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Supplement to the Clinical Practice Guideline for Management of Hip Fractures in Older Adults

e-Appendix 2

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American Academy of Orthopaedic Surgeons

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Strength of Recommendations

Strength Of Recommendation	Overall Strength Of Evidence	Description Of Evidence Quality
Strong	**Strong**	Evidence from two or more "High" quality studies with consistent findings for recommending for or against the intervention. Also requires no reasons to downgrade from the EtD framework
Moderate	**Moderate or Strong**	Evidence from two or more "Moderate" quality studies with consistent findings, or evidence from a single "High" quality study for recommending for or against the intervention. Also requires no or only minor concerns addressed in the EtD framework.
Limited	**Limited, Moderate or Strong**	Evidence from one or more "Low" quality studies with consistent findings or evidence from a single "Moderate" quality study recommending for or against the intervention. Also, higher strength evidence can be downgraded to limited due to major concerns addressed in the EtD Framework.
Consensus	**No Reliable Evidence**	There is no supporting evidence, or higher quality evidence was downgraded due to major concerns addressed in the EtD framework. In the absence of reliable evidence, the guideline work group is making a recommendation based on their clinical opinion.

Hip Fx CPG Quality Appraisal Tables

QA - Intervention - Randomized

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Adams, C. I., 2001	●	●	●	●	●	◑	High Quality
Aktselis, I., 2014	◑	●	◑	◑	◑	●	Moderate Quality
Aprato, A., 2018	●	●	◑	◑	●	●	High Quality
Bachrach-Lindström, M., 2000	◑	◑	◑	○	●	◑	Moderate Quality
Berggren, M., 2008	◑	●	◑	○	◑	◑	Moderate Quality
Blomfeldt, R., 2005	●	●	○	◑	●	◑	Moderate Quality
Cadossi, M., 2013	◑	●	◑	●	◑	◑	Moderate Quality
Cai, L., 2016	◑	◑	●	●	◑	●	High Quality
Calder, S. J., 1995	◑	◑	○	○	◑	●	Moderate Quality
Calder, S. J., 1996	●	◑	○	●	◑	◑	Moderate Quality
Cao, L., 2014	◑	◑	◑	●	◑	◑	Moderate Quality
Carson, J. L., 2011	●	◑	○	●	●	◑	Moderate Quality
Carson, J. L., 2015	●	◑	◑	●	◑	◑	Moderate Quality
Carulli, C., 2017	◑	●	◑	○	●	◑	Moderate Quality
Chammout, G. K., 2012	○	○	○	●	●	●	Moderate Quality
Chammout, G., 2016	◑	●	◑	●	◑	◑	Moderate Quality
Chammout, G., 2019	●	●	◑	◑	◑	●	High Quality
Chen, F., 2019	●	◑	●	●	◑	●	High Quality
Clemmesen, C. G., 2018	●	●	●	●	◑	◑	High Quality
Cooper, A. L., 2019	●	◑	◑	○	◑	◑	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Crotty, M., 2019	●	◑	◑	●	◑	◑	Moderate Quality
Davis, F. M., 1981	◑	◑	○	●	●	○	Moderate Quality
Davison, J. N., 2001	●	◑	◑	○	◑	◑	Moderate Quality
Deangelis, J. P., 2012	◑	◑	◑	●	◑	●	Moderate Quality
Desteli, E. E., 2015	●	◑	○	●	◑	◑	Moderate Quality
Dolatowski, F. C., 2019	●	●	○	●	◑	◑	Moderate Quality
Drakos, A., 2016	◑	◑	●	◑	◑	●	Moderate Quality
Duncan, D. G., 2006	●	●	◑	●	●	◑	High Quality
El-Abed, K., 2005	◑	◑	◑	●	◑	◑	Moderate Quality
Endo, J., 2013	◑	●	◑	●	◑	●	High Quality
Ergenoglu, P., 2015	●	●	●	●	◑	●	High Quality
Eskeland, G., 1966	●	◑	◑	●	◑	◑	Moderate Quality
Fernandez, M. A., 2017	◑	◑	◑	●	◑	●	Moderate Quality
Figved, W., 2009	●	●	◑	●	●	●	High Quality
Frihagen, F., 2007	◑	●	●	●	◑	◑	High Quality
Godoy Monzón, D., 2010	●	●	◑	●	●	●	High Quality
Gorodetskyi, I. G., 2007	●	●	◑	●	●	◑	High Quality
Gregersen, M., 2015	●	◑	◑	○	◑	●	Moderate Quality
Gregersen, M., 2016	●	◑	●	●	◑	◑	High Quality
Griffin, X. L., 2016	●	◑	●	◑	◑	◑	Moderate Quality
Gruber-Baldini, A. L., 2013	◑	◑	○	●	◑	◑	Moderate Quality
Haghighi, M., 2017	◑	◑	●	●	◑	◑	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Hardy, D. C., 1998	○	◑	◑	●	●	◑	Moderate Quality
Health Investigators, 2019	●	◑	○	◑	●	◑	Moderate Quality
Hedbeck, C. J., 2011	●	●	○	●	●	●	High Quality
Hedbeck, C. J., 2011	◑	●	◑	◑	◑	◑	Moderate Quality
Heltne, M., 2017	●	◑	◑	◑	◑	◑	Moderate Quality
Huusko, T. M., 2000	●	●	○	●	◑	◑	Moderate Quality
Huusko, T. M., 2002	●	●	○	●	●	○	Moderate Quality
Inngul, C., 2013	◑	●	○	◑	◑	◑	Moderate Quality
Inngul, C., 2015	◑	●	○	●	◑	◑	Moderate Quality
Iorio, R., 2019	○	◑	◑	◑	◑	◑	Moderate Quality
Jianbo, J., 2019	◑	◑	◑	●	◑	●	Moderate Quality
Johansson, T., 2000	◑	●	◑	●	◑	◑	Moderate Quality
Johansson, T., 2001	●	●	◑	●	●	◑	High Quality
Johansson, T., 2006	◑	●	◑	●	◑	◑	Moderate Quality
Johansson, T., 2014	◑	●	◑	●	◑	◑	Moderate Quality
Jolly, A., 2019	●	◑	○	●	◑	●	Moderate Quality
Jørgensen, P. S., 1992	◑	◑	●	●	◑	◑	Moderate Quality
Jørgensen, Per Seest, 1998	●	◑	◑	○	●	●	Moderate Quality
Kang, H., 2013	●	●	◑	●	◑	●	High Quality
Kanto, K., 2014	◑	●	◑	●	◑	◑	Moderate Quality
Keating, J. F., 2005	●	●	○	●	●	◑	High Quality
Khan, A. M., 2015	◑	◑	◑	●	◑	◑	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Langslet, E., 2014	●	●	◑	●	◑	○	Moderate Quality
Lei, J., 2017	●	◑	○	●	◑	●	Moderate Quality
Leung, K. S., 1992	○	◑	◑	●	●	◑	Moderate Quality
Li, H., 2018	◑	◑	◑	●	◑	●	Moderate Quality
Li, J., 2017	◑	◑	◑	●	◑	●	Moderate Quality
Lu, Q., 2017	●	◑	◑	●	◑	●	High Quality
Ma, H., 2021	●	◑	◑	●	◑	◑	Moderate Quality
Ma, Y., 2018	●	●	○	●	◑	●	High Quality
Majumdar, S. R., 2007	◑	◑	●	●	●	◑	High Quality
Marcantonio, E. R., 2001	●	●	●	●	●	◑	High Quality
Matot, I., 2003	●	◑	○	●	●	◑	Moderate Quality
McKenzie, P. J., 1984	◑	◑	○	●	●	●	Moderate Quality
Miedel, R., 2005	●	●	◑	●	●	◑	High Quality
Moerman, S., 2017	◑	●	◑	○	◑	◑	Moderate Quality
Moppett, I. K., 2015	●	●	◑	●	◑	◑	High Quality
Morris, G. K., 1976	◑	●	◑	●	◑	◑	Moderate Quality
Morrison, R. S., 2016	●	●	●	●	◑	●	High Quality
Mouzopoulos, G., 2008	◑	◑	●	●	◑	◑	Moderate Quality
Mouzopoulos, G., 2009	●	◑	◑	●	●	○	Moderate Quality
Movrin, I., 2020	◑	●	○	●	◑	●	Moderate Quality
Naglie, G., 2002	●	●	●	●	◑	●	High Quality
Needoff, M., 1993	◑	◑	○	●	●	●	Moderate Quality
Newman, B., 2013	●	●	○	●	◑	◑	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Nie, H., 2015	●	◑	○	●	◑	●	Moderate Quality
Olsson, L. E., 2007	◑	◑	◑	●	◑	◑	Moderate Quality
Papasimos, S., 2005	◑	◑	◑	●	◑	◑	Moderate Quality
Parker, M. J., 2002	◑	●	◑	●	◑	◑	Moderate Quality
Parker, M. J., 2010	●	●	◑	●	●	◑	High Quality
Parker, M. J., 2013	◑	●	◑	○	◑	●	Moderate Quality
Parker, M. J., 2015	◑	●	◑	●	◑	◑	Moderate Quality
Parker, M. J., 2015	◑	●	○	◑	◑	●	Moderate Quality
Parker, M. J., 2019	◑	●	◑	◑	●	◑	Moderate Quality
Parker, M. J., 2020	◑	●	●	○	◑	◑	Moderate Quality
Parras, T., 2016	●	◑	●	●	◑	●	High Quality
Phruetthiphat, O. A., 2021	●	◑	●	●	◑	●	High Quality
Prestmo, A., 2015	●	◑	◑	○	●	◑	Moderate Quality
Raia, F. J., 2003	●	◑	◑	○	◑	◑	Moderate Quality
Ravikumar, K. J., 2000	◑	◑	◑	●	●	◑	Moderate Quality
Reference: 12106	◑	◑	●	●	◑	◑	Moderate Quality
Reindl, R., 2015	●	●	◑	◑	◑	◑	Moderate Quality
Ren, C., 2017	◑	◑	◑	●	◑	◑	Moderate Quality
Repantis, T., 2015	●	◑	○	◑	◑	●	Moderate Quality
Resch, S., 1998	◑	◑	○	●	●	●	Moderate Quality
Resch, S., 2005	◑	◑	◑	●	●	◑	Moderate Quality
Rödén, M., 2003	◑	●	◑	●	◑	◑	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Rogmark, C., 2002	◑	●	◑	●	◑	◑	Moderate Quality
Rosen, J. E., 2001	●	◑	○	●	●	●	High Quality
Rowlands, M., 2018	●	○	◑	○	●	◑	Moderate Quality
Sanders, D., 2017	●	◑	◑	○	◑	●	Moderate Quality
Santini, S., 2005	○	○	○	●	●	●	Moderate Quality
Sasaki, S., 2009	◑	◑	◑	●	◑	◑	Moderate Quality
Saxer, F., 2018	●	◑	◑	○	◑	●	Moderate Quality
Saygi, B., 2010	○	◑	◑	●	●	●	Moderate Quality
Schipper, I. B., 2004	●	●	●	●	●		High Quality
Shannon, S. F., 2019	●	◑	○	●	◑	○	Moderate Quality
Sharma, V., 2016	●	◑	○	◑	◑	◑	Moderate Quality
Shi, H., 2018	●	◑	◑	●	◑	◑	Moderate Quality
Shin, S., 2020	●	◑	◑	●	◑	●	High Quality
Shyu, Y. I., 2008	●	◑	◑	◑	◑	○	Moderate Quality
Shyu, Y. I., 2010	◑	◑	◑	○	◑	●	Moderate Quality
Shyu, Y. I., 2013	◑	◑	◑	◑	◑	●	Moderate Quality
Shyu, Y. I., 2013	◑	◑	◑	◑	◑	◑	Moderate Quality
Shyu, Y. I., 2013	◑	◑	◑	●	◑	●	Moderate Quality
Shyu, Y. I., 2016	◑	◑	◑	○	●	●	Moderate Quality
Sikorski, J. M., 1981	○	◑	◑	◑	●	◑	Moderate Quality
Skinner, P., 1989	◑	◑	◑	●	●	◑	Moderate Quality
Stoen, R. O., 2014	◑	●	●	●	◑	◑	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Stenvall, M., 2007	◑	●	○	●	◑	●	Moderate Quality
Stenvall, M., 2007	◑	●	○	●	●	◑	Moderate Quality
Stoen, R. O., 2014	◑	●	●	○	◑	◑	Moderate Quality
Stoffel, K. K., 2013	◑	◑	●	●	◑	◑	Moderate Quality
Stranks, G. J., 1992	◑	◑	○	●	●	●	Moderate Quality
Talsnes, O., 2013	◑	●	◑	●	◑	◑	Moderate Quality
Tao, R., 2013	◑	●	◑	◑	◑	◑	Moderate Quality
Taylor, F., 2012	●	●	●	◑	◑	◑	High Quality
Temelkovska-Stevanovska, M., 2014	◑	◑	◑	●	●	◑	Moderate Quality
Tengberg, P. T., 2016	●	●	●	●	◑	◑	High Quality
Tian, S., 2018	●	◑	◑	●	◑	●	High Quality
Tidermark, J., 2003	◑	●	◑	○	◑	◑	Moderate Quality
Tosun, B., 2018	◑	◑	◑	●	◑	●	Moderate Quality
Tzimas, P., 2018	◑	●	●	●	◑	●	High Quality
Ugland, T. O., 2018	◑	●	◑	●	◑	●	High Quality
Ugland, T. O., 2019	◑	●	●	○	◑	◑	Moderate Quality
Ukaj, S., 2019	◑	◑	◑	●	◑	●	Moderate Quality
Unneby, A., 2017	◑	●	◑	●	◑	●	High Quality
Unneby, A., 2020	◑	●	◑	●	◑	◑	Moderate Quality
Unneby, A., 2020	◑	●	◑	●	◑	●	High Quality
Utrilla, A. L., 2005	◑	●	◑	○	●	◑	Moderate Quality
Uysal, A. I., 2020	◑	◑	◑	◑	◑	●	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Valentin, N., 1986	◑	◑	○	●	●	◑	Moderate Quality
van den Bekerom, M. P., 2010	●	●	○	●	●	●	High Quality
Varela-Egocheaga, J. R., 2009	◑	◑	◑	●	●	●	High Quality
Verettas, D. A., 2010	◑	○	◑	●	●	●	Moderate Quality
Verzellotti, S., 2019	●	◑	◑	◑	◑	●	Moderate Quality
VidÃ¡n, M., 2005	◑	◑	●	●	◑	◑	Moderate Quality
Vidovic, D., 2013	◑	●	◑	○	◑	●	Moderate Quality
Vidovic, D., 2015	◑	●	◑	○	◑	●	Moderate Quality
Waaler Bjørnelv, G. M., 2012	◑	◑	○	○	●	●	Moderate Quality
Wang, B., 2019	●	◑	◑	●	◑	◑	Moderate Quality
Watts, C. D., 2017	●	◑	●	●	◑	●	High Quality
Wei, P., 2020	●	●	◑	◑	◑	●	High Quality
Wennberg, P., 2019	●	◑	●	●	◑	●	High Quality
Wennberg, P., 2019	●	●	●	●	◑	◑	High Quality
Xu, F., 2017	●	●	○	◑	◑	●	Moderate Quality
Xu, L., 2020	◑	◑	◑	●	◑	●	Moderate Quality
Xu, R., 2018	◑	◑	◑	●	◑	◑	Moderate Quality
Yip, D. K., 2002	○	◑	◑	●	●	◑	Moderate Quality
Zehir, S., 2015	●	●	◑	●	◑	●	High Quality
Zhang, J., 2019	◑	◑	◑	●	◑	●	Moderate Quality
Zhang, W., 2020	●	◑	●	●	◑	●	High Quality
Zhou, X. D., 2019	●	○	◑	●	◑	●	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Strength
Zhou, Y., 2019	●	●	◑	●	◑	●	High Quality
Zufferey, P. J., 2010	●	◑	●	●	◑	◑	High Quality

QA - Intervention - Observational

Study	Participant Recruitment	Treatment Recording	Confounding Variables	Outcome measurement bias	Incomplete Outcome Data	Adequate Reporting	Strength
Ashkenazi, I., 2020	●	●	◑	●	●	●	Low Quality
Atzmon, R., 2021	●	●	◑	●	●	●	Low Quality
Biber, R., 2012	●	●	○	◑	●	●	Low Quality
Bovbjerg, P. E., 2020	●	●	◑	●	●	●	Low Quality
Cha, Y. H., 2019	●	●	◑	●	●	●	Low Quality
Chechik, O., 2012	●	●	◑	●	●	●	Low Quality
Elliott, J., 2003	●	●	●	●	●	●	Low Quality
Frisch, N. B., 2017	●	●	◑	●	●	●	Low Quality
Goh, E. L., 2020	●	●	◑	●	●	●	Low Quality
Guo, X. F., 2015	●	●	◑	●	●	●	Low Quality
Horner, N. S., 2017	●	●	●	●	●	●	Low Quality
Hossain, F. S., 2013	●	●	◑	●	●	●	Low Quality
Kenzora, J. E., 1998	●	●	●	●	●	●	Low Quality
Kulachote, N., 2015	●	●	◑	●	●	●	Low Quality
Kwak, D. K., 2019	●	●	◑	●	●	●	Low Quality
Lee, C., 2015	●	●	◑	●	●	●	Low Quality
Liu, J., 2018	●	●	◑	●	●	●	Low Quality
Maalouly, J., 2020	●	●	◑	●	●	●	Low Quality
Maheshwari, R., 2011	●	●	●	◑	●	●	Low Quality
Manning, B. J., 2004	●	●	●	●	●	●	Low Quality

Study	Participant Recruitment	Treatment Recording	Confounding Variables	Outcome measurement bias	Incomplete Outcome Data	Adequate Reporting	Strength
McGuire, K. J., 2004	●	◑	◑	◑	●	●	Low Quality
Moran, C. G., 2005	●	●	◑	◑	●	●	Low Quality
Novack, V., 2007	●	●	◑	●	●	●	Low Quality
Orosz, G. M., 2004	●	●	◑	◑	●	●	Low Quality
Ottesen, T. D., 2018	●	●	◑	●	●	●	Low Quality
Parker, M. J., 1992	●	●	●	◑	●	●	Low Quality
Radcliff, T. A., 2008	●	●	◑	●	●	●	Low Quality
Rai, S., 2020	●	●	◑	●	●	●	Low Quality
Raval, P., 2016	●	●	◑	●	●	●	Low Quality
Schiavone, A., 2018	●	●	◑	●	●	●	Low Quality
Siegmeth, A. W., 2005	●	●	●	◑	●	●	Low Quality
Sköldenberg, O., 2010	●	●	◑	◑	●	●	Low Quality
Thaler, H. W., 2010	●	●	○	◑	●	●	Low Quality
Virani, S. R., 2016	●	●	●	●	●	●	Low Quality
Xie, J., 2019	●	●	◑	●	●	●	Low Quality
Zhang, C., 2018	●	●	◑	●	●	●	Low Quality

Data Tables

Table 1: Traction Versus No Traction - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Endo J. 2012	High	Complications (Erythema or blister)	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	RR	0.98(0.21,4.55)	NS
Endo J. 2012	High	Complications (Deep vein thrombosis (before surgery))	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	RD	4.88(-4.57,16.14)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Endo J. 2012	High	Complications (Pneumonia (before surgery))	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	RD	0.00(-8.76,8.57)	NS
Endo J. 2012	High	Complications (Deep vein thrombosis (after surgery))	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	RR	0.98(0.14,6.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Endo J. 2012	High	Complications (Pneumonia (after surgery))	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	RR	0.98(0.06,15.07)	NS

Tosun B. 2018	Moderate	Pre-operative complications (Constipation, pressure ulcers, adhesiveplaster allergy, pulmonary complications, urinary tract infections,bleeding in the fractured joint)	1 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	RR	3.67(1.12,11.99)	A position splint was applied to the intervention group patientsby the research nurse under the supervision of an orthopedicsurgeon to achieve a neutral position and to provide a barrieror the bed

Table 2: Traction Versus No Traction - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tosun B. 2018	Moderate	Immobilization Comfort Questionnaire (Can only use day 1 sincesubsequent scores N<30)	1 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Mean Difference	-30.1 (-35.65, -24.55)	A position splint was applied to the intervention group patientsby the research nurse under the supervision of an orthopedicsurgeon to achieve a neutral position and to provide a barrieror the bed

Table 3: Traction Versus No Traction - Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment

Tosun B. 2018	Moderate	VAS (comfort) (Visual Analog Scale(comfort))	15 min	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Mean Difference	-1.47 (-2.29, -0.65)	A position splint was applied to the intervention group patientsby the research nurse under the supervision of an orthopedicsurgeon to achieve a neutral position and to provide a barrieror the bed

Tosun B. 2018	Moderate	VAS (comfort) (Visual Analog Scale(comfort))	60 min	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Mean Difference	-2.54 (-3.31, -1.77)	A position splint was applied to the intervention group patientsby the research nurse under the supervision of an orthopedicsurgeon to achieve a neutral position and to provide a barrieror the bed

Tosun B. 2018	Moderate	VAS (comfort) (Visual Analog Scale(comfort))	120 min	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Mean Difference	-2.94 (-3.82, -2.06)	A position splint was applied to the intervention group patientsby the research nurse under the supervision of an orthopedicsurgeon to achieve a neutral position and to provide a barrieror the bed

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	15 min	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p<.001	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	60 min	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p<.001	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	120 min	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p<.001	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	1 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p<.001	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	2 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p=.001	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	3 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p=.012	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	4 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p=.069	N/A	NS

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	5 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p=.008	N/A	Treatment 2 (splint)

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	6 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p=.962	N/A	NS

Tosun B. 2018	Moderate	VAS (pain) (Visual Analog Scale(comfort))	7 days	Routine care was given to the control group. Skin traction was appliedto the control group by the research nurse under the supervision of anorthopedic surgeon. The affected limb was elevated by a clinic nurseand the research nurse applied the traction strapping kit, consisting of arigid sole plate and two adhesive strips, one on each side of the leg,and an elastic bandage was applied. A cord was attached to the soleplate at one end and to the weight at the other and was run through thepulley over the end of the bed. For the skin traction weight (min: 2.5 kg,max: 4.5 kg) up to 5e10% of the patient's weight was used	A position splint was applied to the intervention group patients by theresearch nurse under the supervision of an orthopedic surgeon toachieve a neutral position and to provide a barrier or the bed linen withsoft padding and enough space at the heel. A removable 'T' band wasplaced on the base of the position splint to prevent rotation. Threedifferent sizes of position splint were applied depending on the patients'shoe size. No weight was used in this group	Author Reported - p=.450	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Endo J. 2012	High	Mortality (Mortality (1-year))	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	RR	1.46(0.26,8.30)	NS
Endo J. 2012	High	Radiographic data (Fracture reduction was measured on the basis of leg-length and neck–shaft angle discrepancies on the radiograph)	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	Author Reported	N/A	NS

Table 4. Traction Versus No Traction: Other Cont.

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Yip et al 2002	Blood loss ml	In surgery	Preoperative Foam boot traction with 2 kg weight	Pillow	311	Mean difference	29.00	0.19	N/A	NS

Table 5. Traction Versus No Traction: Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Endo J. 2012	High	Pain (Pain)	1 yrs	In the traction group, the patients underwent skin traction consisting of use of a 3-kg foam rubber boot, which was the maximum recommended for the boot to withstand [18].	Bed rest - The patients in the no-traction group placed their fractured leg on an ordinary pillow and maintained the position that was most comfortable. Patients with trochanteric fractures were treated by use of an intramedullary nail	Author Reported - (p = 0.48)	N/A	NS

Table 6. Traction Versus No Traction: Pain cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Needoff et al 1993	Pain: 0-100 pain score (100 maximum)	1 Day	Skin traction with 2.5 kg	No preoperative traction	60	Mean difference	0.40	-	>.05	NS
Needoff et al 1993	Pain: 0-100 pain score (100 maximum)	2 Days	Skin traction with 2.5 kg	No preoperative traction	60	Mean difference	14.80	-	>.05	NS
Needoff et al 1993	Pain: analgesia consumption	1st 24 hrs	Skin traction with 2.5 kg	No preoperative traction	60	Mean difference	4.60	-	<.05	Favors no traction
Needoff et al 1993	Pain: analgesia consumption	2nd 24 hrs	Skin traction with 2.5 kg	No preoperative traction	60	Mean difference	1.20	-	>.05	NS
Resch et al 1998	VAS Pain	30 minutes after traction application	Skeletal traction with K-wire through proximal tibia, 30deg flexion and weight of 5-10% patient's body weight (approx 3-5kg)	No preoperative traction	68	Mean difference	-0.10	0.79	N/A	NS
Resch et al 1998	Pain: doses of analgesics	While in orthopedic ward	Skeletal traction with K-wire through proximal tibia, 30deg flexion and weight of 5-10% patient's body weight (approx 3-5kg)	No preoperative traction	183	Mean difference	-0.80	0.01	N/A	Favors traction

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Resch et al 1998	Pain: doses of analgesics	While in emergency department	Skeletal traction with K-wire through proximal tibia, 30deg flexion and weight of 5-10% patient's body weight (approx 3-5kg)	No preoperative traction	183	Mean difference	0.00	1.00	N/A	NS
Resch et al 2005	VAS Pain	After immobil.	Skin Traction	Lasse pillow	70	Mean difference	0.10	0.88	N/A	NS
Resch et al 2005	VAS Pain	After immobil.	Skin Traction	Regular pillow	102	Mean difference	0.50	0.26	N/A	NS
Resch et al 1998	Pain: doses of analgesics	While in orthopedic ward	Skin Traction	Regular pillow	102	Mean difference	-0.20	0.69	N/A	NS
Resch et al 1998	Pain: doses of analgesics	While in emergency department	Skin Traction	Regular pillow	102	Mean difference	0.20	0.10	N/A	NS
Resch et al 1998	Pain: doses of analgesics	While in orthopedic ward	Skin Traction	Lasse pillow	59	Mean difference	-0.80	0.08	N/A	NS
Resch et al 1998	Pain: doses of analgesics	While in emergency department	Skin Traction	Lasse pillow	59	Mean difference	0.20	0.28	N/A	NS
Rosen et al 2001	Pain: VAS score	15 minutes after intervention	Skin traction with foam rubber boot and 5lbs weight	Pillow	100	Mean difference	-0.20	0.60	N/A	NS
Rosen et al 2001	Pain: VAS score average reduction from baseline	Morning after intervention	Skin traction with foam rubber boot and 5lbs weight	Pillow	100	Mean difference	-1.06	-	.04	Favors pillow
Rosen et al 2001	Pain: patients reporting the intervention as a painful experience	Unclear	Skin traction with foam rubber boot and 5lbs weight	Pillow	100	Risk ratio	1.59	0.05	N/A	NS
Rosen et al 2001	Pain: patients requesting pain medication at a rate of 2.44+ doses/24hrs	Group1: 1.31 days Group2: 1.20 days	Skin traction with foam rubber boot and 5lbs weight	Pillow	100	Risk ratio	1.78	0.01	N/A	Favors pillow
Rosen et al 2001	Pain: patients requesting no pain medication before surgery	Group1: 1.31 days Group2: 1.20 days	Skin traction with foam rubber boot and 5lbs weight	Pillow	100	Risk ratio	0.45	0.12	N/A	NS
Saygi et al 2010	VAS Pain	1 hour	Skin Traction	Pillow	72	Mean difference	0.04	0.87	N/A	NS
Saygi et al 2010	VAS Pain	4 hours	Skin Traction	Pillow	72	Mean difference	0.22	0.21	N/A	NS
Saygi et al 2010	VAS Pain	12 hours	Skin Traction	Pillow	72	Mean difference	0.24	0.21	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Yip et al 2002	Pain: visual analogue scale	Day 1	Preoperative Foam boot traction with 2 kg weight	Pillow	311	N/A	-	-	>.05	NS
Yip et al 2002	Pain: visual analogue scale	Day 2	Preoperative Foam boot traction with 2 kg weight	Pillow	311	N/A	-	-	>.05	NS

Table 7. Surgical Time: Mortality

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Elliott et al 2003	Mortality	1 year	<1 day	1-<3 days	1389	Risk ratio	0.40	0.00	N/A	Favors<1 day
Elliott et al 2003	Mortality	1 year	<1 day	3-<5 days	1389	Risk ratio	0.45	0.00	N/A	Favors<1 day
Elliott et al 2003	Mortality	1 year	<1 day	5-<10 days	1389	Risk ratio	0.28	0.00	N/A	Favors<1 day
Elliott et al 2003	Mortality	1 year	<1 day	> 10 days	1389	Risk ratio	0.13	0.00	N/A	Favors<1 day
Elliott et al 2003	Mortality	1 year	1<3 days	3-<5 days	1389	Risk ratio	1.11	0.42	N/A	NS
Elliott et al 2003	Mortality	1 year	1-< 3 days	5- <10 days	1389	Risk ratio	0.69	0.00	N/A	Favors 1-< 3 days
Elliott et al 2003	Mortality	1 year	1-<3 days	> 10 days	1389	Risk ratio	0.33	0.00	N/A	Favors 1-< 3 days
Elliott et al 2003	Mortality	1 year	3-<5 days	5-<10 days	1389	Risk ratio	0.62	0.00	N/A	Favors 3-< 5 days
Elliott et al 2003	Mortality	1 year	3-<5 days	>10 days	1389	Risk ratio	0.30	0.00	N/A	Favors 3-< 5 days
Elliott et al 2003	Mortality	1 year	5-<10 days	> 10 days	1389	Risk ratio	0.47	0.00	N/A	Favors 5-< 10 days
Fox et al 1994	Mortality	In hospital	Within 24 hours	Greater than 24 hours	142	N/A	-	-	p=0.04	Within 24 hours
McGuire et al 2004	Adjusted Mortality	30 days	< 1 day	Delay >1 day	18209	N/A	-	-	p=0.981	NS
McGuire et al 2004	Adjusted Mortality	30 days	< 1 day	Delay >2 days	18209	N/A	-	-	p=0.02	< 1 day
McGuire et al 2004	Adjusted Mortality	30 days	< 1 day	Delay >3 days	18209	N/A	-	-	p=0.048	NS
Moran et al 2005	Mortality	30 days	Early (< 24 hours)	Delayed (>24 hours)	2148	Risk ratio	1.19	0.24	N/A	NS
Novack et al 2007	Mortality	In hospital	< 2 days	2-4 days	3211	Risk ratio	1.02	0.93	N/A	NS
Novack et al 2007	Mortality	1 month	< 2 days	2-4 days	3211	Risk ratio	0.91	0.62	N/A	NS
Novack et al 2007	Mortality	1 year	< 2 days	2-4 days	3211	Risk ratio	0.84	0.03	N/A	Favors < 2 days
Novack et al 2007	Mortality	In hospital	< 2 days	>4 days	3069	Risk ratio	0.62	0.03	N/A	Favors < 2 days
Novack et al 2007	Mortality	1 month	< 2 days	>4 days	3069	Risk ratio	0.66	0.02	N/A	Favors < 2 days

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Novack et al 2007	Mortality	1 year	< 2 days	>4 days	3069	Risk ratio	0.67	0.00	N/A	Favors < 2 days
Novack et al 2007	Mortality	In hospital	2-4 days	>4 days	1350	Risk ratio	2.05	0.00	N/A	Favors >4 days
Novack et al 2007	Mortality	1 month	2-4 days	>4 days	1350	Risk ratio	2.17	0.00	N/A	Favors >4 days
Novack et al 2007	Mortality	1 year	2-4 days	>4 days	1350	Risk ratio	2.20	0.00	N/A	Favors >4 days
Parker et al 1992	Mortality	30 days	Early Group (<48 hours)	Late Group (>48 hours)	468	Risk ratio	.68	.395	N/A	NS
Parker et al 1992	Mortality	1 year	Early Group (<48 hours)	Late Group (>48 hours)	468	Risk ratio	.58	.014	N/A	<48 hours
Radcliff et al 2008	Mortality	30 days	Surgery less than 4 days	Surgery on or after 4 days	5683	Odds ratio 95%CI	.78(.62,.98)	-	<.05	Favors surgery before day 4
Smektala et al 2007	Mortality	In hospital	<24 Hours	>24 hours	2325	Odds Ratio	0.95	N/A	>.05	NS
Smektala et al 2007	Mortality	1 year	<24 Hours	>24 hours	2325	Odds Ratio	0.92	N/A	>.05	NS
Siegmeth et al 2005	Mortality	1 year	Early Group (<48 hours)	Delayed Group (>48 hours)	3628	N/A	-	-	p<0.001	Favors <48 hours

Table 8. Surgical Time: Functional Status

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Orosz et al 2004	FIM locomotion	6 months	Early (< 24 hours)	Late (>24 hours)	1178	Mean difference	0.14	-	p= 0.559	NS
Orosz et al 2004	FIM self-care	6 months	Early (< 24 hours)	Late (>24 hours)	1178	Mean difference	-1.04	-	p=0.081	NS
Orosz et al 2004	FIM transfers	6 months	Early (< 24 hours)	Late (>24 hours)	1178	Mean difference	-0.50	-	p= 0.132	NS

Table 9. Surgical Time: Length of Hospital Stay

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Orosz et al 2004	Mean Length of Stay (days)	Varied	Early (< 24 hours)	Late (>24 hours)	1178	Mean difference	-1.46	-	p= 0.000	Favors <24 Hours
Parker et al 1992	Mean total hospital stay (days)	Varied	Early Group (<48 hours)	Late Group (>48 hours)	468	Mean difference	-9.00	-	p= 0.06	NS
Siegmeth et al 2005	Mean Hospital Stay In Days	Varied	Early Group (<48 hours)	Delayed Group (>48 hours)	3628	Mean difference	-14.90	-	p<0.0001	Early Group (<48 hours)

Table 10. Surgical Time: Pain

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Orosz et al 2004	Mean pain score (1-5)	Hospital day 1-5	Early (< 24 hours)	Late (>24 hours)	1178	Mean difference	-0.30	-	p= 0.016	Early (< 24 hours)
Orosz et al 2004	Number of days of severe pain	Hospital day 1-5	Early (< 24 hours)	Late (>24 hours)	1178	Mean difference	-0.29	-	p= 0.013	Early (< 24 hours)

Table 11. Surgical Time: Residence

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Siegmeth et al 2005	Return to Original Residence	1 year	Early Group (<48 hours)	Delayed Group (>48 hours)	3628	N/A	-	-	p<0.0001	Early Group (<48 hours)
Siegmeth et al 2005	Change in Residence	1 year	Early Group (<48 hours)	Delayed Group (>48 hours)	3628	N/A	-	-	p<0.0007	Early Group (<48 hours)

Table 12. Surgical Time Complications and Hospital Readmission

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Novack et al 2007	Readmission	1 month	< 2 days	2-4 days	3211	Risk ratio	0.80	0.05	N/A	NS
Novack et al 2007	Readmission	1 month	< 2 days	>4 days	3069	Risk ratio	0.74	0.01	N/A	Favors < 2 days
Novack et al 2007	Readmission	1 month	2-4 days	>4 days	1350	Risk ratio	2.43	0.00	N/A	Favors >4 days
Radcliff et al 2008	Readmission	30 days	Surgery before day 4	Surgery on or after day 4	5683	Odds ratio 95%CI	.70(.54,.91)	-	<.05	Favors surgery after day 4
Radcliff et al 2008	Complications	30 days	Same day	Next Day	5683	Odds ratio	1.02	-	<.05	NS

Table 13. Surgical Time Other

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study reported p value	Favors
Chechik et al 2012	Mortality, in hospital	Varied	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	% risk difference	-6.67	0.12	N/A	NS
Chechik et al 2012	Mortality, within 1st year	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Risk ratio	0.67	0.38	N/A	NS
Chechik et al 2012	Complication: ACS	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Risk ratio	3.00	0.33	N/A	NS
Chechik et al 2012	Complication: CVA	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Risk ratio	1.00	1.00	N/A	NS
Chechik et al 2012	Complication: Sepsis	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Risk ratio	0.67	0.64	N/A	NS
Chechik et al 2012	Complication: Pneumonia	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Risk ratio	2.00	0.40	N/A	NS
Chechik et al 2012	Complication: Pulmonary Oedema	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	% risk difference	-10.0	0.05	N/A	NS
Chechik et al 2012	Complication: PE	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	% risk difference	-3.33	0.27	N/A	NS
Chechik et al 2012	Complication: Decubitus ulcer	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	% risk difference	-3.33	0.27	N/A	NS
Chechik et al 2012	Complication: GI bleeding	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	% risk difference	-10.0	0.05	N/A	NS
Chechik et al 2012	Complication: wound bleeding	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	% risk difference	3.33	0.27	N/A	NS
Chechik et al 2012	Require blood transfusion	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Risk ratio	0.67	0.38	N/A	NS
Chechik et al 2012	Hospitalization time (hours)	12	Clopidogrel, early treatment	Clopidogrel, delayed treatment	60	Mean difference	-159	0.00	N/A	Favors Clopidogrel, early treatment
Maheshwari et al 2011	Mortality (delay to surgery is treated as a continuous predictor of mortality in a survival analysis)	1 year	Longer delays	Shorter delays	30	Hazard Ratio	1.357	<.05	N/A	Longer delays associated with higher mortality
Manning et al 2003	Require blood transfusion	24 hours	Aspirin	No aspirin	89	Risk ratio	2.14	0.04	N/A	Favors no aspirin
Thaler et al 2010	Major Bleeding	Unclear	Aspirin no delay	No platelet inhibitors, no delay	440	Risk ratio	0.86	0.81	N/A	NS
Thaler et al 2010	Major Bleeding	Unclear	Clopidogrel, no delay	No platelet inhibitors, no delay	364	% Risk difference	2.9	.378	N/A	NS
Thaler et al 2010	Red blood cell units transfused in 24 hours	24 hours	Aspirin no delay	No platelet inhibitors, no delay	440	Mean difference	.2	.24	N/A	NS
Thaler et al 2010	Red blood cell units transfused in 24 hours	24 hours	Clopidogrel, no delay	No platelet inhibitors, no delay	364	Mean difference	-.3	.36	N/A	NS
Thaler et al 2010	Total red blood cell units transfused	Unclear	Aspirin no delay	No platelet inhibitors, no delay	440	Mean difference	-.1	.83	N/A	NS

Thaler et al 2010	Total red blood cell units transfused	Unclear	Clopidogrel, no delay	No platelet inhibitors, no delay	364	Mean difference	-.8	.96	N/A	NS
Thaler et al 2010	Blood drainage (ml)	Unclear	Aspirin no delay	No platelet inhibitors, no delay	440	Mean difference	1	.98	N/A	NS
Thaler et al 2010	Blood drainage (ml)	Unclear	Clopidogrel, no delay	No platelet inhibitors, no delay	364	Mean difference	14	.88	N/A	NS
Thaler et al 2010	Mortality	Unclear	Aspirin no delay	No platelet inhibitors, no delay	440	Risk ratio	0.86	0.81	N/A	NS
Thaler et al 2010	Mortality	In hospital	Clopidogrelno delay	No platelet inhibitors, no delay	364	% Risk difference	2.9	.378	N/A	NS
Thaler et al 2010	Major Bleeding	Unclear	Aspirin no delay	No platelet inhibitors, no delay	440	Risk ratio	0.86	0.81	N/A	NS
Thaler et al 2010	Major Bleeding	Unclear	Clopidogrelno delay	No platelet inhibitors, no delay	364	% Risk difference	2.9	.378	N/A	NS
Hossain et al 2013	Transfusion given	Unclear	Surgically treated while clopidogrel therapy was continued	Surgically treated patients with no exposure to clopidogrel	102	Mean difference	-3.2	.28	N/A	NS
Hossain et al 2013	Hematoma	Unclear	Surgically treated while clopidogrel therapy was continued	Surgically treated patients with no exposure to clopidogrel	102	Risk ratio	3.96	N/A	.16	NS
Hossain et al 2013	Wound infection	Unclear	Surgically treated while clopidogrel therapy was continued	Surgically treated patients with no exposure to clopidogrel	102	Risk ratio	0.52	0.54	N/A	NS
Hossain et al 2013	Reoperation	Unclear	Surgically treated while clopidogrel therapy was continued	Surgically treated patients with no exposure to clopidogrel	102	Risk ratio	0.52	0.54	N/A	NS

Table 14: VTE Prophylaxis- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Goh, E. L. 2020	Low	Complications (Venous thromboembolism)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for treatment across both groups was standardized at 6 weeks(42 days).	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RD	-0.03(-0.06,-0.01)	Direct oral anticoagulants (DOACs)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Goh, E. L. 2020	Low	Complications (Pulmonary embolism)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for treatment across both groups was standardized at 6 weeks(42 days).	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RD	-0.03(-0.05,-0.01)	Direct oral anticoagulants (DOACs)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Goh, E. L. 2020	Low	Complications (Deep vein thrombosis)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for treatment across both groups was standardized at 6 weeks(42 days).	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RD	-0.00(-0.01,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Goh, E. L. 2020	Low	Complications (Hemorrhage)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for treatment across both groups was standardized at 6 weeks(42 days).	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RR	2.47(0.77,7.92)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Goh, E. L. 2020	Low	Wound hematoma (Wound hematoma)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for treatment across both groups was standardized at 6 weeks(42 days).	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RR	1.65(0.17,15.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kulachote, N. 2015	Low	Complications (Pressure sore)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RD	1.54(-7.52,8.21)	NS
Kulachote, N. 2015	Low	Complications (Delirium)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	0.75(0.21,2.63)	NS
Kulachote, N. 2015	Low	Complications (Implant-related)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	0.60(0.04,9.32)	NS
Kulachote, N. 2015	Low	Complications (Overall complications)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	1.20(0.72,1.99)	NS
Kulachote, N. 2015	Low	Complications (Infection)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	0.60(0.19,1.94)	NS
Kulachote, N. 2015	Low	Complications (Thromboembollism)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RD	-2.56(-13.18, 3.40)	NS
Kulachote, N. 2015	Low	Complications (Electrolyte imbalance)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RD	4.62(-4.85,12.71)	NS
Kulachote, N. 2015	Low	Complications (Renal)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	0.60(0.04,9.32)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kulachote, N. 2015	Low	Complications (Pulmonary)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	1.20(0.11,12.80)	NS
Kulachote, N. 2015	Low	Respiratory failure	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RD	1.54(-7.52,8.21)	NS
Kulachote, N. 2015	Low	Complications (Cardiac)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	3.60(0.45,28.80)	NS
Kulachote, N. 2015	Low	Complications (Gastrointestinal)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RD	6.15(-3.56,14.78)	NS
Kulachote, N. 2015	Low	Myocardial infarction	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	1.20(0.11,12.80)	NS
Kulachote, N. 2015	Low	Sepsis	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	1.20(0.11,12.80)	NS
Zhang, C. 2018	Low	Complications (Major bleeding events)	Postop 7 days	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang, C. 2018	Low	Complications (DVT incidence)	Postop 7 days	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	RR	0.30(0.11,0.78)	Rivaroxaban
Zhang, C. 2018	Low	Complications (DVT incidence)	Postop 38days	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	Author Reported - p>.05	N/A	NS
Zhang, C. 2018	Low	Time to first on-study DVT	Postop 2 wks	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	Author Reported - p<.05	N/A	Treatment 1 (Rivaroxaban)

Table 15: VTE Prophylaxis- Function

Study	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kulachote, N. 2015	Low	Ambulatory status (I)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	0.78(0.38,1.61)	NS
Kulachote, N. 2015	Low	Ambulatory status (II)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	0.69(0.45,1.05)	NS
Kulachote, N. 2015	Low	Ambulatory status (III)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	2.25(0.80,6.30)	NS
Kulachote, N. 2015	Low	Ambulatory status (V)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	1.20(0.11,12.80)	NS
Kulachote, N. 2015	Low	Ambulatory status (IV)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	3.60(0.45,28.80)	NS

Table 16: VTE Prophylaxis- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cha, Y. H. 2019	Low	Mortality	Postop 30days	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIa (no medication)	RR	2.61(0.27,25.01)	NS
Cha, Y. H. 2019	Low	Mortality	Postop 60days	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIa (no medication)	RR	2.61(0.53,12.86)	NS
Cha, Y. H. 2019	Low	Mortality	Postop 3 mos	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIa (no medication)	RR	1.74(0.53,5.74)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cha, Y. H. 2019	Low	Mortality	Postop 1 yrs	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIa (no medication)	RR	1.43(0.86,2.37)	NS
Cha, Y. H. 2019	Low	Mortality	Postop 30days	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	Group IIa (no medication)	RR	13.55(1.53,119.84)	Group IIa (no medication)
Cha, Y. H. 2019	Low	Mortality	Postop 60days	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	Group IIa (no medication)	RR	8.47(1.67,42.98)	Group IIa (no medication)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cha, Y. H. 2019	Low	Mortality	Postop 3 mos	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	Group IIa (no medication)	RR	6.78(2.08,22.03)	Group IIa (no medication)
Cha, Y. H. 2019	Low	Mortality	Postop 1 yrs	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	Group IIa (no medication)	RR	2.00(1.05,3.83)	Group IIa (no medication)
Cha, Y. H. 2019	Low	Mortality	Postop 30days	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	RR	0.19(0.04,0.85)	Group IIb (antiplatelet agents)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cha, Y. H. 2019	Low	Mortality	Postop 60days	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	RR	0.31(0.10,0.99)	Group IIb (antiplatelet agents)
Cha, Y. H. 2019	Low	Mortality	Postop 3 mos	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	RR	0.26(0.10,0.67)	Group IIb (antiplatelet agents)
Cha, Y. H. 2019	Low	Mortality	Postop 1 yrs	Group IIb (antiplatelet agents): Patients on antiplatelets such as aspirin,clopidogrel, etc.	Group IIc (anticoagulation agents): Patients on anticoagulants such aswarfarin and new oral anticoagulant [NOAC]	RR	0.71(0.39,1.29)	NS

Goh, E. L. 2020	Low	Length of stay (Length of stay, days)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	Mean Difference	2.8 (-1.38, 6.98)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				treatment across both groups was standardized at 6 weeks(42 days).				

Goh, E. L. 2020	Low	Postoperative hemoglobin (Postoperative hemoglobin, g/L)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	Mean Difference	-0.1 (-4.84, 4.64)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				treatment across both groups was standardized at 6 weeks(42 days).				

Goh, E. L. 2020	Low	Blood transfusion (Blood transfusion)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RR	1.81(0.97,3.39)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				treatment across both groups was standardized at 6 weeks(42 days).				

Goh, E. L. 2020	Low	Mortality (All-cause mortality)	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RR	2.20(0.70,6.88)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				treatment across both groups was standardized at 6 weeks(42 days).				

Goh, E. L. 2020	Low	Mortality (Mortality from venous thromboembolism (%))	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RD	-0.01(-0.02,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				treatment across both groups was standardized at 6 weeks(42 days).				

Goh, E. L. 2020	Low	Mortality (Mortality from hemorrhage (%))	Postop 30days	Direct oral anticoagulants (DOACs): DOAC (apixaban, rivaroxaban, anddabigatran) for VTE prophylaxis following surgery for hip fracture.Apixaban was administered 2.5 mg twice daily to be started 12 to 24hours after surgery. Rivaroxaban was administered 10 mg once daily tobe started 6 to 10 hours after surgery. Dabigatran was administered at75 mg, to be taken 1 to 4 hours after surgery, followed by 150 mg oncedaily for 10 days, to be taken on the first day after surgery. Theduration for	Low-molecular-weight heparin (LMWH): LMWH (dalteparin) for VTEprophylaxis following surgery for hip fracture. Dalteparin wasadministered initially at 5000 units for 1 dose, to be given on theevening before surgery, followed by 5000 units after 24 hours, and then5000 units every 24 hours. The duration for treatment across bothgroups was standardized at 6 weeks (42 days).	RR	2.47(0.23,26.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				treatment across both groups was standardized at 6 weeks(42 days).				
Kulachote, N. 2015	Low	Length of stay (LOS after hip surgery, day)	Postop 1 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Author Reported - p<.05	N/A	Treatment 2 (No drug group)
Kulachote, N. 2015	Low	Duration of surgery (Operative time, minute)	Intraop 0 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Mean Difference	-5 (-14.12, 4.12)	NS
Kulachote, N. 2015	Low	Mortality (1-year mortality)	Postop 1 yrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	RR	1.50(0.31,7.36)	NS
Kulachote, N. 2015	Low	Hct (Postoperative Hct on day 4, %)	Postop 4 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Author Reported - p>.05	N/A	NS
Kulachote, N. 2015	Low	Duration before surgery (Duration before surgery, hours)	Preop 24 hrs	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kulachote, N. 2015	Low	Blood loss (Intraoperative blood loss, ml)	Intraop 0 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Mean Difference	-4 (-30.95, 22.95)	NS
Kulachote, N. 2015	Low	Union time (weeks) (Time to union, week)	Postop 12 wks	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Mean Difference	0.1 (-0.61, 0.81)	NS
Kulachote, N. 2015	Low	Blood transfusion (Blood transfusion, unit)	Intraop 0 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Author Reported - p>.05	N/A	NS
Kulachote, N. 2015	Low	Hct (Preoperative Hct, %)	Preop 0 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Mean Difference	1.4 (-0.63, 3.43)	NS
Kulachote, N. 2015	Low	Length of stay (LOS total, day)	Postop 9 days	Antiplatelet and anticoagulant (AA-AC) group: Post-surgery	No drug group: Post-surgery	Author Reported - p<.05	N/A	Treatment 2 (No drug group)
Zhang, C. 2018	Low	Blood platelets (PLT: blood platelets)	Postop 7 days	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	Mean Difference	-10.5 (-25.18, 4.18)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang, C. 2018	Low	Activated partial thromboplastin time (APTT: activated partialthromboplastin time)	Postop 7 days	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	Mean Difference	-2.3 (-3.78, -0.82)	Rivaroxaban
Zhang, C. 2018	Low	Prothrombin time (PT: prothrombin time)	Postop 7 days	Rivaroxaban: Peroral rivaroxaban at 10 mg/day for 2 weeks	Nadroparin: Subcutaneous injections of nadroparin at 0.3 mL/day for 2weeks	Mean Difference	-1.2 (-1.49, -0.91)	Rivaroxaban

Table 17. VTE Prophylaxis: Blood Loss

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Sasaki et al 2009	Drainage volume (ml)	Postop 1 day to tube removal	Fondaparinux subcutaneously 2.5 mg/day for 14 days with compression stocking	compression stockings only	76	mean difference	36.80	0.02	N/A	compression stockings only
Sasaki et al 2009	Total Drainage volume (ml)	post op	Fondaparinux subcutaneously 2.5 mg/day for 14 days with compression stocking	compression stockings only	76	mean difference	2.60	0.94	N/A	NS
Sasaki et al 2009	hemoglobin loss of > 2 g/dl	post op	Fondaparinux subcutaneously 2.5 mg/day for 14 days with compression stocking	compression stockings only	76	% risk difference	5.26	0.12	N/A	NS
Jorgensen et al 1992	median intraoperative bleeding (ml)	intra-op	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	mean difference	0.00	-	>.05	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Jorgensen et al 1992	median bleeding in drainage (ml)	intra-op	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	mean difference	-42.00	-	>.05	NS
Jorgensen et al 1992	median transfusion (g erythocytes)	postop	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	mean difference	310.00	-	<.05	placebo
Jorgensen et al 1992	median hemoglobin difference	postop	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	mean difference	0.45	-	>.05	NS

Table 18. VTE Prophylaxis: Complications

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
PE prevention Group 2000 2000	total number of venographic indicated DVT	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.69	0.10	N/A	NS
PE prevention Group 2000	nonfatal Myocardial infarction	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.56	0.09	N/A	NS
PE prevention Group 2000	nonfatal Stroke	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.13	0.62	N/A	NS
Sasaki et al 2009	wound necrosis and hematoma	post op	Fondaparinux subcutaneously 2.5 mg/day for 14 days with compression stocking	compression stockings only	76	% risk difference	2.63	0.27	N/A	NS
Sasaki et al 2009	hematoma	post op	Fondaparinux subcutaneously 2.5 mg/day for 14 days with compression stocking	compression stockings only	76	% risk difference	2.63	0.27	N/A	NS
Jorgensen et al 1992	cariace arrest death	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	risk ratio	2.53	0.44	N/A	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Jorgensen et al 1992	pnemonia death	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	risk ratio	0.63	0.70	N/A	NS
Jorgensen et al 1992	required transfusion	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	risk ratio	0.93	0.79	N/A	NS
Morris et al 1976	minor heamorrhagic complications	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	risk ratio	1.58	0.40	N/A	NS
Morris et al 1976	excessivve wound leakage	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	% risk difference	4.00	0.06	N/A	NS
Morris et al 1976	large wound haematoma	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	% risk difference	4.00	0.06	N/A	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Morris et al 1976	gross haematuria	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	% risk difference	1.33	0.28	N/A	NS
Morris et al 1976	small haematemesis	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	% risk difference	1.33	0.28	N/A	NS

Table 19. VTE Prophylaxis: Complications: DVT/VTE/PE

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
PE prevention Group 2000	total number of DVT diagnosed by other test than venograph	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.73	0.16	N/A	NS
PE prevention Group 2000	proximal DVT	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.60	0.04	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	Distal DVT	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.80	0.26	N/A	NS
PE prevention Group 2000	any DVT	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.71	0.03	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	definite PE	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.53	0.00	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	probable PE	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.68	0.25	N/A	NS
PE prevention Group 2000	any PE	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.57	0.00	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	any VTE	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.64	0.00	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	nonfatal Deep-vein thrombosis	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.71	0.03	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	nonfatal Pulmonary embolism	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.74	0.22	N/A	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
PE prevention Group 2000	nonfatal Venous thromboembolism	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.71	0.02	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	Death due to Pulmonary embolism	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.42	0.00	N/A	Aspirin 160mg over 35 days
Kew et al 1999	DVT	1 week	Fraxaparine	no Fraxiparine	78	risk ratio	0.70	0.43	N/A	NS
Kew et al 1999	DVT	2 weeks	Fraxaparine	no Fraxiparine	78	risk ratio	1.79	0.42	N/A	NS
Kew et al 1999	development of contralateral dvt	3 weeks	Fraxaparine	no Fraxiparine	78	risk ratio	1.20	0.88	N/A	NS
Jorgensen et al 1992	Radioactive I fibrogen test for DVT positive	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	risk ratio	0.35	0.02	N/A	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days
Jorgensen et al 1992	Radioactive I fibrogen test for DVT probable	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	risk ratio	1.69	0.47	N/A	NS
Jorgensen et al 1992	Radioactive I fibrogen test for DVT inconclusive	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	% risk difference	-2.63	0.30	N/A	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Jorgensen et al 1992	total DVT	hospital stay	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	risk ratio	0.52	0.03	N/A	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days
Jorgensen et al 1992	multiple PE related death	10 days	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	% risk difference	-2.63	0.30	N/A	NS
Lahnborg et al 1980	DVT	10 days	Heparin 5000 units every 12 hours for 10 days+dyhydroergotamine .5mg every 12 hours for 10 days	placebo	140	risk ratio	0.42	0.00	N/A	Heparin 5000 units every 12 hours for 10 days+dyhydroergotamine .5mg every 12 hours for 10 days
Morris et al 1976	DVT	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	risk ratio	0.45	0.00	N/A	Warfarin using the thrombotest method until independently mobile
Morris et al 1976	unilateral DVT on side of fracture	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	risk ratio	0.83	0.53	N/A	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Morris et al 1976	unilateral DVT on opposite side of fracture	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	risk ratio	0.62	0.38	N/A	NS
Morris et al 1976	Bilateral DVT	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	risk ratio	0.09	0.00	N/A	Warfarin using the thrombotest method until independently mobile

Table 20. VTE Prophylaxis: Mortality

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
PE prevention Group 2000	Death due to Ischaemic heart disease	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.23	0.24	N/A	NS
PE prevention Group 2000	Death due to Stroke	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.05	0.87	N/A	NS
PE prevention Group 2000	Death due to Heart failure	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.20	0.32	N/A	NS
PE prevention Group 2000	Death due to Other vascular cause	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.52	0.03	N/A	Aspirin 160mg over 35 days
PE prevention Group 2000	Death due to Unknown cause of vascular death	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.96	0.83	N/A	NS
PE prevention Group 2000	All vascular deaths	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.93	0.43	N/A	NS
PE prevention Group 2000	Death due to Pneumonia or bronchitis	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	0.90	0.43	N/A	NS
PE prevention Group 2000	Death due to Other non-vascular cause	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.18	0.26	N/A	NS
PE prevention Group 2000	Death due to All non-vascular deaths	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.01	0.88	N/A	NS
PE prevention Group 2000	total mortality	35 days	Aspirin 160mg over 35 days	placebo	13356	risk ratio	1.01	0.84	N/A	NS
Eskeland et al 1966	mortality	3 months	Phenindione using the PP-test or Thrombotest method three times/week until stable level had been reached	no anticoagulant prophylaxis	200	risk ratio	1.26	0.39	N/A	NS

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Morris et al 1976	Mortality	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	risk ratio	0.69	0.18	N/A	NS
Morris et al 1976	Mortality due to PE	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	% risk difference	-8.11	0.01	N/A	Warfarin using the thrombotest method until independently mobile
Morris et al 1976	moratlity from Cerebellar haemorrhage	10 days	Warfarin using the thrombotest method until independently mobile	no treatment	149	% risk difference	1.33	0.28	N/A	NS

Table 21. VTE Prophylaxis: Hospital Stay

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Sasaki et al 2009	Hospital stay (days)	post op	Fondaparinux subcutaneously 2.5 mg/day for 14 days with compression stocking	compression stockings only	76	mean difference	5.80	0.39	N/A	NS
Jorgensen et al 1992	median hospital stay	postop	Heparin 2500 IU or 5000 IU antifactor at 2 and 12 postoperatively, and then every morning in the 6 following days	placebo	68	mean difference	-2.00	-	>.05	NS

Table 22. VTE Prophylaxis: Complications

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Stranks et al 1992	swelling (difference in thigh circumference in centimeters compared to control)	3 days	A/V impulse system with compression stockings for 7-10 days	compression stockings only	79	mean difference	-2.36	-	<.001	A/V impulse system with compression stockings for 7-10 days
Stranks et al 1992	swelling (difference in thigh circumference in centimeters compared to control)	7-10 days	A/V impulse system with compression stockings for 7-10 days	compression stockings only	79	mean difference	-3.27	-	<.001	A/V impulse system with compression stockings for 7-10 days
Stranks et al 1992	swelling (difference in calf circumference in centimeters compared to control)	3 days	A/V impulse system with compression stockings for 7-10 days	compression stockings only	79	mean difference	-1.25	-	<.001	A/V impulse system with compression stockings for 7-10 days
Stranks et al 1992	swelling (difference in calf circumference in centimeters compared to control)	7-10 days	A/V impulse system with compression stockings for 7-10 days	compression stockings only	79	mean difference	-1.55	-	<.001	A/V impulse system with compression stockings for 7-10 days

Table 23. VTE Prophylaxis: DVT/VTE/PE

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Stranks et al 1992	clear evidence of proximal DVT	7-10 days	A/V impulse system with compression stockings for 7-10 days	compression stockings only	79	% risk difference	-23.08	0.00	N/A	A/V impulse system with compression stockings for 7-10 days

Table 24. VTE Prophylaxis: Blood Loss

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Jorgensen et al 1998	operative bleeding (ml)	6-13 days	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	mean difference	0.00	-	>.05	NS
Jorgensen et al 1998	peroperative transfusion requirements (units [1 unit=350 ml concentrated erytrocytes])	preoperative	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	mean difference	0.04	-	>.05	NS
Jorgensen et al 1998	postoperative transfusion requirements (units [1 unit=350 ml concentrated erytrocytes])	post-op	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	mean difference	-0.02	-	>.05	NS

Table 25. VTE Prophylaxis: DVT/VTE/PE

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Jorgensen et al 1998	DVT	6-13 days	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	risk ratio	0.58	0.17	N/A	NS
Jorgensen et al 1998	proximal dvt	6-13 days	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	risk ratio	0.97	0.96	N/A	NS

Table 26. VTE Prophylaxis: Mortality

Author	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Jorgensen et al 1998	mortality	6-13 days	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	risk ratio	2.92	0.18	N/A	NS
Jorgensen et al 1998	mortality	1 month	preop Enoxaparin 40mg once daily until operation and post-op until phlebography	preop placebo once daily until operation and post-op daily Enoxaparin 40mg until until phlebography	146	% risk difference	0.00	1.00	N/A	NS

Table 27: Anesthesia- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Pneumonia)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	1.45(0.24,8.53)	NS
Parker, M. J. 2015	Moderate	Complications (Pulmonary embolism)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	0.01(-0.00,0.03)	NS
Parker, M. J. 2015	Moderate	Complications (Deep vein thrombosis)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	2.89(0.30,27.49)	NS
Parker, M. J. 2015	Moderate	Complications (Post-operative delirium)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	-0.02(-0.04,0.00)	NS
Parker, M. J. 2015	Moderate	Complications (Urine retention)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	7.71(0.98,60.92)	NS
Parker, M. J. 2015	Moderate	Complications (Myocardial infarction)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	0.96(0.06,15.27)	NS
Parker, M. J. 2015	Moderate	Complications (Cerebrovascular accident)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	0.00(0.00,0.00)	NS
Parker, M. J. 2015	Moderate	Complications (Congestive cardiac failure)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	0.01(-0.01,0.02)	NS
Parker, M. J. 2015	Moderate	Complications (Cardiac arrhythmia)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	0.02(-0.00,0.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Acute renal failure)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	0.01(-0.00,0.03)	NS
Parker, M. J. 2015	Moderate	Complications (Gastrointestinal bleed)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RD	-0.01(-0.02,0.01)	NS
Parker, M. J. 2015	Moderate	Complications (Pressure sores)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	0.96(0.14,6.76)	NS
Parker, M. J. 2015	Moderate	Complications (Wound infection)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	0.64(0.11,3.79)	NS
Shin, S. 2020	High	In-hospital complications	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	RR	0.97(0.36,2.58)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	In-hospital complications	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Pulmonary complications	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	RR	0.97(0.25,3.68)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Cardiac complications	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	RR	1.45(0.25,8.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Delirium	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	RR	1.09(0.45,2.63)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Pulmonary complications	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Cardiac complications	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Delirium	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Table 28: Anesthesia- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	Duration of operation	1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	8.44 (6.94, 9.94)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	SBP (during surgery)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-1.26 (-9.03, 6.51)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	SBP (during surgery)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	1.18 (-5.60, 7.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	SBP (during surgery)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	4.92 (-1.34, 11.18)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	DBP (during surgery)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-2.26 (-7.46, 2.94)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	DBP (during surgery)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-0.34 (-5.48, 4.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	DBP (during surgery)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	3.34 (-1.63, 8.31)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	HR (during surgery)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-2.8 (-8.62, 3.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	HR (during surgery)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-3.04 (-8.08, 2.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	HR (during surgery)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	1.34 (-3.52, 6.20)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-0.49 (-6.10, 5.12)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	0.85 (-4.78, 6.48)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	3.9 (-1.27, 9.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	40 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	5.62 (1.00, 10.24)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	50 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	3.66 (-0.73, 8.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	60 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	5.17 (0.81, 9.53)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	70 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	4.06 (0.06, 8.06)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during surgery) (Mean arterial blood pressure)	80 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	4.48 (0.37, 8.59)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	SBP (during recovery)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	14.36 (7.97, 20.75)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	SBP (during recovery)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-102.58 (-108.64, -96.52)	General anesthesia with sevoflurane

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	SBP (during recovery)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	11.58 (5.95, 17.21)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	DBP (during recovery)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	6.7 (2.39, 11.01)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	DBP (during recovery)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	6.22 (1.96, 10.48)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	DBP (during recovery)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	3.6 (-0.76, 7.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	HR (during recovery)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	6.69 (1.36, 12.02)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	HR (during recovery)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	6.48 (1.45, 11.51)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	HR (during recovery)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	5.65 (0.58, 10.72)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during recovery) (Mean arterial blood pressure)	10 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	8.94 (4.42, 13.46)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during recovery) (Mean arterial blood pressure)	20 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	8.81 (4.35, 13.27)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during recovery) (Mean arterial blood pressure)	30 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	6.3 (1.87, 10.73)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	MAP (during recovery) (Mean arterial blood pressure)	40 min	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	8.2 (4.14, 12.26)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	Vomiting in recovery (Patients in recovery)	Postop 1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	RR	9.00(1.18,68.42)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	Ephedrine (during operation) (Patients in recovery)	Postop 1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	RR	0.50(0.10,2.61)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	Morphine (mg) (Morphine consumption - Patients in recovery)	Postop 1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	1.77 (1.15, 2.39)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	Bleeding (ml) (during operation) (Patients in recovery)	Postop 1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	148.7 (103.30, 194.10)	Spinal anesthesia with lidocaine 5%

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	Time to discharge (min) Alderte score>9 (Patients in recovery)	Postop 1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	-6.22 (-8.72, -3.72)	General anesthesia with sevoflurane
Parker, M. J. 2015	Moderate	Anesthesia length (Length of anaesthesia (minutes))	Intraop 1 days	General anaesthesia	Regional (spinal) anaesthesia	Mean Difference	-0.7 (-4.52, 3.12)	NS
Parker, M. J. 2015	Moderate	Hypotension (Intra operative hypotension)	Intraop 1 days	General anaesthesia	Regional (spinal) anaesthesia	RR	1.82(0.84,3.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Blood transfusion (Mean units blood transfused)	Intraop 1 days	General anaesthesia	Regional (spinal) anaesthesia	Mean Difference	0 (-0.17, 0.17)	NS
Parker, M. J. 2015	Moderate	Patient transfusion (Number of patients transfused)	Intraop 1 days	General anaesthesia	Regional (spinal) anaesthesia	RR	0.90(0.56,1.43)	NS
Parker, M. J. 2015	Moderate	Hospital stay (Mean orthopaedic ward stay (days))	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	Mean Difference	-0.9 (-3.24, 1.44)	NS
Parker, M. J. 2015	Moderate	Hospital stay (Mean total hospital stay (days))	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	Mean Difference	-0.3 (-3.40, 2.80)	NS
Parker, M. J. 2015	Moderate	Hospital stay (Discharged to same residence)	Postop 2 wks	General anaesthesia	Regional (spinal) anaesthesia	RR	1.01(0.94,1.08)	NS
Parker, M. J. 2015	Moderate	Mortality (Died by 30 days)	Postop 30days	General anaesthesia	Regional (spinal) anaesthesia	RR	1.54(0.52,4.61)	NS
Parker, M. J. 2015	Moderate	Mortality (Died by 90 days)	Postop 90days	General anaesthesia	Regional (spinal) anaesthesia	RR	0.96(0.45,2.08)	NS
Parker, M. J. 2015	Moderate	Mortality (Died by 120 days)	Postop 120days	General anaesthesia	Regional (spinal) anaesthesia	RR	0.77(0.37,1.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Mortality (Died by 1 year)	Postop 1 yrs	General anaesthesia	Regional (spinal) anaesthesia	RR	0.57(0.34,0.97)	General anaesthesia
Shin, S. 2020	High	Anesthesia time (minutes)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Crystalloid (mL)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Colloid (mL)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Urine output (mL)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Blood loss (mL) transfusion	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Amount of pRBC (U)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Vasopressor use	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	RR	1.05(0.78,1.41)	NS
Shin, S. 2020	High	Hospital days	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	ICU days	Postop 1 days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.06	N/A	NS
Shin, S. 2020	High	Ventilator days	Postop 1 days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Postoperative days	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Anesthesia time (minutes)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Crystalloid (mL)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p<.05	N/A	Treatment 2 (Spinal)
Shin, S. 2020	High	Colloid (mL)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Urine output (mL)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Blood loss (mL) transfusion	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Amount of pRBC (U)	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Vasopressor use %	Periop 145min	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported	N/A	

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Hospital days	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	ICU days	Postop 1 days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	Ventilator days	Postop 1 days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	Postoperative days	Postop 1 wks	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	In-hospital mortality	Postop 1 days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	RR	0.48(0.05,5.19)	NS
Shin, S. 2020	High	30-day mortality	Postop 30days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	RR	1.93(0.18,20.75)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	90-day mortality	Postop 90days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	Spinal anesthesia: Patients in the spinal group received spinalanesthesia with hyperbaric bupivacaine and were administered 3 L ofO2 via nasal prong. The dose of hyperbaric bupivacaine used was 9mg in patients shorter than 160 cm, and 11 mg in those 160 cm ortaller. Patients that requested or required intraoperative sedation wereadministered midazolam starting at doses of 0.02 mg/kg.	RR	0.97(0.20,4.60)	NS
Shin, S. 2020	High	In-hospital mortality	Postop 1 days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shin, S. 2020	High	30-day mortality	Postop 30days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS
Shin, S. 2020	High	90-day mortality	Postop 90days	General anesthesia w/ desflurane: In the desflurane group, patientsreceived pentothal sodium, cisatracurium, and remifentanil forinduction. Anesthesia was maintained with desflurane in oxygen-airmixture (40:60) and remifentanil infusion.	General anesthesia w/ propofol based total intravenous anesthesia:Patients in the propofol group received propofol, remifentanil, andcisatracurium for anesthesia induction and were maintained withtarget-controlled infusion (TCI) of propofol and remifentanil based onthe Marsh [7] and Minto [8] model for the two drugs, respectively.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Duration of Surgery (min)	Periop 0 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	-1 (-11.34, 9.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Hospital Stay (days)	Post-discharge 8 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	-0.04 (., .)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Preoperative Hb (mg/dl)	Preop 0 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	0.09 (., .)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Postoperative Hb	Postop 0 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	0.05 (., .)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	RBC Transfusion ((n of patients))	Postop 0 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	RR	0.67(0.51,0.88)	General Anesthesia

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Mini Mental State Examination 25)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	1.4 (-0.30, 3.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Instrumental Activities of Daily Living Scale)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	0.68 (0.05, 1.31)	General Anesthesia

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Beck Depression Inventory 6)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	-1.75 (-2.88, -0.62)	Spinal Anesthesia

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Controlled Oral Word Association Test 29)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	1.43 (-2.88, 5.74)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Trail Making Test A 84)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	-24.12 (-48.97, 0.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Trail Making Test B 113)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	-44.92 (-95.93, 6.09)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Three Words-Three Shapes-Copy 5)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	0.42 (-0.47, 1.31)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Three Words-Three Shapes-Incidental recall3)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	0.56 (-0.29, 1.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Color Task Test 69)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	6.14 (-10.77, 23.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (Color-Word Task Test 24)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	8.87 (3.25, 14.49)	General Anesthesia

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tzimas, P. 2018	High	Neurophychological tests (The Clock-Drawing Test 3)	Post-discharge 30 days	General Anesthesia: General anesthesia was induced with fentanyl 3–5mg.kg_x0003_1and propofol 1.5 mg.kg_x0003_1. Intubation wasfacilitated using rocuronium 0.6 mg.kg_x0003_1 and mechanicalventilation was initiated using a 50% oxygen-air mixture and wasadjusted to tidal volumes of 6–8 ml/ Kg, respiratory rate of 10–12/min,aiming at SpO2 values >97% and end-tidal carbon dioxide values ofabout 35 mmHg. Anesthesia was maintained with Desflurane byadjusting end-tidal concen- trations.	Spinal Anesthesia: In the group receiving subarachnoid anesthesia (Sgroup), the L3-L4 or L4-C5 intervertebral spaces were selected forspinal puncture, a Quincke 25 G needle was used. Fentanyl 20 mcgand ropivacaine 0.75% were administered in volume according to thesomatometric characteristics of the patient. In case of hypotension,(reduction of systolic arterial blood pressure >30% of the pre-procedure values or <100 mmHg), Etilefrine Hydrochloride wasadministered intravenously at doses of 1 mg. None of the patientsreceived any sedation in the spinal group.	Mean Difference	0.27 (-0.19, 0.73)	NS

Table 29: Anesthesia- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Haghighi, M. 2017	Moderate	VAS (Patients in recovery)	Postop 1 days	General anesthesia with sevoflurane: Anesthesia was induced withfentanyl 2?g/ kg, propofol 2mg/kg and then 0.5 mg/kg atracurium wasinjected during 30 seconds and patients were intubated. Thensevoflurane with Minimum Alveolar Concentration, MAC (1.3-1.5%),oxygen 50% and N2O 50% were used. Mechanical ventilation with tidalvolume (TV=10 cc kg) and respiratory rate (RR=10-12) for continuingPCO2 at 36-46 mmHg were established. At the end of the operationsevoflurane and N2O were discontinued and neuromuscular block wasrevers using neostigmine 0.04 mg/kg and atropine 0.02 mg/kg.	Spinal anesthesia with lidocaine 5%: Lumbar puncture was performedin sitting position using a 25-gauge needle positioned midline at theL2-3 or L3-4 vertebral interspaces. All patients in spinal group receivedsupplemental oxygen via a facemask at a rate of 6 L per minute duringthe procedure. Then 1.5 ml lidocaine 5% (75 mg lidocaine) with 0.1 mgepinephrine were injected. During surgery the heart rate, systolic anddiastolic blood pressure and mean arterial blood pressure werechecked every 10 minutes. Intraoperative hypotension (MAP thatexceeds 20% of baseline MAP) and bradycardia (HR < 50 beats/minuteor decrease > 20% from baseline HR) were treated.	Mean Difference	2.5 (1.79, 3.21)	Spinal anesthesia with lidocaine 5%

Table 30. Anesthesia - Misc

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Davis et al 1981	Blood Loss (mL)	Immediate	Subarachnoid Block	General Anesthesia	132	Mean difference	-201.00	0.00	N/A	Favors Subarachnoid Block
Davis et al 1981	Mortality	4 weeks	Subarachnoid Block	General Anesthesia	132	Risk ratio	0.35	0.11	N/A	NS
Davis et al 1981	Delay time: Injury to Surgery (hr)	Immediate	Subarachnoid Block	General Anesthesia	132	Mean difference	-1.00	0.74	N/A	NS
Davis et al 1981	Duration of Anesthesia (min)	Immediate	Subarachnoid Block	General Anesthesia	132	Mean difference	0.00	1.00	N/A	NS
McKenzie et al 1984	Mean (SEM) Blood Loss (mL)	Immediate	Subarachnoid Blockade	General Anesthesia	148	Mean difference	16.00	0.76	N/A	NS
McKenzie et al 1984	Mean (SEM) Length of Stay in Acute Hospital (days)	Immediate	Subarachnoid Blockade	General Anesthesia	148	Mean difference	-4.10	0.69	N/A	NS
McKenzie et al 1984	Mean (SEM) Duration of All Types of Hospitalization (days)	Immediate	Subarachnoid Blockade	General Anesthesia	148	Mean difference	3.00	0.87	N/A	NS
McKenzie et al 1984	Mean (SEM) Duration of Surgery (min)	Immediate	Subarachnoid Blockade	General Anesthesia	148	Mean difference	5.00	0.23	N/A	NS
McKenzie et al 1984	Mortality	56 days	Subarachnoid Blockade	General Anesthesia	148	Risk ratio	1.03	0.94	N/A	NS
McKenzie et al 1984	Mortality	14 days	Subarachnoid Blockade	General Anesthesia	148	Risk ratio	0.26	0.03	N/A	Subarachnoid Blockade
Valentin et al 1986	Blood Loss		Spinal Anesthesia	General Anesthesia	578	N/A	-	-	p<0.001	Favors Spinal
Valentin et al 1986	Ambulation (chair) in days	Immediate	Spinal Anesthesia	General Anesthesia	578	N/A	-	-	NR	NS
Valentin et al 1986	Ambulation (walking) in days	Immediate	Spinal Anesthesia	General Anesthesia	578	N/A	-	-	NR	NS
Valentin et al 1986	Discharge (days)	Immediate	Spinal Anesthesia	General Anesthesia	578	N/A	-	-	NR	NS
Valentin et al 1986	Mortality	30 days	Spinal Anesthesia	General Anesthesia	578	Risk ratio	1.29	0.40	N/A	NS
Valentin et al 1986	Mortality	2 Years	Spinal Anesthesia	General Anesthesia	578	N/A	-	-	p<0.05	NS

Table 31: STABLE FEMORAL NECK FRACTURES (SURGERY VS NO SURGERY)- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Complications (Nonunion)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	0.83(0.27,2.56)	NS
Wei, P. 2020	High	Complications (AVN)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	2.00(0.19,21.37)	NS
Wei, P. 2020	High	Complications (Wound infection)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RD	.(.,.)	NS
Wei, P. 2020	High	Complications (Periprosthetic fracture)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Complications (DVT)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RD	0.00(0.00,0.00)	NS
Wei, P. 2020	High	Complications (Pulmonary infection)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RD	-0.02(-0.06,0.02)	NS
Wei, P. 2020	High	Reoperations (Total)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	0.86(0.31,2.37)	NS
Wei, P. 2020	High	Complications (Nonunion)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Complications (AVN)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS
Wei, P. 2020	High	Complications (Wound infection)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	.(.,.)	NS
Wei, P. 2020	High	Complications (Periprosthetic fracture)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	.(.,.)	NS
Wei, P. 2020	High	Complications (DVT)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RD	0.02(-0.02,0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Complications (Pulmonary infection)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RD	-0.02(-0.06,0.02)	NS
Wei, P. 2020	High	Reoperations (Total)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	0.42(0.11,1.54)	NS

Table 32: STABLE FEMORAL NECK FRACTURES (SURGERY VS NO SURGERY)- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Harris Hip score	1 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	2.47 (-4.83, 9.77)	NS
Wei, P. 2020	High	Harris Hip score	3 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	1.35 (-6.22, 8.92)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Harris Hip score	6 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	1.19 (-5.62, 8.00)	NS
Wei, P. 2020	High	Harris Hip score	12 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	2.13 (-5.15, 9.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Harris Hip score	24 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	1.33 (-6.27, 8.93)	NS
Wei, P. 2020	High	Harris Hip score	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.23 (-7.28, 7.74)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	EQ-5D	1 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.01 (-0.09, 0.11)	NS
Wei, P. 2020	High	EQ-5D	3 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0 (-0.09, 0.09)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	EQ-5D	6 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.01 (-0.09, 0.11)	NS
Wei, P. 2020	High	EQ-5D	12 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-0.01 (-0.13, 0.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	EQ-5D	24 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.02 (-0.10, 0.14)	NS
Wei, P. 2020	High	EQ-5D	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0 (-0.09, 0.09)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Harris Hip score	1 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	15.19 (8.24, 22.14)	Hemi-arthroplasty
Wei, P. 2020	High	Harris Hip score	3 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	12.01 (5.15, 18.87)	Hemi-arthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Harris Hip score	6 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	12.86 (5.84, 19.88)	Hemi-arthroplasty
Wei, P. 2020	High	Harris Hip score	12 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	2.59 (-4.80, 9.98)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Harris Hip score	24 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	1.99 (-5.16, 9.14)	NS
Wei, P. 2020	High	Harris Hip score	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.66 (-6.94, 8.26)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	EQ-5D	1 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.11 (0.01, 0.21)	Hemi-arthroplasty
Wei, P. 2020	High	EQ-5D	3 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.11 (0.01, 0.21)	Hemi-arthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	EQ-5D	6 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.08 (-0.02, 0.18)	NS
Wei, P. 2020	High	EQ-5D	12 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.07 (-0.05, 0.19)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	EQ-5D	24 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.03 (-0.08, 0.14)	NS
Wei, P. 2020	High	EQ-5D	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.01 (-0.08, 0.10)	NS

Table 33: STABLE FEMORAL NECK FRACTURES (SURGERY VS NO SURGERY)- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Operative duration, min	1 days	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS
Wei, P. 2020	High	Blood loss, mL	1 days	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Hospital stay	1 wks	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.44 (-2.70, 3.58)	NS
Wei, P. 2020	High	Mortality (Mortality @ 1 month)	1 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	0.67(0.12,3.82)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Mortality (Mortality @ 3 months)	3 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.40(0.48,4.12)	NS
Wei, P. 2020	High	Mortality (Mortality @ 6 months)	6 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.00(0.41,2.46)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Mortality (Mortality @ 12 months)	12 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.08(0.55,2.14)	NS
Wei, P. 2020	High	Mortality (Mortality @ 24 months)	24 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.06(0.63,1.77)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Mortality (Mortality @ 36 months)	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.08(0.73,1.61)	NS
Wei, P. 2020	High	Operative duration, min	1 days	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Blood loss, mL	1 days	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Author Reported - p>.05	N/A	NS
Wei, P. 2020	High	Hospital stay	1 wks	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-1.1 (-3.42, 1.22)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Mortality (Mortality @ 1 month)	1 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	0.98(0.21,4.63)	NS
Wei, P. 2020	High	Mortality (Mortality @ 3 months)	3 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.57(0.55,4.48)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Mortality (Mortality @ 6 months)	6 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.10(0.46,2.64)	NS
Wei, P. 2020	High	Mortality (Mortality @ 12 months)	12 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.14(0.59,2.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	Mortality (Mortality @ 24 months)	24 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.04(0.62,1.73)	NS
Wei, P. 2020	High	Mortality (Mortality @ 36 months)	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	RR	1.02(0.68,1.53)	NS

Table 34: STABLE FEMORAL NECK FRACTURES (SURGERY VS NO SURGERY)- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	VAS	1 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.19 (-0.62, 1.00)	NS
Wei, P. 2020	High	VAS	3 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-0.11 (-0.77, 0.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	VAS	6 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-0.04 (-0.57, 0.49)	NS
Wei, P. 2020	High	VAS	12 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-0.06 (-0.33, 0.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	VAS	24 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.06 (-0.10, 0.22)	NS
Wei, P. 2020	High	VAS	36 mos	Internal fixation: IF group, situ fixation of IFNF with three cannulatedscrews percutaneously was performed. No weight-bearing mobilizationwith crutches was trained after 2 weeks of bed rest. Bed-to-wheelchairtransfer training was similar to those of CST group.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.03 (-0.16, 0.22)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	VAS	1 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	2.22 (1.20, 3.24)	Conservative treatment
Wei, P. 2020	High	VAS	3 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.04 (-0.66, 0.74)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	VAS	6 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-0.16 (-0.67, 0.35)	NS
Wei, P. 2020	High	VAS	12 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	-0.02 (-0.32, 0.28)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wei, P. 2020	High	VAS	24 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.1 (-0.06, 0.26)	NS
Wei, P. 2020	High	VAS	36 mos	Hemi-arthroplasty: HA group, the procedure was performed through adirect lateral approach with bipolar uncemented prosthesis. All patientsin this group were encouraged to walk with a walking frame the secondday after surgery.	Conservative treatment: The patients in CST group also receivedLMWH or rivaroxaban daily as antithrombotic prophylaxis in the first 2weeks after injury.	Mean Difference	0.06 (-0.11, 0.23)	NS

Table 35: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Johansson, T. 2001	High	Complications (Heterotopic ossification (HO).)	1 yrs	Total hip arthroplasty: Total hip arthroplasty was performed with acemented prosthesis	Fixation: Osteosynthesis was performed with two parallel andpercutaneously inserted screws (Olmed; Olmed Medical AB, Uppsala,Sweden) after closed reduction and with the aid of two-planefluoroscopy.	RR	27.73(3.97,193.70)	Fixation

Table 36: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- - Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Complications (Decubitus ulcer Pneumonia)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	0.82(0.24,2.75)	NS
Cao, L. 2014	Moderate	Complications (Deep vein thrombosis)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	1.43(0.43,4.77)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Complications (Stroke)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	0.98(0.31,3.13)	NS
Cao, L. 2014	Moderate	Complications (Infection in urinary system)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	1.63(0.30,8.76)	NS
Cao, L. 2014	Moderate	Complications (Deep infection)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	0.98(0.31,3.13)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Complications (Deep infection)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	2.04(0.40,10.33)	NS
Cao, L. 2014	Moderate	Intraoperative bleeding	1 days	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Mean Difference	404.6 (378.02, 431.18)	Closed reduction and internal fixation (CRIF)
Cao, L. 2014	Moderate	Complications (Systemic complications)		Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	1.17(0.72,1.89)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Complications (Postoperative general complication)		Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	RR	0.48(0.34,0.68)	Total hip arthroplasty
Dolatowski F. C. 2019	Moderate	Major reoperations	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.23(0.09,0.59)	Hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Minor and moderate reoperations	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.62(0.15,2.52)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Major surgical complications	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.36(0.17,0.72)	Hemiarthroplasty
Jolly A. 2019	Moderate	Superficial infections	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	2.00(0.64,6.22)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Deep infections	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RD	0.08(0.00,0.16)	CRIF with PFN
Jolly A. 2019	Moderate	Bed sores	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	0.25(0.09,0.70)	Hemiarthroplasty (cemented)
Jolly A. 2019	Moderate	Urinary tract infections	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	0.50(0.16,1.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Venous thromboembolism	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	0.33(0.07,1.57)	NS
Jolly A. 2019	Moderate	Time to full weight bearing in weeks [SD]	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Mean Difference	-6.9 (-8.52, -5.28)	Hemiarthroplasty (cemented)
Jolly A. 2019	Moderate	Lower respiratory tract infection	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	1.00(0.26,3.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Mortality	Postop 1 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	0.50(0.10,2.61)	NS
Jolly A. 2019	Moderate	Number of Complications related to implant	Postop 1 yrs	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	1.60(0.63,4.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Complications	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	RR	0.27(0.08,0.90)	Femoral head replacement
Stoen R. O. 2014	Moderate	Reoperations	Postop 6 yrs	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	RR	0.23(0.13,0.43)	Hemiarthroplasty (bipolar)

Table 37: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- - Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Harris Hip Score (Harris scores of 80-100 (good to excellent))	1 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p<.05	N/A	Treatment 1 (THA group)
Cao, L. 2014	Moderate	Harris Hip Score (Harris scores of 80-100 (good to excellent))	2 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p<.05	N/A	Treatment 1 (THA group)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Harris Hip Score (Harris scores of 80-100 (good to excellent))	3 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p<.05	N/A	Treatment 1 (THA group)
Cao, L. 2014	Moderate	Harris Hip Score (Harris scores of 80-100 (good to excellent))	4 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p<.05	N/A	Treatment 1 (THA group)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Harris Hip Score (Harris scores of 80-100 (good to excellent))	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p<.05	N/A	Treatment 1 (THA group)
Desteli E. E. 2015	Moderate	Social Functioning	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	Mean Difference	-0.25 (-0.29, -0.21)	Proximal Femoral Nail
Desteli E. E. 2015	Moderate	Social Functioning	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	Mean Difference	0.05 (-0.00, 0.10)	NS
Desteli E. E. 2015	Moderate	Social Functioning	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	Mean Difference	0.27 (0.20, 0.34)	Cementless Bipolar Hemiarthroplasty
Desteli E. E. 2015	Moderate	Mobility Scores	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	Mean Difference	0.69 (0.63, 0.75)	Cementless Bipolar Hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Mobility Scores	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	Mean Difference	-0.14 (-0.19, -0.09)	Proximal Femoral Nail
Desteli E. E. 2015	Moderate	Mobility Scores	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	Mean Difference	-0.26 (-0.31, -0.21)	Proximal Femoral Nail
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - No problem in walking)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	2.86(0.83,9.86)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - No problem in walking)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.05(0.50,2.21)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - No problem in walking)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.76(0.41,1.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - Some problems inwalking)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.79(0.61,1.02)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - Some problems inwalking)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.92(0.69,1.23)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - Some problems inwalking)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.10(0.81,1.50)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - Confined to bed)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.43(0.43,4.72)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - Confined to bed)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.91(0.37,9.88)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Mobility - Confined to bed)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.91(0.18,20.28)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - No problem with selfcare)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.16(0.66,2.04)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - No problem with selfcare)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.00(0.63,1.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - No problem with selfcare)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.62,1.47)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - Some problems withself care)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.76(0.46,1.26)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - Some problems withself care)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.90(0.54,1.50)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - Some problems withself care)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.57,1.61)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - Unable to wash ordress)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.31(0.59,2.94)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - Unable to wash ordress)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.34(0.46,3.88)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Self Care - Unable to wash ordress)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.43(0.43,4.72)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - No problem inUA)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.53(0.54,4.30)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - No problem inUA)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.06(0.48,2.35)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - No problem inUA)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.88(0.43,1.76)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - Some problems inUA)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.91(0.60,1.39)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - Some problems inUA)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.66,1.39)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - Some problems inUA)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.99(0.69,1.44)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - Unable to performUA)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.54,1.70)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - Unable to performUA)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.06(0.48,2.35)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Usual activities - Unable to performUA)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.27(0.48,3.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - No pain ordiscomfort)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	2.05(0.93,4.51)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - No pain ordiscomfort)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.85(0.50,1.43)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - No pain ordiscomfort)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.80(0.48,1.34)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - Moderate pain ordiscomfort)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.85(0.61,1.19)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - Moderate pain ordiscomfort)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.29(0.87,1.91)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - Moderate pain ordiscomfort)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.23(0.84,1.80)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - Extreme pain ordiscomfort)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.55(0.17,1.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - Extreme pain ordiscomfort)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.24(0.03,2.05)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Pain/Discomfort - Extreme pain ordiscomfort)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.06,14.77)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/Depression - Not Anxious/depressed)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.00(0.67,1.49)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - Not Anxious/depressed)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.03(0.72,1.48)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - Not Anxious/depressed)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.03(0.73,1.45)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - Moderately Anxious/ depressed)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.01(0.59,1.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - Moderately Anxious/ depressed)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.52,1.75)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - Moderately Anxious/ depressed)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	1.10(0.60,2.03)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - ExtremelyAnxious/ depressed)	3 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.26,3.57)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - ExtremelyAnxious/ depressed)	12 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.95(0.26,3.57)	NS
Desteli E. E. 2015	Moderate	Eq-5D (Evaluation of quality of life) (Anxiety/ Depression - ExtremelyAnxious/ depressed)	24 mos	Cementless Bipolar Hemiarthroplasty: treated with cementless bipolarHA (Osteonics, Allendale, NJ, USA).	Proximal Femoral Nail: intramedullary nailing, with an antirotator PFNA(TST Medical Devices, Istanbul, Turkey)	RR	0.48(0.09,2.47)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Hip function (HHS)	Postop 3 mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	3 (-2.10, 8.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Hip function (HHS)	Postop 12mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	3 (-2.76, 8.76)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Hip function (HHS)	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	2 (-3.87, 7.87)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mobility (TUG)	Postop 3 mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	-2.7 (-6.76, 1.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mobility (TUG)	Postop 12mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	-5.3 (-9.62, -0.98)	Screw fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mobility (TUG)	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	-3.8 (-8.19, 0.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Quality of life (EQ-5D)	Postop 3 mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	0.07 (-0.01, 0.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Quality of life (EQ-5D)	Postop 12mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	0.07 (-0.02, 0.16)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Quality of life (EQ-5D)	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	0.1 (0.01, 0.19)	Hemiarthroplasty
Johansson T. 2014	Moderate	Mental function failure	Postop 15 yrs	Total hip arthroplasty (Cemented total hip replacement): Total hiparthroplasty was performed with a cemented prosthesis (Lubinus IP;LINK, Hamburg, Germany) using a posterolateral approach.	Internal fixation (Closed reduction and internal fixation with two screws):After closed reduction, internal fixation was performed with two paralleland percutaneously inserted screws (Olmed; DePuy/Johnson &Johnson) with the aid of two-plane fluoroscopy.	RR	0.24(0.12,0.51)	Total hip arthroplasty (Cemented total hip replacement)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Harris Hip Score (Mean) (Mean (SD))	Postop 3 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Mean Difference	24.7 (21.37, 28.03)	Hemiarthroplasty (cemented)
Jolly A. 2019	Moderate	Harris Hip Score (Mean) (Mean (SD))	Postop 6 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Mean Difference	-3.8 (-9.74, 2.14)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Harris Hip Score (Mean) (Mean (SD))	Postop 12mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Mean Difference	-16.4 (-22.91, -9.89)	CRIF with PFN
Jolly A. 2019	Moderate	Harris Hip Score (Excellent) (Excellent)	Postop 12mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	0.67(0.39,1.16)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Harris Hip Score (Good) (Good)	Postop 12mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	0.88(0.43,1.79)	NS
Jolly A. 2019	Moderate	Reduction in Mobility Score (mean)	Postop 6 mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Author Reported	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Reduction in Mobility Score (mean)	Postop 12mos	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl- methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Author Reported	N/A	NS
Lu Q. 2017	High	Harris Hip Score (Excellent)	Postop 6 mos	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	RR	0.62(0.28,1.38)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Harris Hip Score (Good)	Postop 6 mos	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	RR	0.58(0.24,1.38)	NS
Lu Q. 2017	High	Harris Hip Score (Fair)	Postop 6 mos	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	RR	3.45(1.26,9.49)	Hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Harris Hip Score (Poor)	Postop 6 mos	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	RR	1.70(0.62,4.66)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Harris Hip Score	Postop 1 wks	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	9.3 (8.05, 10.55)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Harris Hip Score	Postop 1 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	12.8 (10.43, 15.17)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Harris Hip Score	Postop 3 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	15.3 (12.58, 18.02)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Harris Hip Score	Postop 6 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	3.9 (1.93, 5.87)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Harris Hip Score	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	4.2 (3.12, 5.28)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	SF-12 scores (Physical score)	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	4.9 (3.93, 5.87)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	SF-12 scores (Psychological score)	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	5.2 (4.35, 6.05)	Femoral head replacement
Stoen, R. O. 2014	High	Harris hip score (Mean (SD))	4 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	8 (2.72, 13.28)	Hemiarthroplasty
Stoen, R. O. 2014	High	Harris hip score (Mean (SD))	12 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	7 (1.80, 12.20)	Hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen, R. O. 2014	High	Harris hip score (Mean (SD))	24 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	3 (-2.80, 8.80)	NS
Stoen, R. O. 2014	High	Harris hip score (Mean (SD))	6 yrs	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	0 (-9.32, 9.32)	NS
Stoen, R. O. 2014	High	Eq-5D index (Index score - Mean (SD))	4 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	0.08 (-0.02, 0.18)	NS
Stoen, R. O. 2014	High	Eq-5D index (Index score - Mean (SD))	12 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	0.09 (-0.02, 0.20)	NS
Stoen, R. O. 2014	High	Eq-5D index (Index score - Mean (SD))	24 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	0.11 (0.01, 0.21)	Hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen, R. O. 2014	High	Eq-5D index (Index score - Mean (SD))	6 yrs	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	-0.16 (-0.34, 0.02)	NS
Stoen, R. O. 2014	High	Eq-5D index (Visual analog scale - Mean (SD))	4 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	9 (2.12, 15.88)	Hemiarthroplasty
Stoen, R. O. 2014	High	Eq-5D index (Visual analog scale - Mean (SD))	12 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	6 (-2.51, 14.51)	NS
Stoen, R. O. 2014	High	Eq-5D index (Visual analog scale - Mean (SD))	24 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	0 (-8.19, 8.19)	NS
Stoen, R. O. 2014	High	Eq-5D index (Visual analog scale - Mean (SD))	6 yrs	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	Mean Difference	-4 (-17.44, 9.44)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen, R. O. 2014	High	Barthel index score of 95 or 100 (Number (%) of patients with)	4 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	RR	1.07(0.78,1.47)	NS
Stoen, R. O. 2014	High	Barthel index score of 95 or 100 (Number (%) of patients with)	12 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	RR	1.50(1.05,2.14)	Hemiarthroplasty
Stoen, R. O. 2014	High	Barthel index score of 95 or 100 (Number (%) of patients with)	24 mos	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	RR	1.52(1.03,2.26)	Hemiarthroplasty
Stoen, R. O. 2014	High	Barthel index score of 95 or 100 (Number (%) of patients with)	6 yrs	Hemiarthroplasty: Cemented Charnley-Hastings bipolar hemiprosthesiswas used through a direct lateral approach. The hemiarthroplasty groupwas intravenously given 2 g cephalotin preoperatively with anotherthree doses the first 24 hours after surgery.	Internal Fixation: Internal fixation was performed with two parallelcannulated screws after closed reduction.	RR	1.22(0.73,2.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Harris hip score (Mean (SD))	Postop 4 mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	8 (2.72, 13.28)	Hemiarthroplasty (bipolar)
Stoen R. O. 2014	Moderate	Harris hip score (Mean (SD))	Postop 12mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	7 (1.80, 12.20)	Hemiarthroplasty (bipolar)
Stoen R. O. 2014	Moderate	Harris hip score (Mean (SD))	Postop 24mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	3 (-2.80, 8.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Harris hip score (Mean (SD))	Postop 6 yrs	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	0 (-9.32, 9.32)	NS
Stoen R. O. 2014	Moderate	Eq-5D (Index) (Index score - Mean (SD))	Postop 4 mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	0.08 (-0.02, 0.18)	NS
Stoen R. O. 2014	Moderate	Eq-5D (Index) (Index score - Mean (SD))	Postop 12mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	0.09 (-0.02, 0.20)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Eq-5D (Index) (Index score - Mean (SD))	Postop 24mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	0.11 (0.01, 0.21)	Hemiarthroplasty (bipolar)
Stoen R. O. 2014	Moderate	Eq-5D (Index) (Index score - Mean (SD))	Postop 6 yrs	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	-0.16 (-0.34, 0.02)	NS
Stoen R. O. 2014	Moderate	Eq-5D (Visual analog scale) (Visual analog scale - Mean (SD))	Postop 4 mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	9 (2.12, 15.88)	Hemiarthroplasty (bipolar)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Eq-5D (Visual analog scale) (Visual analog scale - Mean (SD))	Postop 12mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	6 (-2.51, 14.51)	NS
Stoen R. O. 2014	Moderate	Eq-5D (Visual analog scale) (Visual analog scale - Mean (SD))	Postop 24mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	0 (-8.19, 8.19)	NS
Stoen R. O. 2014	Moderate	Eq-5D (Visual analog scale) (Visual analog scale - Mean (SD))	Postop 6 yrs	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	Mean Difference	-4 (-17.44, 9.44)	NS

Table 38: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- - Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Walking ability (%) (% assisted by ambulatory aids)	1 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p<.05	N/A	Treatment 1 (THA group)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Walking ability (%) (% assisted by ambulatory aids)	2 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Walking ability (%) (% assisted by ambulatory aids)	3 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Walking ability (%) (% assisted by ambulatory aids)	4 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Walking ability (%) (% assisted by ambulatory aids)	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Table 39: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- - Function cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Chammout et al 2012	Time Required to Walk 30m (seconds)	17 years	Total Hip Replacement	Internal Fixation	100	Mean difference	-13.00	-	0.005	Favors Internal Fixation
Davison et al, 2001	Functional Status (return to preinjury state), months	36	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	-6.20	-	No, p=0.09	No Difference
El-Abed et al, 2005	Functional Status (SF-36)	>36	Uncemented hemiarthroplasty	Closed Reduction and fixation with DHS	122	Mean difference	-24.00	-	Yes, p=0.002	Favors DHS
Frihagen et al 2007	Barthel Index Score of 95 or 100	4	Hemiarthroplasty	Internal Fixation	168	Risk ratio	1.07	0.66	N/A	NS
Frihagen et al 2007	Barthel Index Score of 95 or 100	12	Hemiarthroplasty	Internal Fixation	160	Risk ratio	1.50	0.03	N/A	Favors Hemi
Frihagen et al 2007	Barthel Index Score of 95 or 100	24	Hemiarthroplasty	Internal Fixation	137	Risk ratio	1.52	0.04	N/A	Favors Hemi
Frihagen et al 2007	Barthel Index Score of 95 or 100	4	Hemiarthroplasty	Healed Internal Fixation	116	Risk ratio	1.13	0.59	N/A	NS
Frihagen et al 2007	Barthel Index Score of 95 or 100	12	Hemiarthroplasty	Healed Internal Fixation	110	Risk ratio	1.98	0.02	N/A	Favors Hemi
Frihagen et al 2007	Barthel Index Score of 95 or 100	24	Hemiarthroplasty	Healed Internal Fixation	96	Risk ratio	2.47	0.02	N/A	Favors Hemi
Frihagen et al 2007	Barthel Index Score of 95 or 100	4	Hemiarthroplasty	Reoperated Internal Fixation	117	Risk ratio	1.16	0.51	N/A	NS
Frihagen et al 2007	Barthel Index Score of 95 or 100	12	Hemiarthroplasty	Reoperated Internal Fixation	110	Risk ratio	1.32	0.22	N/A	NS
Frihagen et al 2007	Barthel Index Score of 95 or 100	24	Hemiarthroplasty	Reoperated Internal Fixation	98	Risk ratio	1.44	0.17	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Walking	4	Hemiarthroplasty	Fixation	207	Mean difference	1.90	0.01	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Function	4	Hemiarthroplasty	Fixation	207	Mean difference	1.60	0.01	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Walking	12	Hemiarthroplasty	Fixation	207	Mean difference	1.00	0.24	N/A	NS

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Keating et al 2005	Hip Rating Questionnaire: Function	12	Hemiarthroplasty	Fixation	207	Mean difference	0.50	0.42	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Walking	24	Hemiarthroplasty	Fixation	207	Mean difference	0.80	0.41	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Function	24	Hemiarthroplasty	Fixation	207	Mean difference	-0.10	0.88	N/A	NS
Mouzopoulos et al, 2008	Functional Status (Barthel Index)	At Discharge	THA	Internal Fixation	75	Mean difference	2.00	0.01	N/A	Arthroplasty
Mouzopoulos et al, 2008	Functional Status (Barthel Index)	12	THA	Internal Fixation	75	Mean difference	7.70	0.01	N/A	Arthroplasty
Mouzopoulos et al, 2008	Functional Status (Harris Hip Score)	At Discharge	THA	Internal Fixation	75	Mean difference	1.30	0.31	N/A	NS
Mouzopoulos et al, 2008	Functional Status (Harris Hip Score)	12	THA	Internal Fixation	75	Mean difference	10.30	0.00	N/A	Arthroplasty
Mouzopoulos et al, 2008	Functional Status (Barthel Index)	At Discharge	Hemiarthroplasty	Internal Fixation	72	Mean difference	1.80	0.08	N/A	NS
Mouzopoulos et al, 2008	Functional Status (Barthel Index)	12	Hemiarthroplasty	Internal Fixation	72	Mean difference	-0.30	0.86	N/A	NS
Mouzopoulos et al, 2008	Functional Status (Harris Hip Score)	At Discharge	Hemiarthroplasty	Internal Fixation	72	Mean difference	0.20	0.88	N/A	NS
Mouzopoulos et al, 2008	Functional Status (Harris Hip Score)	12	Hemiarthroplasty	Internal Fixation	72	Mean difference	6.50	0.00	N/A	Arthroplasty
Parker et. al. 2002	Mobility (Reduction in Mobility Score)	12	Hemiarthroplasty	Internal Fixation	323	Mean difference	0.20	-	No, p=0.27	No Difference
Parker et. al. 2002	Mobility (Reduction in Mobility Score)	24	Hemiarthroplasty	Internal Fixation	228	Mean difference	0.20	-	No, p=0.45	No Difference
Parker et. al. 2002	Functional Status (Shortening mm)	12	Hemiarthroplasty	Internal Fixation	323	Mean difference	-3.40	-	Yes, p=0.004	Hemiarthroplasty
Parker et. al. 2002	Functional Status (Loss of Flexion)	12	Hemiarthroplasty	Internal Fixation	323	Mean difference	0.40	-	No, p=0.83*	No Difference
Ravikumar et al, 2000	Mobility	156	arthroplasty	Internal Fixation	271	Risk ratio	1.06	0.74	N/A	NS
Roden et al 2003	Functional Status (walk as well as before sx)	4	Hemiarthroplasty	Internal Fixation	84	Risk ratio	1.66	0.02	N/A	Arthroplasty
Rogmark et al, 2002	Mobility	24	Arthroplasty	Internal Fixation	409	Risk ratio	0.69	0.01	N/A	Arthroplasty

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Tidermark et al, 2003	Function-Pain (Charnley score)	4	THA	Internal Fixation	102	Mean difference	1.00	-	Yes, p<0.001	Internal fix
Tidermark et al, 2003	Function-Pain (Charnley score)	12	THA	Internal Fixation	102	Mean difference	0.80	-	Yes, p<0.005	Internal fix
Tidermark et al, 2003	Function-Pain (Charnley score)	24	THA	Internal Fixation	102	Mean difference	0.90	-	No, p=0.062	No Difference
Tidermark et al, 2003	Function-Mvmt (Charnley score)	4	THA	Internal Fixation	102	Mean difference	0.30	-	No	No Difference
Tidermark et al, 2003	Function-Mvmt (Charnley score)	12	THA	Internal Fixation	102	Mean difference	0.40	-	Yes, p<0.005	Internal fix
Tidermark et al, 2003	Function-Mvmt (Charnley score)	24	THA	Internal Fixation	102	Mean difference	0.40	-	No	No Difference
Tidermark et al, 2003	Function-Walking (Charnley Score)	4	THA	Internal Fixation	102	Mean difference	0.80	-	Yes, p<0.05	Internal Fix
Tidermark et al, 2003	Function-Walking (Charnley Score)	12	THA	Internal Fixation	102	Mean difference	0.70	-	Yes, p<0.05	Internal fix
Tidermark et al, 2003	Function-Walking (Charnley Score)	24	THA	Internal Fixation	102	Mean difference	0.70	-	No	No Difference

Table 40: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation) - Complications/Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Operative duration	1 days	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Mean Difference	33.9 (32.61, 35.19)	Closed reduction and internal fixation (CRIF)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Length of stay	1 mos	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Mean Difference	7 (4.55, 9.45)	Closed reduction and internal fixation (CRIF)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Mortality	1 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Mortality	2 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Mortality	3 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Mortality	4 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cao, L. 2014	Moderate	Mortality	5 yrs	Total hip arthroplasty: THA was carried out with an uncementedprosthesis via posterior approach to the hip joint, with the patient in alateral position.	Closed reduction and internal fixation (CRIF): All the patientsundergoing CRIF were placed on an orthopedic traction table in thesupine position. Internal fixation was carried out under C-arm X-ray,with a small incision in the lateral femur, which was then internally fixedwith three hollow compression screws	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Duration of surgery (min)	Periop 1 days	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	46 (40.99, 51.01)	Screw fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Intraoperative blood loss (mL)	Periop 1 days	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	236 (208.28, 263.72)	Screw fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Duration of in-hospital care (days)	Periop 1 days	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	2 (0.98, 3.02)	Screw fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mortality	Postop 1 mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.44(0.12,1.66)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mortality	Postop 3 mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.55(0.23,1.33)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mortality	Postop 12mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.78(0.46,1.33)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Dolatowski F. C. 2019	Moderate	Mortality	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	RR	0.72(0.48,1.08)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Johansson, T. 2001	High	Mortality	1 yrs	Total hip arthroplasty: Total hip arthroplasty was performed with acemented prosthesis	Fixation: Osteosynthesis was performed with two parallel andpercutaneously inserted screws (Olmed; Olmed Medical AB, Uppsala,Sweden) after closed reduction and with the aid of two-planefluoroscopy.	RR	0.75(0.38,1.46)	NS
Johansson T. 2014	Moderate	Mortality	Postop 5 yrs	Total hip arthroplasty (Cemented total hip replacement): Total hiparthroplasty was performed with a cemented prosthesis (Lubinus IP;LINK, Hamburg, Germany) using a posterolateral approach.	Internal fixation (Closed reduction and internal fixation with two screws):After closed reduction, internal fixation was performed with two paralleland percutaneously inserted screws (Olmed; DePuy/Johnson &Johnson) with the aid of two-plane fluoroscopy.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Johansson T. 2014	Moderate	Mortality	Postop 10 yrs	Total hip arthroplasty (Cemented total hip replacement): Total hiparthroplasty was performed with a cemented prosthesis (Lubinus IP;LINK, Hamburg, Germany) using a posterolateral approach.	Internal fixation (Closed reduction and internal fixation with two screws):After closed reduction, internal fixation was performed with two paralleland percutaneously inserted screws (Olmed; DePuy/Johnson &Johnson) with the aid of two-plane fluoroscopy.	Author Reported - p>.05	N/A	NS
Johansson T. 2014	Moderate	Mortality	Postop 15 yrs	Total hip arthroplasty (Cemented total hip replacement): Total hiparthroplasty was performed with a cemented prosthesis (Lubinus IP;LINK, Hamburg, Germany) using a posterolateral approach.	Internal fixation (Closed reduction and internal fixation with two screws):After closed reduction, internal fixation was performed with two paralleland percutaneously inserted screws (Olmed; DePuy/Johnson &Johnson) with the aid of two-plane fluoroscopy.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Average Intraoperative blood loss in ml (SD)	Intraop 1 days	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl-methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Mean Difference	141 (129.80, 152.20)	CRIF with PFN

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Mean Operative time in minutes (SD)	Intraop 1 days	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl-methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	Mean Difference	12 (8.73, 15.27)	CRIF with PFN

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jolly A. 2019	Moderate	Mortality at 1 year (including 1st month mortality)	Postop 1 yrs	Hemiarthroplasty (cemented): Primary cemented hemireplacementarthroplasty with bipolar prosthesis. In the cemented hemiarthroplastygroup, the patient was placed in the lateral position under anaesthesiaand the fracture was exposed via the posterior approach. A bipolarprosthesis of appropriate size was fixed with 40 g of bone cement (polymethyl-methacrylate). The average operating time was 50.4 min andthe average blood loss during the procedure was 187 ml.	CRIF with PFN: In the PFN group of patients, Closed Reduction andInternal Fixation was done with the patient on a traction table with shortor standard length proximal femur nails under fluoroscopic guidance.The average operating time was 38.4 min and average blood loss was46 ml.	RR	1.15(0.55,2.40)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Length of incision ((cm))	Periop 1 days	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	Mean Difference	8.5 (7.66, 9.34)	Internal Fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Operation time ((min))	Periop 1 days	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	Mean Difference	20.23 (16.78, 23.68)	Internal Fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Blood loss ((mL))	Periop 1 days	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	Mean Difference	146.42 (137.91, 154.93)	Internal Fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Haemoglobin drop ((g/L))	Periop 1 days	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	Mean Difference	14.43 (12.07, 16.79)	Hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Blood transfusion	Periop 1 days	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	RR	9.97(2.48,40.11)	Internal Fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lu Q. 2017	High	Hospital stay ((days))	Postop 2 wks	Hemiarthroplasty: All hemiarthroplasties were performed using amodified hardinge approach [23] in the lateral decubitus position.Artificial Joint Prosthesis used was a cemented exeter stem (Smith &Nephew Medical Lid, UK) and a bipolar head (Smith & Nephew MedicalLid, UK) with 28 mmdiameter inner head in all cases. Above processesused same cement (Tecres S.P.A., Italy) using third-generationcementing techniques. All patientswere given intravenous infusion ofcefazolin 2 g as antibiotic prophylactics for 3 days after surgery, andsubcutaneous injection of low molecular weight heparin asthromboembolic prophylactics for 10 days after the operation.	Internal Fixation: Patients underwent internal fixation surgery onorthopedic table. Then three 6.5 mm cannulated screws (AO) wereinserted into the femoral necks, and the implant placement was thesame as described by Probe and Ward [22].	Mean Difference	3.72 (3.02, 4.42)	Internal Fixation

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Operation time (min)	Periop 1 days	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-17.6 (-19.09, -16.11)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Intraoperative bleeding (ml)	Periop 1 days	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-153.3 (-161.39, -145.21)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Postoperative drainage time (days)	Periop 1 days	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-1.2 (-1.31, -1.09)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	10 m walking speed (m/sec)	Postop 3 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	0.9 (0.83, 0.97)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	10 m walking speed (m/sec)	Postop 6 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	0.5 (0.39, 0.61)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	10 m walking speed (m/sec)	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	0.4 (0.22, 0.58)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	5-time sit-stand time (sec)	Postop 3 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-16.4 (-21.70, -11.10)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	5-time sit-stand time (sec)	Postop 6 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-7.9 (-10.15, -5.65)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	5-time sit-stand time (sec)	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-8.1 (-10.00, -6.20)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Total hospitalization time	Postop	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-1.9 (-2.32, -1.48)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Time of walking on crutches	Postop	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-5.4 (-5.69, -5.11)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shi H. 2018	Moderate	Time of walking without crutches	Postop	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-62.3 (-66.71, -57.89)	Femoral head replacement

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Number (%) of patients with Barthel index score of 95 or 100	Postop 4 mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	RR	1.07(0.78,1.47)	NS
Stoen R. O. 2014	Moderate	Number (%) of patients with Barthel index score of 95 or 100	Postop 12mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	RR	1.50(1.05,2.14)	Hemiarthroplasty (bipolar)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Number (%) of patients with Barthel index score of 95 or 100	Postop 24mos	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	RR	1.52(1.03,2.26)	Hemiarthroplasty (bipolar)
Stoen R. O. 2014	Moderate	Number (%) of patients with Barthel index score of 95 or 100	Postop 6 yrs	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	RR	1.22(0.73,2.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoen R. O. 2014	Moderate	Mortality	Postop 6 yrs	Hemiarthroplasty (bipolar): Bipolar hemiarthroplasty. Forhemiarthroplasty, a cemented Charnley-Hastings bipolarhemiprosthesis was used through a direct lateral approach	Internal Fixation: Internal fixation with 2 parallel screws. Internal fixationwas performed with two parallel cannulated screws (Olmed;DePuy/Johnson and Johnson, Uppsala, Sweden) after closed reduction	RR	1.14(0.77,1.68)	NS

Table 41: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation) - Complications/Other cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Bachrach-Lindstrom et al 2000	Mortality	12	Primary Total Hip Arthroplasty	Osteosynthesis	100	Risk ratio	1.22	0.62	N/A	NS
Davison et al 2001	Mortality	6	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	1.70	0.28	N/A	NS
Davison et al 2001	Mortality	12	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	1.28	0.51	N/A	NS
Davison et al 2001	Mortality	18	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	1.27	0.47	N/A	NS
Davison et al 2001	Mortality	24	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	1.54	0.16	N/A	NS
Davison et al 2001	Mortality	30	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	1.16	0.55	N/A	NS
Davison et al 2001	Mortality	36	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	1.32	0.25	N/A	NS
Davison et al 2001	Survival Time months	36	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	-14.40	-	Yes, p=0.008	AHS
Frihagen et al 2007	Mortality	30 days	Hemiarthroplasty	Internal Fixation	222	Risk ratio	1.45	0.43	N/A	NS
Frihagen et al 2007	Mortality	90 days	Hemiarthroplasty	Internal Fixation	222	Risk ratio	1.27	0.43	N/A	NS
Frihagen et al 2007	Mortality	12	Hemiarthroplasty	Internal Fixation	222	Risk ratio	1.23	0.39	N/A	NS
Frihagen et al 2007	Mortality	24	Hemiarthroplasty	Internal Fixation	222	Risk ratio	1.02	0.92	N/A	NS
Johansson et al 2000	Mortality	12	THA	Internal Fixation	99	Risk ratio	0.75	0.40	N/A	NS
Mouzopoulos et al 2008	Mortality	12	Any Arthroplasty	Internal Fixation	109	Risk ratio	1.28	0.61	N/A	NS
Mouzopoulos et al 2008	Mortality	12	Hemiarthroplasty	Internal Fixation	72	Risk ratio	1.34	0.60	N/A	NS
Mouzopoulos et al 2008	Mortality	12	THA	Internal Fixation	75	Risk ratio	1.23	.71	N/A	NS
Parker et. al. 2002	Mortality	12	Hemiarthroplasty	Internal Fixation	455	Risk ratio	0.99	0.93	N/A	NS
Parker et. al. 2002	Mortality	24	Hemiarthroplasty	Internal Fixation	455	Risk ratio	1.19	0.07	N/A	NS
Parker et. al. 2002	Mortality	36	Hemiarthroplasty	Internal Fixation	455	Risk ratio	1.13	0.08	N/A	NS
Parker et. al. 2010	Survival Time	11 years	Hemiarthroplasty	Internal Fixation	455	N/A	-	-	No, p=0.424	No Difference

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Ravikumar et al 2000	Mortality	2	arthroplasty	Internal Fixation	271	Risk ratio	0.41	0.04	N/A	Arthroplasty
Ravikumar et al 2000	Mortality	12	arthroplasty	Internal Fixation	271	Risk ratio	0.46	0.00	N/A	Arthroplasty
Roden et al 2003	Mortality	24	Hemiarthroplasty	Internal Fixation	100	Risk ratio	0.64	0.46	N/A	NS
Roden et al 2003	Mortality	60-72	Hemiarthroplasty	Internal Fixation	100	Risk ratio	0.81	0.31	N/A	NS
Rogmark et al 2002	Mortality	During Hospital Stay	Arthroplasty	Internal Fixation	409	Risk ratio	1.70	0.56	N/A	NS
Rogmark et al 2002	Mortality	4	Arthroplasty	Internal Fixation	409	Risk ratio	1.44	0.35	N/A	NS
Rogmark et al 2002	Mortality	12	Arthroplasty	Internal Fixation	409	Risk ratio	1.17	0.53	N/A	NS
Rogmark et al 2002	Mortality	24	Arthroplasty	Internal Fixation	409	Risk ratio	1.01	0.97	N/A	NS
Rogmark et al 2002	Mortality	4	Arthroplasty	Internal Fixation	172	Risk ratio	0.53	0.04	N/A	Favors Arthroplasty
Rogmark et al 2002	Mortality	12	Arthroplasty	Internal Fixation	172	Risk ratio	0.69	0.09	N/A	NS
Sikorski et al 1981	Mortality	3	Posterior Thompson Hemiarthroplasty	Internal Fixation	133	N/A	-	-	<0.05	No difference
Sikorski et al 1981	Mortality	6	Anterior Thompson Arthroplasty	Internal Fixation	152	N/A	-	-	<0.05	Anterior Thompson arthroplasty
Skinner et al 1989	Mortality	2	Hemi arthroplasty	Internal fixation	278	N/A	-	-	>.05	NS
Skinner et al 1989	Mortality	12	Hemi arthroplasty	Internal fixation	278	N/A	-	-	>.05	NS
Tidermark et al 2003	Mortality	24	THA	Internal Fixation	102	Risk ratio	0.54	0.23	N/A	NS
Frihagen et al 2007	Hospital Stay (days)	Varied	Hemiarthroplasty	Internal Fixation	220	Mean difference	2.00	-	0.14	NS
Parker et. al. 2002	Hospital Stay	Varied	Hemiarthroplasty	Internal Fixation	455	Mean difference	-0.30	-	0.91	No Difference
Rogmark et al 2002	Hospital Stay (days)	Varied	Arthroplasty	Internal Fixation	172	Mean difference	1.00	-	>.05	No difference
Rogmark et al, 2002	Hospital Stay	Varied	Arthroplasty	Internal Fixation	409	N/A	-	-	<0.001	Internal Fix
Chammout et al 2012	Major Reoperation	17 years	Total Hip Replacement	Internal Fixation	100	Risk ratio	0.24	0.00	N/A	Favors THR
Davison et al 2001	Revision	6	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	0.06	0.00	N/A	Arthroplasty
Davison et al 2001	Revision	12	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	0.05	0.00	N/A	Arthroplasty

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Davison et al 2001	Revision	18	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	0.04	0.00	N/A	Arthroplasty
Davison et al 2001	Revision	24	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	0.06	0.00	N/A	Arthroplasty
Davison et al 2001	Revision	30	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	0.06	0.00	N/A	Arthroplasty
Davison et al 2001	Revision	36	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Risk ratio	0.05	0.00	N/A	Arthroplasty
El-Abed et al 2005	Revision (convert to THA)	>36	Uncemented hemiarthroplasty	Closed Reduction and fixation with DHS	122	Risk ratio	0.69	0.32	N/A	NS
Frihagen et al 2007	More than one reoperation	24	Hemiarthroplasty	Internal Fixation	219	Risk ratio	0.15	0.01	N/A	Favors Hemi
Davison et al 2001	Quality of Life (Harris hip Score)	12	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	1.90	-	P>.05	No difference
Davison et al 2001	Quality of Life (Harris hip Score)	24	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	5.30	-	P>.05	No difference
Davison et al 2001	Quality of Life (Harris hip Score)	36	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	3.60	-	P>.05	No difference
Davison et al 2001	Quality of Life (Harris hip Score)	48	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	3.50	-	P>.05	No difference
Davison et al 2001	Quality of Life (Harris hip Score)	60	Cemented Arthroplasty	Reduction and internal fixation using an 'Ambi' compression hip screw (AHS) and a two-hole plate	280	Mean difference	3.20	-	P>.05	No difference
Frihagen et al 2007	Eq-5d Index Score	4	Hemiarthroplasty	Internal Fixation	149	Mean difference	0.10	-	0.06	NS
Frihagen et al 2007	Eq-5d Index Score	12	Hemiarthroplasty	Internal Fixation	132	Mean difference	0.10	-	0.07	NS
Frihagen et al 2007	Eq-5d Index Score	24	Hemiarthroplasty	Internal Fixation	104	Mean difference	0.10	-	0.03	Favors Hemi

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Frihagen et al 2007	Eq-5d Visual Analogue Scale	4	Hemiarthroplasty	Internal Fixation	129	Mean difference	9.00	-	0.01	Favors Hemi
Frihagen et al 2007	Eq-5d Visual Analogue Scale	12	Hemiarthroplasty	Internal Fixation	113	Mean difference	6.00	-	0.16	NS
Frihagen et al 2007	Eq-5d Visual Analogue Scale	24	Hemiarthroplasty	Internal Fixation	88	Mean difference	0.00	-	0.84	NS
Frihagen et al 2007	Eq-5d Index Score	4	Hemiarthroplasty	Healed Internal Fixation	99	Mean difference	0.00	-	0.67	NS
Frihagen et al 2007	Eq-5d Index Score	12	Hemiarthroplasty	Healed Internal Fixation	89	Mean difference	0.10	-	0.26	NS
Frihagen et al 2007	Eq-5d Index Score	24	Hemiarthroplasty	Healed Internal Fixation	69	Mean difference	0.20	-	0.03	Favors Hemi
Frihagen et al 2007	Eq-5d Visual Analogue Scale	4	Hemiarthroplasty	Healed Internal Fixation	86	Mean difference	6.00	-	0.22	NS
Frihagen et al 2007	Eq-5d Visual Analogue Scale	12	Hemiarthroplasty	Healed Internal Fixation	76	Mean difference	12.00	-	0.01	Favors Hemi
Frihagen et al 2007	Eq-5d Visual Analogue Scale	24	Hemiarthroplasty	Healed Internal Fixation	57	Mean difference	5.00	-	0.32	NS
Frihagen et al 2007	Eq-5d Index Score	4	Hemiarthroplasty	Reoperated Internal Fixation	107	Mean difference	0.20	-	0.005	Favors Hemi
Frihagen et al 2007	Eq-5d Index Score	12	Hemiarthroplasty	Reoperated Internal Fixation	94	Mean difference	0.20	-	0.07	NS
Frihagen et al 2007	Eq-5d Index Score	24	Hemiarthroplasty	Reoperated Internal Fixation	79	Mean difference	0.10	-	0.07	NS
Frihagen et al 2007	Eq-5d Visual Analogue Scale	4	Hemiarthroplasty	Reoperated Internal Fixation	93	Mean difference	13.00	-	0.005	Favors Hemi
Frihagen et al 2007	Eq-5d Visual Analogue Scale	12	Hemiarthroplasty	Reoperated Internal Fixation	81	Mean difference	4.00	-	0.47	NS
Frihagen et al 2007	Eq-5d Visual Analogue Scale	24	Hemiarthroplasty	Reoperated Internal Fixation	66	Mean difference	0.00	-	0.91	NS

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Tidermark et al 2003	Quality of Life (?EQ-5D)	4	THA	Internal Fixation	102	Mean difference	0.20	0.00	N/A	Arthroplasty
Tidermark et al 2003	Quality of Life (?EQ-5D)	12	THA	Internal Fixation	102	Mean difference	0.10	0.10	N/A	NS
Tidermark et al 2003	Quality of Life (?EQ-5D)	24	THA	Internal Fixation	102	Mean difference	0.10	0.05	N/A	Arthroplasty
Waaler Bjornelv et al 2012	Health-Related Quality of Life	4 months	Hemiarthroplasty	Internal Fixation	166	Mean difference	0.10	0.03	N/A	Favors Hemiarthroplasty
Waaler Bjornelv et al 2012	Health-Related Quality of Life	12 months	Hemiarthroplasty	Internal Fixation	166	Mean difference	0.10	0.07	N/A	NS
Waaler Bjornelv et al 2012	Health-Related Quality of Life	24 months	Hemiarthroplasty	Internal Fixation	166	Mean difference	0.20	0.00	N/A	Arthroplasty
Waaler Bjornelv et al 2012	Quality Adjusted Life Year	2 years	Hemiarthroplasty	Internal Fixation	166	Mean difference	0.20	0.00	N/A	Arthroplasty
Frihagen et al 2007	Intraoperative problems	Perioperative	Hemiarthroplasty	Internal Fixation	218	Risk ratio	0.78	0.42	N/A	NS
Frihagen et al 2007	Intraoperative blood loss (ml)	Perioperative	Hemiarthroplasty	Internal Fixation	217	Mean difference	313	-	0.001	Favors Internal Fixation
Frihagen et al 2007	Received blood transfusion while admitted	Hospital Stay	Hemiarthroplasty	Internal Fixation	220	Risk ratio	2.38	0.00	N/A	Favors Internal Fixation
Frihagen et al 2007	Any medical complication	Hospital Stay	Hemiarthroplasty	Internal Fixation	220	Risk ratio	1.09	0.70	N/A	NS
Frihagen et al 2007	Postoperative Confusion	Hospital Stay	Hemiarthroplasty	Internal Fixation	220	Risk ratio	1.20	0.55	N/A	NS
Frihagen et al 2007	Cognitive Failure (MMSE-12 Score <10)	4	Hemiarthroplasty	Internal Fixation	173	Risk ratio	1.01	0.94	N/A	NS
Frihagen et al 2007	Total Complications	24	Hemiarthroplasty	Internal Fixation	219	Risk ratio	0.23	0.00	N/A	Favors Hemi
Johansson et al 2000	Complication (Heterotopic Ossification)	12	THA	Internal Fixation	84	Risk ratio	27.73	0.00	N/A	Internal fixation

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Parker et. al. 2002	Complications (Total)	36	Hemiarthroplasty	Internal Fixation	455	Risk ratio	1.12	0.38	N/A	NS
Parker et. al. 2002	Deep wound infection	36	Hemiarthroplasty	Internal Fixation	455	% risk difference	2.62	0.01	N/A	Internal Fix
Parker et. al. 2010	Implant Survival Rate	11 years	Hemiarthroplasty	Internal Fixation	455	Risk ratio	1.51	0.00	N/A	Hemiarthroplasty
Roden et al 2003	Blood loss	Intra-op	Hemiarthroplasty	Internal Fixation	100	N/A	-	-	Yes, p<0.001	Internal Fixation
Roden et al 2003	Complications (Blood transfusion)	Unclear	Hemiarthroplasty	Internal Fixation	100	N/A	-	-	Yes, p<0.001	Internal Fixation
Rogmark et al 2002	Complications (Operation Time) minutes	Intra-op	Arthroplasty	Internal Fixation	409	N/A	-	-	<0.001	Internal Fix
Rogmark et al 2002	Complications	24	Arthroplasty	Internal Fixation	409	Risk ratio	1.54	0.04	N/A	Internal Fix
Rogmark et al 2002	Complications (Total Failure Rate)	24	Arthroplasty	Internal Fixation	409	Risk ratio	0.15	0.00	N/A	Arthroplasty
Rogmark et al 2002	Complications (Severe or slight hip pain when walking)	4	Arthroplasty	Internal Fixation	409	Risk ratio	0.56	0.00	N/A	Arthroplasty
Rogmark et al 2002	Complications (Severe or slight hip pain when walking)	12	Arthroplasty	Internal Fixation	409	Risk ratio	0.58	0.00	N/A	Arthroplasty
Rogmark et al 2002	Complications (Severe hip pain when walking)	24	Arthroplasty	Internal Fixation	409	Risk ratio	0.26	0.03	N/A	Arthroplasty
Skinner et al 1989	Complications	12	Hemi arthroplasty	Internal fixation	278	N/A	-	-	>.05	NS
Tidermark et al 2003	Complications (Blood transfusion)	24	THA	Internal Fixation	102	Risk ratio	13.70	0.00	N/A	Internal fixation
Frihagen et al 2007	Harris Hip Score	4	Hemiarthroplasty	Internal Fixation	173	Mean difference	8.10	-	0.003	Favors Hemi
Frihagen et al 2007	Harris Hip Score	12	Hemiarthroplasty	Internal Fixation	161	Mean difference	6.80	-	0.01	Favors Hemi
Frihagen et al 2007	Harris Hip Score	24	Hemiarthroplasty	Internal Fixation	139	Mean difference	3.30	-	0.26	NS

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Frihagen et al 2007	Harris Hip Score	4	Hemiarthroplasty	Healed Internal Fixation	121	Mean difference	4.30	-	0.16	NS
Frihagen et al 2007	Harris Hip Score	12	Hemiarthroplasty	Healed Internal Fixation	111	Mean difference	8.90	-	0.01	Favors Hemi
Frihagen et al 2007	Harris Hip Score	24	Hemiarthroplasty	Healed Internal Fixation	97	Mean difference	6.70	-	0.04	Favors Hemi
Frihagen et al 2007	Harris Hip Score	4	Hemiarthroplasty	Reoperated Internal Fixation	121	Mean difference	14.10	-	p< 0.001	Favors Hemi
Frihagen et al 2007	Harris Hip Score	12	Hemiarthroplasty	Reoperated Internal Fixation	111	Mean difference	6.40	-	0.06	NS
Frihagen et al 2007	Harris Hip Score	24	Hemiarthroplasty	Reoperated Internal Fixation	99	Mean difference	3.70	-	0.35	NS
Johansson et al 2006	Diseased	3	Total Hip Replacement	Internal Fixation	128	Risk ratio	0.53	0.35	N/A	NS
Johansson et al 2006	Diseased	12	Total Hip Replacement	Internal Fixation	135	Risk ratio	1.04	0.89	N/A	NS
Johansson et al 2006	Diseased	24	Total Hip Replacement	Internal Fixation	130	Risk ratio	0.98	0.95	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Global	4	Hemiarthroplasty	Fixation	207	Mean difference	2.00	0.01	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Overall	4	Hemiarthroplasty	Fixation	207	Mean difference	7.80	0.00	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Global	12	Hemiarthroplasty	Fixation	207	Mean difference	2.80	0.00	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Overall	12	Hemiarthroplasty	Fixation	207	Mean difference	6.50	0.01	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Global	24	Hemiarthroplasty	Fixation	207	Mean difference	1.30	0.22	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Overall	24	Hemiarthroplasty	Fixation	207	Mean difference	3.10	0.29	N/A	NS
Keating et al 2005	EQ-5D: Utility Score	4	Hemiarthroplasty	Fixation	207	Mean difference	0.00	1.00	N/A	NS

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Mouzopoulos et al 2008	Harris Hip score (hemi vs if)	12	Hemiarthroplasty	Internal Fixation	72	Mean difference	6.50	0.00	N/A	Arthroplasty
Mouzopoulos et al 2008	Harris Hip score (hemi vs if)	36	Hemiarthroplasty	Internal Fixation	72	Mean difference	5.90	0.00	N/A	Arthroplasty
Mouzopoulos et al 2008	Hospital Stay (hemi vs if)	n/a	Hemiarthroplasty	Internal fixation	72	Mean difference	-3.90	0.00	N/A	Arthroplasty
Mouzopoulos et al 2008	Harris hip score(tha vs if)	12	Total Hip Arthroplasty	Internal Fixation	75	Mean difference	10.30	0.00	N/A	Arthroplasty
Mouzopoulos et al 2008	Harris hip score(tha vs if)	16	Total Hip Arthroplasty	Internal Fixation	75	Mean difference	10.10	0.00	N/A	Arthroplasty
Mouzopoulos et al 2008	Hospital Stay (tha vs if)	n/a	Total arthroplasty	Internal fixation	75	Mean difference	-4.70	0.00	N/A	Arthroplasty
Rogmark et al 2002	Return Home	Days	Arthroplasty	Internal Fixation	409	Risk ratio	0.84	0.13	N/A	NS
Rogmark et al 2002	Failure	12	Arthroplasty	Internal Fixation	172	Risk ratio	0.22	0.00	N/A	Favors Arthroplasty
Rogmark et al 2002	Duration of Surgery (min)	Intra-op	Arthroplasty	Internal Fixation	172	Mean difference	45.00	-	<0.001	Favors Arthroplasty
Calder, S. J. 1995	Pain Index	6 mos	Hemiarthroplasty - Thompson unipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS
Calder, S. J. 1995	Physical Mobility Index	6 mos	Hemiarthroplasty - Thompson unipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p<.05	p=0.076	Monk group favored
Calder, S. J. 1995	Sleep Index	6 mos	Hemiarthroplasty - Thompson unipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS
Calder, S. J. 1995	Energy Index	6 mos	Hemiarthroplasty - Thompson unipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS
Calder, S. J. 1995	Social Index Score	6 mos	Hemiarthroplasty - Thompson unipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p<.05	p=0.049	Thompson and Monk prostheses favored over fixation group
Calder, S. J. 1995	Emotion Index	6 mos	Hemiarthroplasty - Thompson unipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Calder, S. J. 1995	Pain Index	6 mos	Hemiarthroplasty - Monk bipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS
Calder, S. J. 1995	Physical Mobility	6 mos	Hemiarthroplasty - Monk bipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p<.05	p=0.076	Monk group favored
Calder, S. J. 1995	Sleep Index	6 mos	Hemiarthroplasty - Monk bipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS
Calder, S. J. 1995	Energy Index	6 mos	Hemiarthroplasty - Monk bipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p<.05	p=0.09	Monk group favored over fixation
Calder, S. J. 1995	Social Index Score	6 mos	Hemiarthroplasty - Monk bipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p<.05	p=0.049	Thompson and Monk prostheses favored over fixation group
Calder, S. J. 1995	Emotion Index	6 mos	Hemiarthroplasty - Monk bipolar prosthesis	Closed reduction & internal fixation with a sliding screw and plate	110	Mean difference	-	p>.05	-	NS

Table 42: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- - Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment

Dolatowski F. C. 2019	Moderate	Hip pain (PI-NRS)	Postop 3 mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	-0.4 (-1.13, 0.33)	NS

Dolatowski F. C. 2019	Moderate	Hip pain (PI-NRS)	Postop 12mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	-0.5 (-1.24, 0.24)	NS

Dolatowski F. C. 2019	Moderate	Hip pain (PI-NRS)	Postop 24mos	Hemiarthroplasty: The hemiarthroplasties were done with alatest-generation implant, with or without bone cement. In line with theirestablished practices, the main trial center used a femoral stem (ExeterV40; Stryker) with a modular head inserted with bone cement (OptipacRefobacin; Biomet) and through a direct lateral approach; the secondcenter used a cementless femoral stem (CORAIL; DePuy/Johnson &Johnson) with a modular head inserted through a direct lateralapproach; and the third center used the same prosthesis as the secondcenter but a posterior approach until January 2014, when it used thesame prosthesis and surgical approach as the main trial center.Standardized sexspecific femoral stem offsets and inner heads of atleast 28 mm were applied, with individual tailoring if needed.	Screw fixation: The screw fixation was performed with use of spinalanesthesia and the patient on a traction table. Two partially threaded,cancellous, cannulated screws of 8.0-mm diameter (Hip Pins; Smith &Nephew) were inserted, with the inferior screw placed as closely aspossible to the medial cortex. Both screws were positioned centrallyand posteriorly as seen on the lateral view and inserted as deeply aspossible, ensuring screw purchase in the subchondral bone. If thefemoral head was tilted posteriorly, the surgeon attempted closedreduction.	Mean Difference	-0.2 (-0.88, 0.48)	NS

Shi H. 2018	Moderate	VAS pain	Postop 1 wks	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-0.9 (-0.99, -0.81)	Femoral head replacement

Shi H. 2018	Moderate	VAS pain	Postop 1 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-3.1 (-3.21, -2.99)	Femoral head replacement

Shi H. 2018	Moderate	VAS pain	Postop 3 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-2.2 (-2.27, -2.13)	Femoral head replacement

Shi H. 2018	Moderate	VAS pain	Postop 6 mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-0.8 (-0.95, -0.65)	Femoral head replacement

Shi H. 2018	Moderate	VAS pain	Postop 12mos	Femoral head replacement: The observation group was treated withartificial femoral head replacement. The incision was entered using theSmith-Petersen method. All patients received the combinedspinal-epidural anesthesia in a lateral position. A 8 cm-long incisionwas made in the greater trochanter of femur till 5 cm below the greatertrochanter of femur, followed by blunt separation to fully expose thefracture site in greater trochanter of femur. The fracturere-displacement was avoided. The femoral head and labrumacetabulare were exposed, the lateral iliac artery was ligated and thenthe joint capsule was cut. The femoral neck was broken from 1.5 cm inthe femoral lesser trochanter. The femoral head was removed, and thebone marrow was enlarged. The femoral prosthesis was placed into thefracture site of femur,	Fixation (PFLP): The control group was treated with PFLP fixation.First, a 20 cm-long longitudinal incision was made on the greatertrochanter of femur, followed by blunt separation to expose the femoralmembrane. Under the C-arm, the Kirschner wire was placed atapproximately 5 cm under the greater trochanter. The Kirschner wire atan appropriate position under the femoral neck was used as the guidepin, and the cancellous bone screw was placed and the locking screwswere screwed on.	Mean Difference	-0.7 (-0.79, -0.61)	Femoral head replacement

Table 43: Displaced Femoral Neck Fractures (THA Hemiarth vs Fixation)- - Pain cont.

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Bachrach-Lindstrom et al, 2000	Pain (Harris Hip)	3	Primary Total Hip Arthroplasty	Osteosynthesis	88	Risk ratio	0.11	0.00	N/A	Arthroplasty
Bachrach-Lindstrom et al, 2000	Pain (Harris Hip)	12	Primary Total Hip Arthroplasty	Osteosynthesis	66	Risk ratio	0.15	0.01	N/A	Arthroplasty
Bray et al 1988	Pain Grade	19.2-19.7	Hemiarthroplasty	Internal Fixation	34	Mean difference	-0.20	-	NR	NS
Chammout et al 2012	Pain in Operated Hip	17 years	Total Hip Replacement	Internal Fixation	100	N/A	-	-	<0.001	Favors THR
Jonsson et al 1996	No Pain at Rest	1	Total Hip Replacement	Hook- Pins	47	Risk ratio	0.75	0.19	N/A	NS
Jonsson et al 1996	No Pain at Rest	4	Total Hip Replacement	Hook- Pins	47	Risk ratio	0.99	0.94	N/A	NS
Jonsson et al 1996	No Pain at Rest	12	Total Hip Replacement	Hook- Pins	47	Risk ratio	1.18	0.40	N/A	NS
Jonsson et al 1996	No Pain at Rest	24	Total Hip Replacement	Hook- Pins	47	Risk ratio	1.25	0.24	N/A	NS
Jonsson et al 1996	No Pain when Walking	1	Total Hip Replacement	Hook- Pins	47	Risk ratio	1.28	0.48	N/A	NS
Jonsson et al 1996	No Pain when Walking	4	Total Hip Replacement	Hook- Pins	47	Risk ratio	0.85	0.64	N/A	NS
Jonsson et al 1996	No Pain when Walking	12	Total Hip Replacement	Hook- Pins	47	Risk ratio	1.70	0.12	N/A	NS
Jonsson et al 1996	No Pain when Walking	24	Total Hip Replacement	Hook- Pins	47	Risk ratio	1.23	0.47	N/A	NS
Jonsson et al 1996	No use of Analgetics	1	Total Hip Replacement	Hook- Pins	47	Risk ratio	0.73	0.43	N/A	NS
Jonsson et al 1996	No use of Analgetics	4	Total Hip Replacement	Hook- Pins	47	Risk ratio	0.83	0.48	N/A	NS
Jonsson et al 1996	No use of Analgetics	12	Total Hip Replacement	Hook- Pins	47	Risk ratio	1.04	0.86	N/A	NS
Jonsson et al 1996	No use of Analgetics	24	Total Hip Replacement	Hook- Pins	47	Risk ratio	0.97	0.90	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Pain	4	Hemiarthroplasty	Fixation	207	Mean difference	2.40	0.00	N/A	Arthroplasty

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Keating et al 2005	Hip Rating Questionnaire: Pain	12	Hemiarthroplasty	Fixation	207	Mean difference	2.20	0.01	N/A	Arthroplasty
Keating et al 2005	Hip Rating Questionnaire: Pain	24	Hemiarthroplasty	Fixation	207	Mean difference	0.90	0.32	N/A	NS
Parker et. al. 2002	Pain (w/ little-no pain)	12	Hemiarthroplasty	Internal Fixation	323	Risk ratio	0.88	0.15	N/A	NS
Parker et. al. 2002	Pain (w/ little-no pain)	24	Hemiarthroplasty	Internal Fixation	228	Risk ratio	1.10	0.19	N/A	NS
Parker et. al. 2002	Pain (w/ little-no pain)	36	Hemiarthroplasty	Internal Fixation	165	Risk ratio	0.99	0.92	N/A	NS
Parker et. al. 2002	Pain (Charnley Pain Scale)	12	Hemiarthroplasty	Internal Fixation	323	Mean difference	0.20	-	No, p=0.91	No Difference
Parker et. al. 2002	Pain (Charnley Pain Scale)	24	Hemiarthroplasty	Internal Fixation	228	Mean difference	-0.10	-	No, p=0.82	No Difference
Ravikumar et al, 2000	Pain (Sikorski and Barrington Grade 3 or 4)	12	Arthroplasty	Internal Fixation	271	% risk difference	-12.09	0.00	N/A	Arthroplasty
Ravikumar et al, 2000	Pain (Sikorski and Barrington Grade 3 or 4)	156	Arthroplasty	Internal Fixation	271	Risk ratio	0.05	0.00	N/A	Arthroplasty
Roden et al 2003	Pain (Consumption of Analgesics)	4	Hemiarthroplasty	Internal Fixation	88	Risk ratio	0.29	0.00	N/A	Hemiarthroplasty

Table 44: UNIPOLAR VS BIPOLAR- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Complications (Pneumonia)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.76(0.24,2.44)	NS
Parker, M. J. 2020	Moderate	Complications (Congestive cardiac failure)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	1.83(0.34,9.81)	NS
Parker, M. J. 2020	Moderate	Complications (Myocardial infarction)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	-0.02(-0.05,0.00)	NS
Parker, M. J. 2020	Moderate	Complications (Cardiac arrhythmia)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	2.74(0.29,26.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Complications (Urinary retention)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.83(0.36,1.89)	NS
Parker, M. J. 2020	Moderate	Complications (Deep vein thrombosis)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.46(0.04,4.98)	NS
Parker, M. J. 2020	Moderate	Complications (Pulmonary embolism)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	0.01(-0.01,0.02)	NS
Parker, M. J. 2020	Moderate	Complications (Pressure sores)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.30(0.08,1.10)	NS
Parker, M. J. 2020	Moderate	Complications (Delirium)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.98(0.49,1.95)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Complications (Cerebrovascular accident)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.23(0.03,2.02)	NS
Parker, M. J. 2020	Moderate	Complications (Gastrointestinal bleed)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.55(0.13,2.25)	NS
Parker, M. J. 2020	Moderate	Complications (Acute renal failure)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	1.83(0.47,7.16)	NS
Parker, M. J. 2020	Moderate	Complications (Clostridia diarrhoea)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2020	Moderate	Complications (Fat embolism)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	0.01(-0.01,0.03)	NS

Inngul C. 2013	Moderate	Acetabular erosion	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	RR	2.89(0.83,10.13)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Acetabular erosion	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	RR	4.49(1.04,19.38)	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI,USA).

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Acetabular erosion	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	RR	1.80(0.68,4.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Acetabular erosion	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	RR	1.35(0.36,4.99)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Kanto K. 2014	Moder ate	Dislocation (On-time dislocations)	1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipola r HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	RR	2.97(0. 62,14. 29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Protrusion		Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	RR	0.99(0.14,6.86)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Revision	7 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	RR	0.66(0.11,3.85)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Survivorship ((%))	8 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Mean Difference	1 (-2.61, 4.61)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Complications (Post-surgery)	Postop 1 days	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	RR	0.82(0.38,1.81)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				
Stoffel K. K. 2013	Moderate	Post-operative complications	1 wks	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	RR	0.78(0.47,1.30)	NS

Table 45: UNIPOLAR VS BIPOLAR- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	8 wks	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	3 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	6 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	9 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS

Inngul C. 2013	Moderate	EQ-5D (Health related quality of life (mean EQ-5D index score))	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	EQ-5D (Health related quality of life (mean EQ-5D index score))	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	EQ-5D (Health related quality of life (mean EQ-5D index score))	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	EQ-5D (Health related quality of life (mean EQ-5D index score))	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Author Reported - p=0.04	N/A	

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Total score)	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-1.7 (-26.65, 23.25)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Total score)	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0.5 (-22.84, 23.84)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Total score)	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-1.2 (-26.06, 23.66)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Total score)	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-1.8 (-28.65, 25.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Pain)	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-0.8 (-5.96, 4.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Pain)	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0.8 (-4.94, 6.54)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Pain)	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-1.1 (-9.30, 7.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Pain)	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-0.4 (-6.04, 5.24)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Function)	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-1 (-20.44, 18.44)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Function)	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-0.3 (-19.04, 18.44)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Function)	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-0.1 (-17.60, 17.40)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Function)	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	-2.9 (-24.90, 19.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Absence of deformity)	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0 (-1.43, 1.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Absence of deformity)	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0 (-1.43, 1.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Absence of deformity)	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0 (-1.43, 1.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Absence of deformity)	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0 (-1.43, 1.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Range of motion)	4 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0.1 (-0.40, 0.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Range of motion)	12 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0.1 (-0.40, 0.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Range of motion)	24 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0.1 (-0.40, 0.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				

Inngul C. 2013	Moderate	Harris hip score (Range of motion)	48 mos	Unipolar head (Unipolar head, Stryker Howmedica, Kalamazoo, MI,USA): A modified Hardinge approach with the patient in the lateraldecubitus position was used in all cases. The same cementandstandard cementing technique was used for both procedures. Thediameter of the inner head of the bipolar head was 28 mm in all cases.All patients were given three doses of intravenous Cloxacillin 2 g asantibiotic prophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight	Bipolar head (UHR, Stryker Howmedica, Kalamazoo, MI, USA).: Amodified Hardinge approach with the patient in the lateral decubitusposition was used in all cases. The same cementand standardcementing technique was used for both procedures. The diameter ofthe inner head of the bipolar head was 28 mm in all cases. All patientswere given three doses of intravenous Cloxacillin 2 g as antibioticprophylactics and low molecularweight heparin was given asthromboembolic prophylactics for ten–14 days. Postoperatively patientswere mobilised the day after surgery and allowed weight bearing astolerated.	Mean Difference	0.1 (-0.26, 0.46)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				bearing astolerated.				
Stoffel K. K. 2013	Moderate	VNRS (Verbal Numerical Rating Score (VNRS))		7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	0.6 (0.13, 1.07)	7. Bipolar Hemiarthroplasty
Stoffel K. K. 2013	Moderate	OHS (Oxford Hip Score)		7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	0.8 (-1.69, 3.29)	NS
Stoffel K. K. 2013	Moderate	Modified HHS		7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	0.4 (-3.62, 4.42)	NS

Table 46: UNIPOLAR VS BIPOLAR- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	8 wks	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	3 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	6 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	9 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Stoffel K. K. 2013	Moderate	Six-Minute Walk		7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	45 (9.36, 80.64)	7. Bipolar Hemiarthroplasty
Stoffel K. K. 2013	Moderate	Hip range of motion (Bipolar versus unipolar) (Flexion)	12 mos	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	-1.2 (-6.75, 4.35)	NS
Stoffel K. K. 2013	Moderate	Hip range of motion (Bipolar versus unipolar) (Abduction)	12 mos	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	-1.9 (-3.89, 0.09)	NS
Stoffel K. K. 2013	Moderate	Hip range of motion (Bipolar versus unipolar) (Adduction)	12 mos	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	0.6 (-5.76, 6.96)	NS
Stoffel K. K. 2013	Moderate	Hip range of motion (Bipolar versus unipolar) (External rotation)	12 mos	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	-1.1 (-4.43, 2.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Stoffel K. K. 2013	Moderate	Hip range of motion (Bipolar versus unipolar) (Internal rotation)	12 mos	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Mean Difference	0.6 (-1.75, 2.95)	NS

Table 47: UNIPOLAR VS BIPOLAR- Function cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Calder et al 1996	Function (Return of Preinjury)	1.04 years to 2.4 years	Monk Bipolar	Thompson Unipolar	250	Risk ratio	1.41	0.05	N/A	Favors Bipolar arthroplasty
Calder et al 1996	Function (No Limp)	1.04 years to 2.4 years	Monk Bipolar	Thompson Unipolar	250	Risk ratio	1.22	0.45	N/A	NS
Calder et al 1996	Function (Harris Score)	1.04 years to 2.4 years	Monk Bipolar	Thompson Unipolar	250	N/A	-	-	p=0.23	NS
Davison et al 2001	Functional Status (return to preinjury state)	24	monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.85	0.00	N/A	Bipolar
Hedbeck et al 2011	Function (Harris Score-total)	4	Bipolar	Unipolar	115	Mean difference	1.70	-	p=0.17	NS
Hedbeck et al 2011	Function (Harris Hip Score-Pain)	4	Bipolar	Unipolar	115	Mean difference	0.80	-	p=0.22	NS
Hedbeck et al 2011	Function (Harris Hip Score-Function)	4	Bipolar	Unipolar	115	Mean difference	1.00	-	p=0.38	NS
Hedbeck et al 2011	Function (Harris Hip Score-Absence of Deformity)	4	Bipolar	Unipolar	115	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Function (Harris Hip Score- Range of Motion)	4	Bipolar	Unipolar	115	Mean difference	-0.10	-	p=0.05	Unipolar
Hedbeck et al 2011	Function (Harris Hip Score-Total)	12	Bipolar	Unipolar	99	Mean difference	-0.50	-	p=1	NS
Hedbeck et al 2011	Function (Harris Hip Score- Pain)	12	Bipolar	Unipolar	99	Mean difference	-0.80	-	p=0.92	NS
Hedbeck et al 2011	Function (Harris Hip Score-Function)	12	Bipolar	Unipolar	99	Mean difference	0.30	-	p=0.91	NS
Hedbeck et al 2011	Function (Harris Hip Score-Absence of Deformity)	12	Bipolar	Unipolar	99	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Function (Harris Hip Score- Range of Motion)	12	Bipolar	Unipolar	99	Mean difference	-0.10	-	p=0.26	NS
Hedbeck et al 2011	Independence (Living Independently)	4	Bipolar	Unipolar	115	Risk ratio	1.01	0.82	N/A	NS
Hedbeck et al 2011	Independence (Living Independently)	12	Bipolar	Unipolar	99	Risk ratio	1.02	0.64	N/A	NS
Kenzora et al 1998	Postoperative confusion	24	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS
Kenzora et al 1998	Walking speed	24	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	<.05	Bipolar arthroplasty
Kenzora et al 1998	Need for external support during walking	24	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	<.05	Bipolar arthroplasty
Raia et al 2003	Function (Remain Community Ambulators)	12	Bipolar	Unipolar	115	Risk ratio	0.98	0.88	N/A	NS
Raia et al 2003	Function(Musculoskeletal Functional Assessment score)- Raw Score	12	Bipolar	Unipolar	115	Mean difference	0.10	-	p=0.99	NS

Raia et al 2003	Function(Musculoskeletal Functional Assessment score)- Mobility	12	Bipolar	Unipolar	115	Mean difference	-0.50	-	p=0.94	NS
Raia et al 2003	Function(Musculoskeletal Functional Assessment score)- Self Care	12	Bipolar	Unipolar	115	Mean difference	4.10	-	p=0.65	NS
Raia et al 2003	Function (Short Form Score- Physical Function)	3	Bipolar	Unipolar	115	Mean difference	-3.20	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Physical Function)	12	Bipolar	Unipolar	115	Mean difference	2.60	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Bodily Pain)	3	Bipolar	Unipolar	115	Mean difference	-1.80	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Bodily Pain)	12	Bipolar	Unipolar	115	Mean difference	-2.20	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Role Limitations, Physical)	3	Bipolar	Unipolar	115	Mean difference	-2.70	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Role Limitations, Physical)	12	Bipolar	Unipolar	115	Mean difference	3.30	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Role Limitations, Emotional)	3	Bipolar	Unipolar	115	Mean difference	-5.30	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Role Limitations, Emotional)	12	Bipolar	Unipolar	115	Mean difference	-10.90	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Mental Health)	3	Bipolar	Unipolar	115	Mean difference	4.30	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Mental Health)	12	Bipolar	Unipolar	115	Mean difference	-1.80	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Social Functioning)	3	Bipolar	Unipolar	115	Mean difference	2.10	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Social Functioning)	12	Bipolar	Unipolar	115	Mean difference	-7.50	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Vitality)	3	Bipolar	Unipolar	115	Mean difference	-11.30	-	>.05	NS
Raia et al 2003	Function (Short Form Score- Vitality)	12	Bipolar	Unipolar	115	Mean difference	-6.10	-	>.05	NS
Raia et al 2003	Function (Short Form Score- General Health)	3	Bipolar	Unipolar	115	Mean difference	3.20	-	>.05	NS
Raia et al 2003	Function (Short Form Score- General Health)	12	Bipolar	Unipolar	115	Mean difference	1.60	-	>.05	NS

Table 48: UNIPOLAR VS BIPOLAR- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Length of surgery (Mean length of surgery, mins (SD))	0 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	4.7 (1.86, 7.54)	Unemented hemiarthroplasty
Parker, M. J. 2020	Moderate	Operative blood loss (Mean operative blood loss, ml (SD))	0 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-2.6 (-27.07, 21.87)	NS
Parker, M. J. 2020	Moderate	Blood transfusion required (Required blood transfusion, n (%))	0 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-14 (-16.61, -11.39)	Cemented hemiarthroplasty
Parker, M. J. 2020	Moderate	Units of blood transfused (SD) (Mean units of blood transfused (SD))	0 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-0.16 (-0.30, -0.02)	Cemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Total hospital stay (Mean total hospital stay, days (SD))	2 wks	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-2.2 (-7.36, 2.96)	NS
Parker, M. J. 2020	Moderate	Mortality (30-day mortality, n (%))	30 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.98(0.48,2.02)	NS
Parker, M. J. 2020	Moderate	Mortality (120-day mortality, n (%))	120 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.86(0.57,1.30)	NS
Parker, M. J. 2020	Moderate	Mortality (365-day mortality, n (%))	365 days	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.73(0.55,0.97)	Cemented hemiarthroplasty

Kanto K. 2014	Moderate	Operating time ((min))		Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Mean Difference	-3 (-13.52, 7.52)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Estimated blood loss (ml) ((ml))		Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Mean Difference	30 (-49.11, 109.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Drainage discharge (ml) ((ml))		Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Mean Difference	-25 (-62.42, 12.42)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Mortality ((in-hospital))	Postop 1 days	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	RR	1.98(0.18,21.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Mortality	Postop 1 mos	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Mortality	Postop 3 mos	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Mortality	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Mortality	Postop 3 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Mortality	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (a Independent community ambulatory withregular exercise)	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (a Independent community ambulatory withregular exercise)	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (b Independent community ambulator)	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (b Independent community ambulator)	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (c Independent household ambulator)	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (c Independent household ambulator)	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (d Household ambulator with cane)	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (d Household ambulator with cane)	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (e Household ambulator with walker/crutches)	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (e Household ambulator with walker/crutches)	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (f Assisted ambulation only)	Postop 1 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Ambulatory ability (%) (f Assisted ambulation only)	Postop 5 yrs	Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				

Kanto K. 2014	Moderate	Radiographic analysis (Early protrusion)		Cemented Lubinus (Waldemar Link GmbH & Co, Hamburg, Germany)unipolar HE .: Cemented Lubinus unipolar HE . Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement (Heraeus Holding GmbH,Hanau, Germany). Unipolar or bipolar heads were available in sizesfrom 38 to 60 mm. In bipolar heads, the size of the inner head of thebipolar	Bipolar (Vario-Cup) HE: Bipolar (Vario-Cup) HE. Beside the prosthesis,both cohorts were treated with the same protocol: all procedures wereperformed using posterior decubitus approach, with the patient was inlateral position. A Lubinus SP II stem with appropriate size, neck lengthand neck angel was used in patients. All stems were cemented withPalacos cum gentamycin antibiotic cement. Unipolar or bipolar headswere available in sizes from 38 to 60 mm. In bipolar heads, the size ofthe inner head of the bipolar prosthesis was 28 mm.	RR	0.99(0.14,6.86)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				prosthesis was 28 mm.				
Stoffel K. K. 2013	Moderate	Hospital stay	8 days	7. Unipolar Hemiarthroplasty	7. Bipolar Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Pain (- 65 to 79 years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Physical (- 65 to 79 years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p<.05	N/A	Group 2 (Hemiarthroplasty - Monk Bipolar prosthesis)
Calder, S. J. 1995	Moderate	Sleep (- 65 to 79 years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Energy (- 65 to 79 years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p<.05	N/A	Group 2 (Hemiarthroplasty - Monk Bipolar prosthesis)
Calder, S. J. 1995	Moderate	Social (- 65 to 79 years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Calder, S. J. 1995	Moderate	Emotion (- 65 to 79 years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Pain (- 80+ years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Physical (- 80+ years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p<.05	N/A	Group 2 (Hemiarthroplasty - Monk Bipolar prosthesis)
Calder, S. J. 1995	Moderate	Sleep (- 80+ years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Energy (- 80+ years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p<.05	N/A	Group 2 (Hemiarthroplasty - Monk Bipolar prosthesis)
Calder, S. J. 1995	Moderate	Social (- 80+ years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS
Calder, S. J. 1995	Moderate	Emotion (- 80+ years - Median scores)	6 mos	Unipolar: Hemiarthroplasty - Thompson unipolar prosthesis	Bipolar: Hemiarthroplasty - Monk Bipolar prosthesis	Author Reported - p>.05	N/A	NS

Table 49: UNIPOLAR VS BIPOLAR- Other cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Calder et al 1996	Mortality	12	Monk Bipolar	Thompson Unipolar	250	N/A	-	-	>.05	NS
Davison et al 2001	Mortality	6	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.43	0.45	N/A	NS
Davison et al 2001	Mortality	12	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.09	0.82	N/A	NS
Davison et al 2001	Mortality	18	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.00	1.00	N/A	NS
Davison et al 2001	Mortality	24	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	0.85	0.59	N/A	NS
Davison et al 2001	Mortality	30	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	0.76	0.31	N/A	NS
Davison et al 2001	Mortality	36	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	0.79	0.33	N/A	NS
Hedbeck et al 2011	Mortality	12	Bipolar	Unipolar	120	Risk ratio	1.86	0.15	N/A	NS
Kenzora et al 1998	Mortality	24	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS
Raia et al 2003	Mortality	12	Bipolar	Unipolar	115	Risk ratio	1.09	0.81	N/A	NS
Calder et al 1996	Hospital Stay, days	Varied	Monk Bipolar	Thompson Unipolar	250	N/A	-	-	p=0.40	NS
Kenzora et al 1998	Hospital stay	In hospital	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS
Raia et al 2003	Length of Stay (on orthopedic service),days	Varied	Bipolar	Unipolar	115	Mean difference	-0.30	-	>.05	NS
Hedbeck et al 2011	Complication (Blood Loss), ml	Peri-op	Bipolar	Unipolar	120	Mean difference	-50.00	-	p=0.31	NS
Hedbeck et al 2011	Complication (Transfused Blood Volume), ml	Peri-op	Bipolar	Unipolar	120	Mean difference	10.00	-	p=0.42	NS
Hedbeck et al 2011	Complication (Sx Length)	Peri-op	Bipolar	Unipolar	120	Mean difference	-3.00	-	p=0.11	NS
Raia et al 2003	Complication (Blood Loss)ml	Peri-op	Bipolar	Unipolar	115	Mean difference	-15.00	-	>.05	NS
Raia et al 2003	Complication (Transfusions)	12	Bipolar	Unipolar	115	Risk ratio	0.91	0.75	N/A	NS
Raia et al 2003	Complications (Minor)	12	Bipolar	Unipolar	115	N/A	-	-	>.05	NS
Raia et al 2003	Complications (Major)	12	Bipolar	Unipolar	115	N/A	-	-	>.05	NS
Calder et al 1996	Return Home	Varied	Monk Bipolar	Thompson Unipolar	250	Risk ratio	0.96	0.78	N/A	NS

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Davison et al 2001	Revision	6	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.00	1.00	N/A	NS
Davison et al 2001	Revision	12	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.00	1.00	N/A	NS
Davison et al 2001	Revision	18	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	1.00	1.00	N/A	NS
Davison et al 2001	Revision	24	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	2.00	0.57	N/A	NS
Davison et al 2001	Revision	30	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	2.00	0.57	N/A	NS
Davison et al 2001	Revision	36	Monk cemented bipolar hemiarthroplasty	Cemented Thompson unipolar hemiarthroplasty	280	Risk ratio	2.00	0.57	N/A	NS
Hedbeck et al 2011	Quality of Life (EQ-5D)	4	Bipolar	Unipolar	115	Mean difference	0.08	-	p=0.06	NS
Hedbeck et al 2011	Quality of Life (EQ-5D)	12	Bipolar	Unipolar	99	Mean difference	0.03	-	p=0.51	NS
Hedbeck et al 2011	Quality of Life (ADL Class A or B)	4	Bipolar	Unipolar	115	Risk ratio	1.00	0.98	N/A	NS
Hedbeck et al 2011	Quality of Life (ADL Class A or B)	12	Bipolar	Unipolar	99	Risk ratio	1.06	0.59	N/A	NS
Kenzora et al 1998	Postoperative depression	Post-op	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS
Kenzora et al 1998	Postoperative cognitive function	Post-op	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS

Table 50: UNIPOLAR VS BIPOLAR- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	8 wks	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Uncemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	3 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stemhemiarthroplasty	Uncemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	6 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stem hemiarthroplasty	Uncemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	9 mos	Cemented hemiarthroplasty: Cemented unipolar double-tapered stem hemiarthroplasty	Uncemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	1 yrs	Cemented hemiarthroplasty: Cemented unipolar double-tapered stem hemiarthroplasty	Uncemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Khan, A. M. 2015	Moderate	Visual analogue scale (VAS) score.	4 wks	Cemented bipolar hemi-arthoplasty	Austin Moore hemi-arthoplasty	Mean Diff	-2.023 (-2.42, -1.63)	Bipolar Favored
Khan, A. M. 2015	Moderate	Visual analogue scale (VAS) score.	8 wks	Cemented bipolar hemi-arthoplasty	Austin Moore hemi-arthoplasty	Mean Diff	-1.5 (-2.52, -0.479)	Bipolar Favored
Khan, A. M. 2015	Moderate	Visual analogue scale (VAS) score.	12 wks	Cemented bipolar hemi-arthoplasty	Austin Moore hemi-arthoplasty	Mean Diff	-2.73 (-4.27, -1.19)	Bipolar Favored

TABLE 3. UNIPOLAR VS **BIPOLAR: PAIN CONT**

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Calder et al 1995	Nottingham Health Profile Pain	6 months	Monk Bipolar	Thompson Unipolar	128	N/A	-	-	.065	NS
Calder et al 1996	Pain (None or Mild)	1.4 to 2.4 year follow up	Monk Bipolar	Thompson Unipolar	250	Risk ratio	1.04	0.74	N/A	NS
Kenzora et al 1998	Hip pain	Post-op	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS
Kenzora et al 1998	Back pain	Post-op	Cemented or press fit bipolar hemiarthroplasty	Uncemented unipolar hemiarthroplasty	270	N/A	-	-	>.05	NS

Table 51: Total vs Hemiarthroplasty- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Dislocation (Hip-related complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RD	-0.02(-0.05,0.02)	NS
Chammout G. 2019	High	Superficial infection (Hip-related complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RD	0.05(-0.01,0.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Deep periprosthetic infection (Hip-related complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RD	-0.05(-0.11,0.01)	NS
Chammout G. 2019	High	Non-healing fracture (Hip-related complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RD	0.02(-0.02,0.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Total number of hip complications (Hip-related complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	1.00(0.26,3.81)	NS
Chammout G. 2019	High	Number of patients with any hip complication (Hip-relatedcomplications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	1.00(0.26,3.81)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Reoperation (Includes: Closed reduction, Surgical debridement and1-stage revision, Another major reoperation, Total number of majorreoperations)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	0.40(0.08,1.98)	NS
Chammout G. 2019	High	Pneumonia (General complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	0.57(0.18,1.85)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Pulmonary embolism (General complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	1.00(0.06,15.62)	NS
Chammout G. 2019	High	Myocardial infarct (General complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	2.00(0.19,21.47)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Cerebral vascular lesion (General complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	2.00(0.52,7.63)	NS
Chammout G. 2019	High	Acute kidney failure (General complications)	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RD	0.02(-0.02,0.05)	NS
Heath Invest. 2019	Moderate	Unplanned secondary procedure	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	0.96(0.68,1.35)	NS
Heath Invest. 2019	Moderate	Serious adverse event	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.14(1.00,1.30)	8. Hemi arthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heath Invest. 2019	Moderate	Any hip-related complication	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.13(0.90,1.41)	NS
Heath Invest. 2019	Moderate	Periprosthetic fracture (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.09(0.70,1.71)	NS
Heath Invest. 2019	Moderate	Hip instability or dislocation** (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	2.01(1.14,3.57)	8. Hemi arthroplasty
Heath Invest. 2019	Moderate	Superficial surgical-site infection (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.51(0.54,4.22)	NS
Heath Invest. 2019	Moderate	Deep surgical-site infection (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.07(0.54,2.10)	NS
Heath Invest. 2019	Moderate	Another wound-healing problem (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.21(0.37,3.94)	NS
Heath Invest. 2019	Moderate	Another soft-tissue procedure (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.01(0.44,2.31)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heath Invest. 2019	Moderate	Clinically important heterotopic ossification†† (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.22(0.72,2.07)	NS
Heath Invest. 2019	Moderate	Abductor failure (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	0.34(0.03,3.22)	NS
Heath Invest. 2019	Moderate	Implant failure: loosening or subsidence (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.01(0.29,3.46)	NS
Heath Invest. 2019	Moderate	Implant failure: breakage (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RD	0.00(-0.00,0.00)	NS
Heath Invest. 2019	Moderate	Neurovascular injury: technical error (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	2.01(0.18,22.16)	NS
Heath Invest. 2019	Moderate	Other (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	0.54(0.22,1.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Iorio R. 2019	Moderate	Dislocation (%)	1 yrs	Total hip arthroplasty (THA) with dual mobility cup (DMC): In the THAgroup, patients receive a dual mobility cup Quattro with Pavicementless femoral stem	Hemi-arthroplasty (HA): In the hemiarthroplasty group, patients receivean Excia cementless femoral stem with bipolar head	RD	-0.17(-0.30,-0.03)	Total hip arthroplasty (THA) with dual mobility cup (DMC)
Iorio R. 2019	Moderate	Re-operation	1 yrs	Total hip arthroplasty (THA) with dual mobility cup (DMC): In the THAgroup, patients receive a dual mobility cup Quattro with Pavicementless femoral stem	Hemi-arthroplasty (HA): In the hemiarthroplasty group, patients receivean Excia cementless femoral stem with bipolar head	RD	-0.03(-0.10,0.03)	NS
Li J. 2017	Moderate	Complications (Peri-operative (Periprothesic fracture, Vancouver typeB1))	Periop 1 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	RD	0.00(0.00,0.00)	NS
Li J. 2017	Moderate	Complications (Luxation)	Postop 1 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	RD	0.00(0.00,0.00)	NS
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type B1)	Postop 1 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	RD	0.02(-0.02,0.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type C)	Postop 1 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	RR	1.00(0.06,15.62)	NS
Li J. 2017	Moderate	Complications (Peri-operative (Periprothesic fracture, Vancouver typeB1))	Periop 1 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	RD	0.02(-0.02,0.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Complications (Luxation)	Postop 1 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	RD	-0.02(-0.05,0.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type B1)	Postop 1 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type C)	Postop 1 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	RD	0.02(-0.02,0.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Superficial wound infection)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	1.02(0.15,6.97)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Deep wound infection)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Haematoma)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.02(-0.02,0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Urinary retention)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	1.53(0.27,8.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Deep vein thrombosis)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.04(-0.01,0.09)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Pressure sores)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.02(-0.02,0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Delirium)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	1.02(0.15,6.97)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Cerebrovascular accident)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.02(-0.02,0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Fat embolism/cement reaction)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.02(-0.02,0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Complications (Patient with complication)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	0.17(0.02,1.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ren C. 2017	Moderate	Complications	1 wks	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).	RR	1.50(0.26,8.60)	NS
Sharma V. 2016	Moderate	Superficial wound infection	1 wks	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	RR	0.50(0.05,5.30)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Complications (Dislocations, infection)	90 days	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	RR	0.75(0.18,3.17)	NS
Ukaj, S. 2019	Moderate	Complications	Postop 90days	Dual Mobility Acetabular Cup	Hemiarthroplasty	RR	0.75(0.18,3.17)	NS

Xu F. 2017	Moderate	Total complications (Periprosthetic infection, Prosthetic loosening,Dislocation of hip joint, Periprosthetic fracture, Acetabularosteroarthritis,)	5 yrs	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	RR	0.62(0.29,1.31)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				with an angle >3°underwent varus or valgus fixation.				

Table 52: TOTAL V**S HEMIARTHROPLASTY- Composite**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris hip score (HHS) (HHS total)	3 mos	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS
Cadossi M. 2013	Moderate	Harris hip score (HHS) (Pain subscore)	3 mos	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris hip score (HHS) (Function subscore)	3 mos	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS
Cadossi M. 2013	Moderate	Harris hip score (HHS) (HHS total)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris hip score (HHS) (Pain subscore)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p=0.006	N/A	Treatment 2 (PCU-Total hip arthroplasty)
Cadossi M. 2013	Moderate	Harris hip score (HHS) (Function subscore)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Brooker score (Score of 0)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS
Cadossi M. 2013	Moderate	Brooker score (Score of 1)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Brooker score (Score of 2)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS
Cadossi M. 2013	Moderate	Brooker score (Score of 3)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Brooker score (Score of 4)	1 yrs	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Cadossi M. 2013	Moderate	Harris Hip score (Total)	3 mos	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Cadossi M. 2013	Moderate	Harris Hip score (Total)	1 yrs	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Harris hip score	3 mos	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	1 (-4.31, 6.31)	NS
Chammout G. 2019	High	Harris hip score	1 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	2 (-4.21, 8.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Harris hip score	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	1 (-4.80, 6.80)	NS
Chammout G. 2019	High	EQ-5D	3 mos	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	-0.02 (-0.11, 0.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	EQ-5D	1 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	0.01 (-0.10, 0.12)	NS
Chammout G. 2019	High	EQ-5D	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	0.1 (-0.03, 0.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Activities of daily living	3 mos	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	0.99(0.77,1.28)	NS
Chammout G. 2019	High	Activities of daily living	1 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	0.93(0.70,1.24)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Activities of daily living	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	RR	1.02(0.76,1.38)	NS
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	-3.5 (-5.09, -1.91)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	-3 (-5.30, -0.70)	Hemi arthroplasty (CI operation)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	-4.6 (-6.23, -2.97)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage IV fracture type)	Postop 6 wks	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	-3.1 (-5.66, -0.54)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in mobility scale	8 wks	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in mobility scale	3 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in mobility scale	6 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in mobility scale	9 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in mobility scale	1 yrs	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in social dependency scale	8 wks	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in social dependency scale	3 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in social dependency scale	6 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in social dependency scale	9 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean reduction in social dependency scale	1 yrs	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ren C. 2017	Moderate	Harris hip score (Excellent)	1 wks	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).	RR	1.12(0.78,1.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ren C. 2017	Moderate	Harris hip score (Good)	1 wks	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).	RR	1.00(0.62,1.62)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ren C. 2017	Moderate	Harris hip score (Medium)	1 wks	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).	RR	0.33(0.04,3.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ren C. 2017	Moderate	Harris hip score (Poor)	1 wks	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).	RD	-0.02(-0.06,0.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sharma V. 2016	Moderate	Harris Hip score (mean Harris hip score)	1 yrs	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	Author Reported - p<.05	N/A	
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 3 months Harris Hip score)	3 mos	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	1.14 (-1.43, 3.71)	NS
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 6 months)	6 mos	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	3.6 (0.15, 7.05)	DM (Dual mobility cup)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 1 year)	1 yrs	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	3.83 (0.22, 7.44)	DM (Dual mobility cup)
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 3 years)	3 yrs	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	4.16 (0.71, 7.61)	DM (Dual mobility cup)
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 3 months post-op)	Postop 3 mos	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	1.14 (-1.43, 3.71)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 6 months post-op)	Postop 6 mos	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	3.6 (0.15, 7.05)	Dual Mobility Acetabular Cup
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 1 year post-op)	Postop 1 yrs	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	3.83 (0.22, 7.44)	Dual Mobility Acetabular Cup
Ukaj, S. 2019	Moderate	Harris Hip score (HHS 3 years post-op)	Postop 3 yrs	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	4.16 (0.71, 7.61)	Dual Mobility Acetabular Cup

Xu F. 2017	Moderate	Harris hip score	1 yrs	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Mean Difference	0.71 (-1.41, 2.83)	NS

Xu F. 2017	Moderate	Harris hip score	5 yrs	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Mean Difference	4.83 (0.89, 8.77)	Total hip replacement

Table 53: TOTAL V**S HEMIARTHROPLASTY- Function**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris Hip score (Function subscore)	3 mos	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris Hip score (Function subscore)	1 yrs	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Shortening of 10 mm or more	6 wks	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	1.64(0.29,9.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean loss flexion in degrees	6 wks	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p=.004	N/A	Treatment 2 (Hemi-Arthroplasty)
Ukaj, S. 2019	Moderate	Functional independence measure (FIM functional independencemeasure (FIM))	1 yrs	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindrospherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	1.75 (-0.48, 3.98)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Walking ability (Time to walking ability with 2 crutches, weeks)	1 mos	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindrospherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	-0.13 (-0.35, 0.09)	NS
Ukaj, S. 2019	Moderate	Weight-bearing time (Time to first postoperative full weight-bearing)	Postop 2 wks	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	0.07 (-0.19, 0.33)	NS
Ukaj, S. 2019	Moderate	Walking ability (2 crutches) (Time to walking ability with 2 crutches, weeks)	Postop 2 wks	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	-0.13 (-0.35, 0.09)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Walking ability (1 crutch) (Time to walking ability with 1 crutch, weeks)	Postop 2 wks	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	-0.08 (-0.34, 0.18)	NS
Ukaj, S. 2019	Moderate	FIM (FIM, functional independence measure)	Postop 1 yrs	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	1.75 (-0.48, 3.98)	NS
Ukaj, S. 2019	Moderate	Walking ability (Time to walking ability with 1 crutch, weeks)	1 mos	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindrospherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	-0.08 (-0.34, 0.18)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu F. 2017	Moderate	Hip function	1 yrs	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu F. 2017	Moderate	Hip function	5 yrs	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.	Mean Difference	4.8 (0.87, 8.73)	Total hip replacement

Table 54. Total Versus Hemiarthroplasty: Function cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Blomfeldt et al 2005	Functional Status (Total Mean Harris Hip Score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-5.00	-	.011	THA
Blomfeldt et al 2005	Functional Status (Total Mean Harris Hip Score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-7.80	-	<.001	THA
Blomfeldt et al 2005	Functional status (Mean Function Harris Hip Score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-3.10	-	.021	THA
Blomfeldt et al 2005	Functional status (Mean Function Harris Hip Score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-3.70	-	.037	THA
Blomfeldt et al 2005	Absence of Deformity (Mean Harris Hip Score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Blomfeldt et al 2005	Absence of Deformity (Mean Harris Hip Score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Blomfeldt et al 2005	Range of Movement (Mean Harris Hip Score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Blomfeldt et al 2005	Range of Movement (Mean Harris Hip Score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Blomfeldt et al 2005	Activities of Daily Life (ADL) or living conditions (Grade A or B)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.92	0.31	N/A	NS
Blomfeldt et al 2005	Activities of Daily Life (ADL) or living conditions (Grade A or B)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	1.04	0.53	N/A	NS
Blomfeldt et al 2005	Living Independently	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	1.04	0.40	N/A	NS
Blomfeldt et al 2005	Living Independently	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.98	0.55	N/A	NS
Hedbeck et al 2011	Functional Status (Total Harris Hip Score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-5.00	0.03	N/A	THA
Hedbeck et al 2011	Functional Status (Total Harris Hip Score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-7.80	0.00	N/A	THA
Hedbeck et al 2011	Functional Status (Total Harris Hip Score)	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-9.30	0.00	N/A	THA
Hedbeck et al 2011	Functional Status (Total Harris Hip Score)	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-13.80	0.00	N/A	THA
Hedbeck et al 2011	Functional Status (Harris Hip Score: Pain)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.00	0.00	N/A	THA

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Hedbeck et al 2011	Functional Status (Harris Hip Score: Pain)	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.90	0.00	N/A	THA
Hedbeck et al 2011	Functional Status (Harris Hip Score: Pain)	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-2.10	0.20	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Function)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-3.10	0.06	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Function)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-3.70	0.04	N/A	THA
Hedbeck et al 2011	Functional Status (Harris Hip Score: Function)	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.40	0.02	N/A	THA
Hedbeck et al 2011	Functional Status (Harris Hip Score: Function)	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-5.80	0.01	N/A	THA
Hedbeck et al 2011	Functional Status (Harris Hip Score: Absence of deformity)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Absence of deformity)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Absence of deformity)	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Absence of deformity)	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Range of motion)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Range of motion)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Range of motion)	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Functional Status (Harris Hip Score: Range of motion)	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.10	0.04	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Total Score	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-7.80	0.00	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Function	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-3.70	0.04	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Absence of deformity	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Range of Motion	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Total Score	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-9.30	0.00	N/A	THA

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Hedbeck et al 2011	Harris Hip Score: Function	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.40	0.02	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Absence of deformity	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Range of Motion	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Total Score	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-13.80	0.00	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Function	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-5.80	0.01	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Absence of deformity	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Range of Motion	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.10	0.04	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Total Score	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-5.00	0.03	N/A	THA
Hedbeck et al 2011	Harris Hip Score: Function	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-3.10	0.06	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Absence of deformity	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	-	N/A	NS
Hedbeck et al 2011	Harris Hip Score: Range of Motion	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	0.00	1.00	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Function	4 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.40	0.57	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Function	12 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.70	0.26	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Function	24 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-1.90	0.02	N/A	THA
Keating et al 2005	Hip Rating Questionnaire: Walking	4 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-1.40	0.11	N/A	NS
Keating et al 2005	Hip Rating Questionnaire: Walking	12 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-2.40	0.01	N/A	THA
Keating et al 2005	Hip Rating Questionnaire: Walking	24 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-3.10	0.00	N/A	THA
van den Bekerom et al 2010	Functional status (Mean Total Harris Hip Score)	1 year	Hemiarthroplasty	Total Hip Arthroplasty	252	Mean difference	-2.10	-	.4	NS
van den Bekerom et al 2010	Functional status (Mean Total Harris Hip Score)	5 years	Hemiarthroplasty	Total Hip Arthroplasty	252	Mean difference	-3.30	-	.2	NS

Table 55: TOTAL VS HEMIARTHROPLASTY- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Mean time from trauma to surgery ((days))	1 days	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p=0.039	N/A	Treatment 2 (PCU-Total hip arthroplasty)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Mean post-operative hospital stay ((days))	3 wks	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed through a straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Blood loss - low (n) (< 500 ml)	1 days	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed through a straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Mean Difference	8 (-4.60, 20.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Blood loss - high (n) (> 500 ml)	1 days	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed through a straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Mean Difference	1 (-29.98, 31.98)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Mean operating time ((mins))	1 days	Total hip replacement (THR): Patients in the PCU-THR group wereimplanted with an uncemented Conus stem and a large-diameterfemoral head. The PCU component was coupled with a 6 mmsmaller-diameter metal head.	Bipolar Hemi arthroplasty (HA): All operations were performed througha straight lateral approach. According to the surgeon's preference, HApatients received either a cemented (n = 33) or an uncemented (n = 8)stem coupled with a bipolar femoral head. For the cementedprocedures, Simplex low-viscosity bone cement (HowmedicaStryker)was used.	Author Reported - p>.05	N/A	NS

Cadossi M. 2013	Moderate	Mean time from trauma to surgery (days)	1 wks	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p<.05	N/A	Treatment 1 (THR w/ PCU)

Cadossi M. 2013	Moderate	Mean post-operative hospital stay (days) (range)	1 mos	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Cadossi M. 2013	Moderate	Blood loss < 500 ml	0 days	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Cadossi M. 2013	Moderate	Blood loss > 500 ml	0 days	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Cadossi M. 2013	Moderate	Mean operating time (mins) (range)	0 days	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heath Invest. 2019	Moderate	Mortality	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	1.09(0.84, 1.41)	NS
Iorio R. 2019	Moderate	Length of surgery ((min))	1 days	Total hip arthroplasty (THA) with dual mobility cup (DMC): In the THAgroup, patients receive a dual mobility cup Quattro with Pavicementless femoral stem	Hemi-arthroplasty (HA): In the hemiarthroplasty group, patients receivean Excia cementless femoral stem with bipolar head	Author Reported - p=.04	N/A	Treatment 1 (Total Hip Arthroplasty)
Iorio R. 2019	Moderate	Duration of stay ((days))	8 days	Total hip arthroplasty (THA) with dual mobility cup (DMC): In the THAgroup, patients receive a dual mobility cup Quattro with Pavicementless femoral stem	Hemi-arthroplasty (HA): In the hemiarthroplasty group, patients receivean Excia cementless femoral stem with bipolar head	Author Reported - p>.05	N/A	NS
Iorio R. 2019	Moderate	Mortality (Mortality - 30 days)	30 days	Total hip arthroplasty (THA) with dual mobility cup (DMC): In the THAgroup, patients receive a dual mobility cup Quattro with Pavicementless femoral stem	Hemi-arthroplasty (HA): In the hemiarthroplasty group, patients receivean Excia cementless femoral stem with bipolar head	RR	1.00(0.07, 15.26)	NS
Iorio R. 2019	Moderate	Mortality (Mortality - 1 year)	1 yrs	Total hip arthroplasty (THA) with dual mobility cup (DMC): In the THAgroup, patients receive a dual mobility cup Quattro with Pavicementless femoral stem	Hemi-arthroplasty (HA): In the hemiarthroplasty group, patients receivean Excia cementless femoral stem with bipolar head	RR	0.80(0.24, 2.69)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	2.98 (1.92, 4.04)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	43.7 (36.23, 51.17)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	129 (101.48, 156.52)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	138.8 (118.34, 159.26)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IIIfracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	4.15 (3.38, 4.92)	Hemi arthroplasty (CI operation)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	3.54 (1.94, 5.14)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	46.5 (34.34, 58.66)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	135.2 (92.82, 177.58)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	132.4 (97.80, 167.00)	Hemi arthroplasty (CI operation)
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IVfracture type)	Intraop 0 days	Total hip arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Hemi arthroplasty (CI operation): The CI operation was routinelyperformed with an incision length of 15–20 cm.	Mean Difference	3.86 (2.20, 5.52)	Hemi arthroplasty (CI operation)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	0.5 (-0.04, 1.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	30.2 (23.87, 36.53)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	154.6 (127.15, 182.05)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	89.1 (76.98, 101.22)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IIIfracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	1.55 (1.01, 2.09)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	0.53 (-0.28, 1.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	28.27 (18.16, 38.38)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	164.18 (124.42, 203.94)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	90.26 (73.66, 106.86)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IVfracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Hemi arthroplasty (FMWSI procedure): The FMWSI procedure wascarried out as follows: A slightly curved incision was made along thelower edge of the greater trochanter via a modified lateral approach andwith the surface of the greater trochanter as the center. The incisionlength was 6.5–10 cm, and two-thirds of the incision was located at theedge of the proximal end of the greater trochanter.	Mean Difference	1.46 (0.58, 2.34)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mortality (30 day - mortality)	30 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RD	0.00(0.00, 0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mortality (120 day - mortality)	120 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	2.04(0.19, 21.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mortality (365 day - mortality)	365 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	2.04(0.39, 10.65)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean length of surgery (minutes)	Periop 1 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p<.05	N/A	Treatment 2 (Hemi-Arthroplasty)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean length of anaesthesia	Periop 1 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p<.05	N/A	Treatment 2 (Hemi-Arthroplasty)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean operative blood loss (mls)	Periop 1 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p<.05	N/A	Treatment 2 (Hemi-Arthroplasty)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Required blood transfusion	Periop 1 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	4.08(0.47, 35.27)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean hospital stay in days	Post-discharge15 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p=.055	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	No demonstrable shortening	Periop 1 days	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	RR	0.96(0.79, 1.15)	NS

Ren C. 2017	Moderate	Operation time (min)	1 days	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after	Mean Difference	20.77 (16.89, 24.65)	Hemiarthroplasty - The patients were treated with anesthesiaand were guided to take posterior recumbent position after theonset [3-5]. The incision around 10.00 cm was taken from theoutside of the

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).			

Ren C. 2017	Moderate	Bleeding amount (mL)	1 days	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after	Mean Difference	184.35 (172.66, 196.04)	Hemiarthroplasty - The patients were treated with anesthesiaand were guided to take posterior recumbent position after theonset [3-5]. The incision around 10.00 cm was taken from theoutside of the

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).			

Ren C. 2017	Moderate	Out-of-bed (out-of-bed activity)	1 days	Total Hip Arthroplasty - The first step was same with that of the groupB. The method was the same except for incision size 12.00 cm. Theacetabular and femoral prosthesis suitable for the patient were selectedto perform the implantation with other treatment ways, same as GroupB	Hemiarthroplasty - The patients were treated with anesthesia and wereguided to take posterior recumbent position after the onset [3-5]. Theincision around 10.00 cm was taken from the outside of the affectedarea, the femoral neck on small trochanter of the patient was cut offand then the bone was taken out for measurement. With the cleaningwork done, the model was set and put into the test with adjustment ofrelevant position. Related modulation work as well as formal installationwas conducted in the end of the test and conditions including the jointelasticity were checked followed by the reduction of the patient's hipjoint [6-9]. The incision was closed after the completion of drainagedevice and the patients were told to pay attention to some noticeablethings after	Mean Difference	1.84 (1.30, 2.38)	Total Hip Arthroplasty - The first step was same with that ofthe group B. The method was the same except for incisionsize 12.00 cm. The acetabular and femoral prosthesis suitablefor the patient wer

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					the operation (wearing T-shaped shoes and takingfunctional exercises 2 d-1 week after the operation).			
Sharma V. 2016	Moderate	Mean operative time ((minutes))	Periop 1 days	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	Author Reported	N/A	NS
Sharma V. 2016	Moderate	Average intraoperative blood loss ((cc))	Periop 1 days	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	Author Reported	N/A	NS
Sharma V. 2016	Moderate	Mean hospital stay ((days))	14 days	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	Author Reported	N/A	NS
Sharma V. 2016	Moderate	Mean blood transfusion required ((units))	1 days	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	Author Reported	N/A	NS
Sharma V. 2016	Moderate	Mortality (Mortality (7 days))	7 days	Total Hip Replacement (THR) - by Modified Gibson approach	Hemiarthroplasty - by Modified Gibson approach	RD	0.03(-0.02,0.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Blood loss (Blood loss intra-op/ml)	0 days	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	18.93 (9.62, 28.24)	Hemiarthroplasty (bipolar cementless)
Ukaj, S. 2019	Moderate	Surgery time, min (Duration of surgery/min)	0 days	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	5.95 (3.88, 8.02)	Hemiarthroplasty (bipolar cementless)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Weight bearing time (Time to first postoperative full weight-bearing)	1 yrs	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	Mean Difference	0.07 (-0.19, 0.33)	NS
Ukaj, S. 2019	Moderate	Mortality (Mortality 30 days)	30 days	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	RR	0.75(0.18, 3.17)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Mortality (Mortality 90 days)	90 days	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	RR	0.71(0.24, 2.09)	NS
Ukaj, S. 2019	Moderate	Mortality (Mortality 1 year)	1 yrs	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	RR	0.58(0.25, 1.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ukaj, S. 2019	Moderate	Mortality (Mortality 3 years)	3 yrs	DM (Dual mobility cup): Patients with DM received cementlessacetabular components: DualMobilityCup material CoCr,AnatomicandCylindro spherical design, 6 equatorial fins, and 4 tropical spikes forprimary stability. Dualmobility liner:UHMWPEmaterial, adapted for 22.2-or 28-mm heads.	Hemiarthroplasty (bipolar cementless): Patients with HA received theBipolar cementless acetabular prosthesis UHL	RR	0.87(0.46, 1.62)	NS
Ukaj, S. 2019	Moderate	Blood loss (Blood loss intra-op/ ml)	Intraop 1 days	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	18.93 (9.62, 28.24)	Hemiarthroplasty
Ukaj, S. 2019	Moderate	Surgery duration (Duration of surgery/ min)	Intraop 1 days	Dual Mobility Acetabular Cup	Hemiarthroplasty	Mean Difference	5.95 (3.88, 8.02)	Hemiarthroplasty
Ukaj, S. 2019	Moderate	Mortality (Mortality @ 30 days)	Postop 30days	Dual Mobility Acetabular Cup	Hemiarthroplasty	RR	1.00(0.27, 3.76)	NS
Ukaj, S. 2019	Moderate	Mortality (Mortality @ 90 days)	Postop 90days	Dual Mobility Acetabular Cup	Hemiarthroplasty	RR	0.71(0.24, 2.09)	NS
Ukaj, S. 2019	Moderate	Mortality (Mortality @ 1 year)	Postop 1 yrs	Dual Mobility Acetabular Cup	Hemiarthroplasty	RR	0.58(0.25, 1.35)	NS
Ukaj, S. 2019	Moderate	Mortality (Mortality @ 3 years)	Postop 3 yrs	Dual Mobility Acetabular Cup	Hemiarthroplasty	RR	0.87(0.46, 1.62)	NS

Xu F. 2017	Moderate	Intraoperative blood loss (ml)	Intraop 1 days	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis	Mean Difference	138.09 (93.20, 182.98)	Bipolar hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				>3°underwent varus or valgus fixation.	of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.			

Xu F. 2017	Moderate	Operation time (min)	Periop 1 days	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis	Mean Difference	89.27 (81.14, 97.40)	Bipolar hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				>3°underwent varus or valgus fixation.	of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.			

Xu F. 2017	Moderate	Hospital stay (day)	Post-discharge3 wks	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis	Mean Difference	9.1 (8.24, 9.96)	Bipolar hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				>3°underwent varus or valgus fixation.	of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.			

Xu F. 2017	Moderate	Postoperative length discrepancy in lower extremities (cm)	Postop 1 days	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis	Mean Difference	0.37 (0.16, 0.58)	Bipolar hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				>3°underwent varus or valgus fixation.	of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.			

Xu F. 2017	Moderate	Mortality (Mortality due to complications)	5 yrs	Total hip replacement: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle	Bipolar hemiarthroplasty: Surgeries performed using the posterolateralapproach with spinal anesthesia (total hip replacement was performedwith combined spinal/epidural anesthesia). All prostheses used in thisstudy were uncemented prostheses. The femur was reamed to adiameter for insert¬ing the uncemented prosthesis. For patientsundergoing total hip replacement, the metal-polyethylene andceramic-polyethylene inter¬faces of hip joint were used, where theacetabular bone was ground to a diameter of 1 mm smaller than theinserted prosthesis, and screws were used to enhance the fixationsta¬bility. In the anteroposterior X-ray of the hip joint, patients with anangle between the long axis	RR	0.71(0.25, 2.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				>3°underwent varus or valgus fixation.	of prosthetic stem and that of the femur of?3° underwent central fixation, while those with an angle >3°underwent varus or valgus fixation.			

Table 56. Total Versus Hemiarthroplasty: Complications

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Blomfeldt et al. 2005	Complications (Superficial Infection)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	1.00	1.00	N/A	NS
Blomfeldt et al. 2005	Complications (Additional Fractures)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	1.50	0.65	N/A	NS
Blomfeldt et al. 2005	Complications (Total General Medical Complications)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.83	0.75	N/A	NS
Blomfeldt et al. 2005	Complications (Deep Vein Thrombosis)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	% risk difference	1.67	0.27	N/A	NS
Blomfeldt et al. 2005	Complications (Atrial Fibrillation)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	% risk difference	1.67	0.27	N/A	NS
Blomfeldt et al. 2005	Complications (Myocardial Infarction)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	1.00	1.00	N/A	NS
Blomfeldt et al. 2005	Complications (Pneumonia)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	% risk difference	-1.67	0.27	N/A	NS
Blomfeldt et al. 2005	Complications (Congestive Heart Failure)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	% risk difference	-1.67	0.27	N/A	NS
Blomfeldt et al. 2005	Complications (Decubitus Ulcer)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	% risk difference	-1.67	0.27	N/A	NS
Blomfeldt et al. 2005	Complications (Death)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	1.00	1.00	N/A	NS
Hedbeck et al. 2011	Complications	0-44 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.33	0.34	N/A	NS
van den Bekerom et al. 2010	Complications (Total)	1 year	Hemiarthroplasty	Total Hip Arthroplasty	252	Risk ratio	1.02	0.93	N/A	NS
van den Bekerom et al. 2010	Complications (general patients)	1 year	Hemiarthroplasty	Total Hip Arthroplasty	252	Risk ratio	0.69	0.14	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
van den Bekerom et al. 2010	Complications (local patients)	1 year	Hemiarthroplasty	Total Hip Arthroplasty	252	Risk ratio	0.74	0.36	N/A	NS
van den Bekerom et al. 2010	Dislocation of prosthesis	5 years	Hemiarthroplasty	Total Hip Arthroplasty	252	% risk difference	-6.96	0.00	N/A	Hemi
Keating et al. 2005	Hip Rating Questionnaire: Global	4 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.90	0.30	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Global	12 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.50	0.61	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Global	24 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.70	0.47	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Overall	4 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-2.50	0.33	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Overall	12 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-2.90	0.28	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Overall	24 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-6.10	0.04	N/A	THA
van den Bekerom et al. 2010	Revision Operations	1 year	Hemiarthroplasty	Total Hip Arthroplasty	252	% risk difference	0.73	0.30	N/A	NS
van den Bekerom et al. 2010	Revision Operations	5 years	Hemiarthroplasty	Total Hip Arthroplasty	252	risk ratio	2.52	0.25	N/A	NS
Blomfeldt et al. 2005	Mortality	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.75	0.70	N/A	NS
Hedbeck et al. 2011	Mortality Rate	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.82	0.53	N/A	NS
Hedbeck et al. 2011	Overall mortality rate	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Risk ratio	0.82	0.53	N/A	NS
van den Bekerom et al. 2010	Mortality During Hospital Stay	Immediately	Hemiarthroplasty	Total Hip Arthroplasty	252	Risk ratio	1.18	0.78	N/A	NS
van den Bekerom et al. 2010	Mortality	1 year	Hemiarthroplasty	Total Hip Arthroplasty	252	Risk ratio	0.94	0.86	N/A	NS
van den Bekerom et al. 2010	Mortality	5 years	Hemiarthroplasty	Total Hip Arthroplasty	252	Risk ratio	0.72	0.01	N/A	Hemi
Blomfeldt et al. 2005	Health-related quality of life (EQ-5D index score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.05	-	>.05	NS
Blomfeldt et al. 2005	Health-related quality of life (EQ-5D index score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.05	-	>.05	NS
Hedbeck et al. 2011	EQ-5D index score	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.05	-	>.05	NS
Hedbeck et al. 2011	EQ-5D index score	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.08	-	>.05	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Hedbeck et al. 2011	EQ-5D index score	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.11	-	<.05	THA
Hedbeck et al. 2011	EQ-5D index score	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-0.05	-	>.05	NS
Keating et al. 2005	EQ-5D: Worse general level of health compared with before fracture	4 months	Hemiarthroplasty	Total Hip Replacement	131	Risk ratio	0.93	0.85	N/A	NS
Keating et al. 2005	EQ-5D: Worse general level of health compared with before fracture	12 months	Hemiarthroplasty	Total Hip Replacement	131	Risk ratio	0.94	0.86	N/A	NS
Keating et al. 2005	EQ-5D: Worse general level of health compared with before fracture	24 months	Hemiarthroplasty	Total Hip Replacement	131	Risk ratio	1.02	0.96	N/A	NS
Keating et al. 2005	EQ-5D: Utility Score	4 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.08	.1	N/A	NS
Keating et al. 2005	EQ-5D: Utility Score	12 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.04	.447	N/A	NS
Keating et al. 2005	EQ-5D: Utility Score	24 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.16	.008	N/A	THA

Table 57: TOTAL V**S HEMIARTHROPLASTY- Pain**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris Hip score (Pain subscore)	3 mos	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cadossi M. 2013	Moderate	Harris Hip score (Pain subscore)	1 yrs	THR w/ PCU: Total hip replacement (THR) comprising apolycarbonate–urethane (PCU) acetabular component coupled with alarge-diameter metal femoral head Patients in the PCU-THR groupwere implanted with an uncemented Conus stem and a large-diameterfemoral head (Biomet, Warsaw, Indiana). The acetabular cartilage wasremoved with a specifically designed ultra-precision reamer to exposethe subchondral bone. When all the cartilage had been removed, acircular groove was created at the acetabular margin using a dedicatedinstrument centred in the acetabulum. The PCU acetabular componentwas then inserted. The fit between the external equatorial flap of thePCU implant and the groove ensured its stability. The PCU componentwas coupled with a 6 mm smaller-diameter metal head.	Bipolar hemiarthroplasty: HA patients received either a cemented (n =33) or an uncemented (n = 8) stem (Exeter; Howmedica Stryker,Montreux, Switzerland; or Conus; Zimmer, Warsaw, Indiana) coupledwith a bipolar femoral head (Centrax; Howmedica Stryker; orEndoprotesi Biarticolare; Citieffe, Bologna, Italy). For the cementedprocedures, Simplex low-viscosity bone cement (Howmedica Stryker)was used.	Author Reported - p<.05	N/A	Treatment 1 (THR w/ PCU)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Pain numerical rating scale	3 mos	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	-0.3 (-0.98, 0.38)	NS
Chammout G. 2019	High	Pain numerical rating scale	1 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	-0.3 (-1.00, 0.40)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout G. 2019	High	Pain numerical rating scale	2 yrs	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Direct lateral approach with the patient in the lateral decubitus position:A vacuum-mixed low-viscosity cement with gentamicin was used in allpatients. All patients received antibiotic and anticoagulant prophylaxis(3 doses of 2- g cloxacillin and low-molecular-weight heparin for 30days postoperatively).	Mean Difference	0 (-0.78, 0.78)	NS
Heath Invest. 2019	Moderate	Pain (Hip-related complication)	2 yrs	8. Total hip arthroplasty	8. Hemi arthroplasty	RR	0.50(0.19,1.33)	NS
Parker M. 2019	Moderate	Mean Pain score	8 wks	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean Pain score	3 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS
Parker M. 2019	Moderate	Mean Pain score	6 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker M. 2019	Moderate	Mean Pain score	9 mos	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS
Parker M. 2019	Moderate	Mean Pain score	1 yrs	Cemented total hip arthroplasty (THR) with a cemented acetabularcup.: All stems were a polished tapered stem. All acetabular cups werecemented polyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those treated withTHR were advised to limit flexion of the hip beyond 90 degrees forbending and sitting and avoidance of crossing the legs and excessivetwisting for eight weeks. All patients were allowed to weight bear asable.	Cemented polished tapered stem hemiarthroplasty: All stems were apolished tapered stem. All acetabular cups were cementedpolyethylene, apart from one which was a hybrid hip with anuncemented cup inserted via a posterior approach. Those patientstreated with hemiarthroplasty had no restriction on hip function. Allpatients were allowed to weight bear as able.	Author Reported - p>.05	N/A	NS

Table 58. Total Versus Hemiarthroplasty: Pain cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Blomfeldt et al. 2005	Pain (Mean Pain Harris Hip Score)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-2.00	-	.121	NS
Blomfeldt et al. 2005	Pain (Mean Pain Harris Hip Score)	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.00	-	<.001	NS
Hedbeck et al. 2011	Harris Hip Score: Pain	12 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.00	0.00	N/A	THA
Hedbeck et al. 2011	Harris Hip Score: Pain	24 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-4.90	0.00	N/A	THA
Hedbeck et al. 2011	Harris Hip Score: Pain	48 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-7.90	0.00	N/A	THA
Hedbeck et al. 2011	Harris Hip Score: Pain	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-2.00	0.06	N/A	NS
Hedbeck et al. 2011	Functional Status (Harris Hip Score: Pain)	4 months	Hemiarthroplasty	Total Hip Arthroplasty	120	Mean difference	-2.00	0.06	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Pain	4 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	0.10	0.90	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Pain	12 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	0.70	0.38	N/A	NS
Keating et al. 2005	Hip Rating Questionnaire: Pain	24 months	Hemiarthroplasty	Total Hip Replacement	131	Mean difference	-0.40	0.65	N/A	NS

Table 59: CEMENTED VS UNCEMENTED ARTHROPLASTY- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout, G. 2016	Moderate	Complications (Dislocation)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RR	0.32(0.04,2.96)	NS
Chammout, G. 2016	Moderate	Complications (Periprosthetic fracture intraoperatively)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RD	-0.09(-0.18,0.01)	NS
Chammout, G. 2016	Moderate	Complications (Late periprosthetic fracture)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RD	-0.03(-0.09,0.03)	NS
Chammout, G. 2016	Moderate	Complications (Superficial infection)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RD	-0.03(-0.09,0.03)	NS
Chammout, G. 2016	Moderate	Complications (Unstable stem)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RD	-0.03(-0.09,0.03)	NS
Chammout, G. 2016	Moderate	Complications (Total number of hip complications)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RR	0.11(0.01,0.81)	Cemented Total hip replacement
Chammout, G. 2016	Moderate	Complications (No. of patients with any hip complication)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RR	0.14(0.02,1.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Inngul, C. 2015	Moderate	Intra-operative femoral fracture	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	-0.12(-0.20,-0.05)	Cemented arthroplasty
Inngul, C. 2015	Moderate	Intra-operative fracture of the tip of the greater trochanter	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	1.10(0.29,4.24)	NS
Inngul, C. 2015	Moderate	Re-operation due to dislocation	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	0.01(-0.01,0.04)	NS
Inngul, C. 2015	Moderate	Re-operation due to deep infection	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	-0.01(-0.04,0.01)	NS
Inngul, C. 2015	Moderate	Superficial wound infection	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	0.49(0.16,1.52)	NS
Inngul, C. 2015	Moderate	Urinary tract infection	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	1.42(0.56,3.60)	NS
Inngul, C. 2015	Moderate	Pneumonia	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	0.55(0.05,5.95)	NS
Inngul, C. 2015	Moderate	Acute myocardial infarction	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	-0.01(-0.04,0.01)	NS
Inngul, C. 2015	Moderate	Acute cardiac failure	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	-0.01(-0.04,0.01)	NS
Inngul, C. 2015	Moderate	Acute renal failure	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	-0.01(-0.04,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Inngul, C. 2015	Moderate	Death within 24 hours post-operatively	1 days	Cemented arthroplasty	Uncemented arthroplasty	RD	0.01(-0.01,0.04)	NS
Moerman, S. 2017	Moderate	Complications (Major systemic) (Tachyarrhythmia)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Major systemic) (Myocardial infarction)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major systemic) (Pulmonary embolus)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Major systemic) (Acute renal failure)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major systemic) (Stroke and/or TIA)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major systemic) (Bowel obstruction)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	Complications (Major systemic) (Total number of patients with >/=1major systemic complication a)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Anemia)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Urinary tract infection)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Mental status change)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Gastric hypomotility)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Deep venous thrombosis)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Pneumonia)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Social complication)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Others)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Minor systemic) (Total number of patients with >/=1minor systemic a)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Major local) (Peripheral nerve injury)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major local) (Infection leading to revision)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	Complications (Major local) (Periprosthetic fracture)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major local) (intraoperatively)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	0.00(0.00,0.00)	NS
Moerman, S. 2017	Moderate	Complications (Major local) (postoperatively)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major local) (Dislocation)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Major local) (Total number of patients with >/= 1 majorlocal complication a)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor local) (Hematoma)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	Complications (Minor local) (Persistent wound drainage)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor local) (Superficial wound infection)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Complications (Minor local) (Skin blisters)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Minor local) (Other)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	NS
Moerman, S. 2017	Moderate	Complications (Minor local) (Total number of patients with >/= 1 minorlocal complication a)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Movrin, I. 2020	High	Late periprosthetic fracture	Postop 24mos	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RR	0.50(0.05,5.40)	NS
Movrin, I. 2020	High	Dislocation	Postop 24mos	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RR	2.00(0.19,21.61)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Movrin, I. 2020	High	Deep infection	Postop 24mos	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RD	0.04(-0.00,0.08)	NS
Parker, M. J. 2020	Moderate	Complications (Pneumonia)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.76(0.24,2.44)	NS
Parker, M. J. 2020	Moderate	Complications (Congestive cardiac failure)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	1.83(0.34,9.81)	NS
Parker, M. J. 2020	Moderate	Complications (Myocardial infarction)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	-0.02(-0.05,0.00)	NS
Parker, M. J. 2020	Moderate	Complications (Cardiac arrhythmia)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	2.74(0.29,26.01)	NS
Parker, M. J. 2020	Moderate	Complications (Urinary retention)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.83(0.36,1.89)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Complications (Deep vein thrombosis)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.46(0.04,4.98)	NS
Parker, M. J. 2020	Moderate	Complications (Pulmonary embolism)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	0.01(-0.01,0.02)	NS
Parker, M. J. 2020	Moderate	Complications (Pressure sores)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.30(0.08,1.10)	NS
Parker, M. J. 2020	Moderate	Complications (Delirium)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.98(0.49,1.95)	NS
Parker, M. J. 2020	Moderate	Complications (Cerebrovascular accident)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.23(0.03,2.02)	NS
Parker, M. J. 2020	Moderate	Complications (Gastrointestinal bleed)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.55(0.13,2.25)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Complications (Acute renal failure)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	1.83(0.47,7.16)	NS
Parker, M. J. 2020	Moderate	Complications (Clostridia diarrhoea)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2020	Moderate	Complications (Fat embolism)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RD	0.01(-0.01,0.03)	NS

Table 60: CEMENTED VS UNCEMENTED ARTHROPLASTY- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout, G. 2016	Moderate	EQ-5D (health-related quality of life EQ-5D)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	Author Reported - p>.05	N/A	NS
Chammout, G. 2016	Moderate	Harris Hip Score ((HHS))	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	Author Reported - p>.05	N/A	NS
Chammout, G. 2016	Moderate	ADL (Activities of daily living (ADL) status)	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	Author Reported - p>.05	N/A	NS
Inngul, C. 2015	Moderate	Harris hip score (Total)	4 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	7.3 (2.58, 12.02)	Cemented arthroplasty
Inngul, C. 2015	Moderate	Harris hip score (Total)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	3.7 (-1.30, 8.70)	NS
Inngul, C. 2015	Moderate	SMFA dysfunction score	4 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	-9.4 (-15.52, -3.28)	Cemented arthroplasty
Inngul, C. 2015	Moderate	SMFA dysfunction score	12 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	-12.6 (-18.99, -6.21)	Cemented arthroplasty
Inngul, C. 2015	Moderate	SMFA bother score	4 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	-5.3 (-11.79, 1.19)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Inngul, C. 2015	Moderate	SMFA bother score	12 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	-16.3 (-22.57, -10.03)	Cemented arthroplasty
Inngul, C. 2015	Moderate	EQ-5D index score	4 mos	Cemented arthroplasty	Uncemented arthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Inngul, C. 2015	Moderate	EQ-5D index score	12 mos	Cemented arthroplasty	Uncemented arthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Langslet, E. 2014	Moderate	Harris hip score	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-1.2 (-6.66, 4.26)	NS
Langslet, E. 2014	Moderate	Harris hip score	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.9 (-6.00, 4.20)	NS
Langslet, E. 2014	Moderate	Harris hip score	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-9.9 (-17.75, -2.05)	Uncemented hemiarthroplasty
Langslet, E. 2014	Moderate	Barthel Index of 19 or 20	7 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.55(0.24,1.25)	NS
Langslet, E. 2014	Moderate	Barthel Index of 19 or 20	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.88(0.65,1.19)	NS
Langslet, E. 2014	Moderate	Barthel Index of 19 or 20	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.79(0.61,1.04)	NS
Langslet, E. 2014	Moderate	Barthel Index of 19 or 20	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.87(0.63,1.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Langslet, E. 2014	Moderate	EQ-5D index score	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.06 (-0.03, 0.15)	NS
Langslet, E. 2014	Moderate	EQ-5D index score	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.07 (-0.03, 0.17)	NS
Langslet, E. 2014	Moderate	EQ-5D index score	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.09 (-0.23, 0.05)	NS
Langslet, E. 2014	Moderate	Number (%) living in own home	7 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.78(0.21,2.82)	NS
Langslet, E. 2014	Moderate	Number (%) living in own home	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.97(0.80,1.19)	NS
Langslet, E. 2014	Moderate	Number (%) living in own home	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.85(0.70,1.03)	NS
Langslet, E. 2014	Moderate	Number (%) living in own home	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.80(0.60,1.07)	NS
Langslet, E. 2014	Moderate	Number (%) not in need of any pain medication	7 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.17(0.37,3.71)	NS
Langslet, E. 2014	Moderate	Number (%) not in need of any pain medication	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.00(0.79,1.26)	NS
Langslet, E. 2014	Moderate	Number (%) not in need of any pain medication	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.91(0.78,1.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Langslet, E. 2014	Moderate	Number (%) not in need of any pain medication	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.00(0.77,1.30)	NS
Langslet, E. 2014	Moderate	Number (%) able to walk independently using any aids	7 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.07(0.93,1.23)	NS
Langslet, E. 2014	Moderate	Number (%) able to walk independently using any aids	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.03(0.95,1.12)	NS
Langslet, E. 2014	Moderate	Number (%) able to walk independently using any aids	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.04(0.96,1.12)	NS
Langslet, E. 2014	Moderate	Number (%) able to walk independently using any aids	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.88(0.75,1.02)	NS
Langslet, E. 2014	Moderate	EQ-5D visual analogue scale	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-2 (-8.62, 4.62)	NS
Langslet, E. 2014	Moderate	EQ-5D visual analogue scale	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-4 (-10.75, 2.75)	NS
Langslet, E. 2014	Moderate	EQ-5D visual analogue scale	5 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0 (-8.55, 8.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	SF-12 Physical component (6 weeks)	6 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	5 (2.76, 7.24)	Cemented hemiarthroplasty
Moerman, S. 2017	Moderate	SF-12 Physical component (12 weeks)	12 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	4.7 (1.97, 7.43)	Cemented hemiarthroplasty
Moerman, S. 2017	Moderate	SF-12 Physical component (1 year)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.7 (-2.11, 3.51)	NS
Moerman, S. 2017	Moderate	SF-12 Mental component (6 weeks)	6 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	2.4 (-0.97, 5.77)	NS
Moerman, S. 2017	Moderate	SF-12 Mental component (12 weeks)	12 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	1.8 (-1.29, 4.89)	NS
Moerman, S. 2017	Moderate	SF-12 Mental component (1 year)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	2.1 (-0.88, 5.08)	NS
Movrin, I. 2020	High	Harris hip score	Postop 6 wks	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	Mean Difference	5.8 (1.10, 10.50)	Cemented bipolar Hemi arthroplasty
Movrin, I. 2020	High	Harris hip score	Postop 24mos	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	Mean Difference	1.6 (-2.04, 5.24)	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	8 wks	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	3 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	6 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	9 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Social dependency reduction (Mean reduction in social dependency)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Vidovic, D. 2013	Moderate	Harris hip score	Postop 3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	4.21 (1.40, 7.02)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Harris hip score	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	4.22 (1.09, 7.35)	Cemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2013	Moderate	Harris hip score	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	5.05 (1.25, 8.85)	Cemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Harris Hip Score	3 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	5.03 (2.42, 7.64)	Cemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Harris Hip Score	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	6.23 (3.47, 8.99)	Cemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Harris Hip Score	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	5.1 (1.74, 8.46)	Cemented hemiarthroplasty

Table 61: CEMENTED VS UNCEMENTED ARTHROPLASTY- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	Timed up and go (6 weeks)	6 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0 (-3.72, 3.72)	NS
Moerman, S. 2017	Moderate	Timed up and go (12 weeks)	12 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.7 (-3.70, 2.30)	NS
Moerman, S. 2017	Moderate	Timed up and go (1 year)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	1.1 (-1.46, 3.66)	NS
Moerman, S. 2017	Moderate	GARS* (iADL) Groningen Activity Restriction Scale (GARS)) (6 weeks)	6 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-3.1 (-7.29, 1.09)	NS
Moerman, S. 2017	Moderate	GARS* (iADL) Groningen Activity Restriction Scale (GARS)) (12 weeks)	12 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.4 (-5.07, 4.27)	NS
Moerman, S. 2017	Moderate	GARS* (iADL) Groningen Activity Restriction Scale (GARS)) (1 year)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-4 (-9.09, 1.09)	NS
Moerman, S. 2017	Moderate	New Mobility Score (NMS) (6 weeks)	6 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.2 (-0.88, 0.48)	NS
Moerman, S. 2017	Moderate	New Mobility Score (NMS) (12 weeks)	12 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.3 (-0.52, 1.12)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moerman, S. 2017	Moderate	New Mobility Score (NMS) (1 year)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	1 (0.15, 1.85)	Cemented hemiarthroplasty
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	8 wks	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	3 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	6 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	9 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Mobility (walking) (Mean reduction in mobility scale)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p<.05	N/A	Treatment 1 (cement)

Table 62. CEMENTED VS UNCEMENTED ARTHROPLASTY: Function cont

Study	Outcome	Time	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Deangelis et al 2012	Living at home	1 month	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.915	NS
Deangelis et al 2012	Living at home	2 months	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.575	NS
Deangelis et al 2012	Living at home	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.217	NS
Deangelis et al 2012	Need walking assistance	1 month	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.577	NS
Deangelis et al 2012	Need walking assistance	2 months	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.834	NS
Deangelis et al 2012	Need walking assistance	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.188	NS
Deangelis et al 2012	Physical ADL	1 month	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	0.2	N/A	0.73	NS
Deangelis et al 2012	Physical ADL	2 months	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	0.1	N/A	0.875	NS
Deangelis et al 2012	Physical ADL	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	-1.3	N/A	0.168	NS
Deangelis et al 2012	Instrumental ADL	1 month	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	-0.2	N/A	0.262	NS
Deangelis et al 2012	Instrumental ADL	2 months	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	-0.3	N/A	0.3	NS
Deangelis et al 2012	Instrumental ADL	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	-0.2	N/A	0.384	NS
Deangelis et al 2012	Energy/fatigue	1 month	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	0	N/A	0.938	NS
Deangelis et al 2012	Energy/fatigue	2 months	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	0	N/A	0.668	NS
Deangelis et al 2012	Energy/fatigue	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	Mean difference	0	N/A	0.608	NS
Figved et al 2009	Surgical time (minutes)	Peri-op	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	220	Mean difference	12.40	0.00	N/A	Favors Uncemented
Figved et al 2009	Total blood loss (ml)	Peri-op	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	218	Mean difference	77.00	0.04	N/A	Favors Uncemented
Figved et al 2009	Function (Harris Hip Score)	Baseline	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	220	Mean difference	-2.20	0.30	N/A	NS
Figved et al 2009	Function (Harris Hip Score)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	189	Mean difference	-1.20	0.67	N/A	NS
Figved et al 2009	Function (Harris Hip Score)	12 Months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	167	Mean difference	-0.90	0.73	N/A	NS
Figved et al 2009	Independence (Living in own home)	Baseline	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	220	Risk ratio	0.98	0.79	N/A	NS

Study	Outcome	Time	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Figved et al 2009	Independence (Living in own home)	Discharge (7 Days)	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	215	Risk ratio	0.78	0.70	N/A	NS
Figved et al 2009	Independence (Living in own home)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	190	Risk ratio	0.97	0.79	N/A	NS
Figved et al 2009	Independence (Living in own home)	12 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	168	Risk ratio	0.85	0.09	N/A	NS
Figved et al 2009	Function (Able to walk independently)	Baseline	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	220	Risk difference	0.00	1.00	N/A	NS
Figved et al 2009	Function (Able to walk independently)	Discharge (7 Days	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	215	Risk ratio	1.07	0.35	N/A	NS
Figved et al 2009	Function (Able to walk independently)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	190	Risk ratio	1.03	0.45	N/A	NS
Figved et al 2009	Function (Able to walk independently)	12 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	168	Risk ratio	1.04	0.37	N/A	NS
Santini et al 2005	Function (VELCA- Walking Ability)	1 year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	-0.28	0.53	N/A	NS
Santini et al 2005	Function (VELCA- Personal Activities)	1 year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	0.07	0.80	N/A	NS
Santini et al 2005	Function (VELCA- Daily Activities)	1 year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	0.31	0.36	N/A	NS
Santini et al 2005	Function (VELCA- Living Conditions)	1 year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	0.09	0.91	N/A	NS
Santini et al 2005	Function (VELCA- Total Score)	1 year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	0.18	0.88	N/A	NS
Santini et al 2005	Independence (Live Alone)	1 year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Risk ratio	1.17	0.77	N/A	NS
Taylor et al 2012	Oxford Hip Score	6 weeks	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	<.05	NS
Taylor et al 2012	Oxford Hip Score	6 months	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Oxford Hip Score	1 year	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Oxford Hip Score	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Short Musculoskeletal Function Assessment	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Timed Up and Go score	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	<.01	NS

Table 63: CEMENTED VS UNCEMENTED ARTHROPLASTY- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout, G. 2016	Moderate	Surgery time, min	Intraop 1 days	Cemented Total hip replacement	Uncemented Total hip replacement	Mean Difference	13 (2.59, 23.41)	Uncemented Total hip replacement
Chammout, G. 2016	Moderate	Perioperative bleeding, mL	Intraop 1 days	Cemented Total hip replacement	Uncemented Total hip replacement	Mean Difference	-32 (-157.23, 93.23)	NS
Chammout, G. 2016	Moderate	Mortality	Postop 2 yrs	Cemented Total hip replacement	Uncemented Total hip replacement	RR	0.97(0.14,6.51)	NS
Inngul, C. 2015	Moderate	Acetabular erosion (Grade 1)	4 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	1.39(0.38,5.10)	NS
Inngul, C. 2015	Moderate	Acetabular erosion (Grade 1)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	0.84(0.31,2.28)	NS
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 1)	4 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	0.84(0.54,1.29)	NS
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 1)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	0.95(0.62,1.46)	NS
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 2)	4 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	1.20(0.60,2.37)	NS
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 2)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	1.09(0.56,2.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 3)	4 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	2.39(0.22,25.70)	NS
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 3)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	0.58(0.11,3.07)	NS
Inngul, C. 2015	Moderate	Heterotopic ossification (Grade 4)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RD	0.02(-0.02,0.06)	NS
Inngul, C. 2015	Moderate	Mortality	4 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	4.42(0.51,38.55)	NS
Inngul, C. 2015	Moderate	Mortality	12 mos	Cemented arthroplasty	Uncemented arthroplasty	RR	1.93(0.59,6.31)	NS
Langslet, E. 2014	Moderate	Duration of surgery (minutes)	Periop 1 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	12.4 (7.23, 17.57)	Uncemented hemiarthroplasty
Langslet, E. 2014	Moderate	Length of surgical incision (cm)	Periop 1 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.5 (-0.20, 1.20)	NS
Langslet, E. 2014	Moderate	Intraoperative blood loss (mL)	Periop 1 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	90 (43.00, 137.00)	Uncemented hemiarthroplasty
Langslet, E. 2014	Moderate	Postoperative drainage blood loss (mL)	Periop 1 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-13 (-53.30, 27.30)	NS
Langslet, E. 2014	Moderate	Total blood loss (mL)	Periop 1 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	77 (5.25, 148.75)	Uncemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Langslet, E. 2014	Moderate	Hospital stay	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.6 (-2.46, 1.26)	NS
Moerman, S. 2017	Moderate	Mortality	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RD	.(.,.)	Uncemented hemiarthroplasty
Moerman, S. 2017	Moderate	Varus or valgus deviation (Post operative)	1 days	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.72(0.27,1.92)	NS
Movrin, I. 2020	High	Intraoperative bleeding	Intraop 1 days	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	Mean Difference	82 (37.42, 126.58)	Uncemented bipolar Hemi arthroplasty
Movrin, I. 2020	High	Intraoperative SaO2 drop	Intraop 1 days	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RD	0.10(0.03,0.17)	Uncemented bipolar Hemi arthroplasty
Movrin, I. 2020	High	Drop (?30 mmHg) in systolic BP during stem insertion	Intraop 1 days	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RR	3.75(1.30,10.80)	Cemented bipolar Hemi arthroplasty
Movrin, I. 2020	High	Intraoperative femoral fracture	Intraop 1 days	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RD	-0.03(-0.06,0.01)	NS
Movrin, I. 2020	High	Intraoperative death	Intraop 1 days	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RD	0.00(0.00,0.00)	NS
Movrin, I. 2020	High	Mortality within 7 days	Postop 7 days	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RR	2.33(0.63,8.70)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Movrin, I. 2020	High	Mortality within 24 months	Postop 24mos	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	RR	0.89(0.57,1.40)	NS
Parker, M. J. 2020	Moderate	Length of surgery (Mean length of surgery, mins (SD))	0 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	4.7 (1.86, 7.54)	Unemented hemiarthroplasty
Parker, M. J. 2020	Moderate	Operative blood loss (Mean operative blood loss, ml (SD))	0 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-2.6 (-27.07, 21.87)	NS
Parker, M. J. 2020	Moderate	Blood transfusion required (Required blood transfusion, n (%))	0 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-14 (-16.61, -11.39)	Cemented hemiarthroplasty
Parker, M. J. 2020	Moderate	Units of blood transfused (SD) (Mean units of blood transfused (SD))	0 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-0.16 (-0.30, -0.02)	Cemented hemiarthroplasty
Parker, M. J. 2020	Moderate	Total hospital stay (Mean total hospital stay, days (SD))	2 wks	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Mean Difference	-2.2 (-7.36, 2.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2020	Moderate	Mortality (30-day mortality, n (%))	30 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.98(0.48,2.02)	NS
Parker, M. J. 2020	Moderate	Mortality (120-day mortality, n (%))	120 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.86(0.57,1.30)	NS
Parker, M. J. 2020	Moderate	Mortality (365-day mortality, n (%))	365 days	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	RR	0.73(0.55,0.97)	Cemented hemiarthroplasty
Talsnes, O. 2013	Moderate	Theatre time (Theatre time, (min))	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Mean Difference	20 (13.57, 26.43)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).
Talsnes, O. 2013	Moderate	Surgery duration (Operation time, (min))	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Mean Difference	13 (7.33, 18.67)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Talsnes, O. 2013	Moderate	Blood loss, (ml) (Intraoperatively)	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Mean Difference	75 (30.48, 119.52)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).
Talsnes, O. 2013	Moderate	Blood loss, (ml) (Postoperatively)	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Mean Difference	17 (-29.87, 63.87)	NS
Talsnes, O. 2013	Moderate	Blood loss, (ml) (Total)	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Mean Difference	92 (20.47, 163.53)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).
Talsnes, O. 2013	Moderate	Patients transfused (Patients (%) transfused with >=C2 U PRBC beforedischarge)	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Author Reported - p>.05	N/A	NS
Talsnes, O. 2013	Moderate	Hgb day +4 g/dl	Intraop 1 days	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Mean Difference	0.1 (-0.17, 0.37)	NS
Talsnes, O. 2013	Moderate	Mortality	Postop 1 yrs	Cemented (Landos Titan, Depuy, Warshaw, IN, USA)	Non-cemented (Landos Corail, Depuy, Warshaw, IN, USA).	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R1))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.022 (-0.03, 0.08)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R1))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.037 (-0.01, 0.09)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R1))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.036 (0.04, 0.04)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R2))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.073 (-0.00, 0.15)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R2))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.11 (0.03, 0.19)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R2))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.11 (0.04, 0.18)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R3))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.082 (0.01, 0.15)	Cemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R3))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.11 (0.04, 0.18)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R3))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.125 (0.06, 0.19)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R4))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.126 (0.07, 0.19)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R4))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.119 (0.06, 0.18)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R4))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.237 (0.18, 0.30)	Cemented hemiarthroplasty
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R5))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.011 (-0.08, 0.05)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R5))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.001 (-0.07, 0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R5))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.011 (-0.06, 0.08)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R6))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.011 (-0.08, 0.06)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R6))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.015 (-0.06, 0.09)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R6))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.04 (-0.04, 0.12)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R7))	Postop 1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.048 (-0.11, 0.01)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R7))	Postop 6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.01 (-0.06, 0.08)	NS
Vidovic, D. 2013	Moderate	Bone mineral density (g/cm2) (Gruen region (R7))	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.038 (-0.02, 0.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2013	Moderate	Mortality	Postop 12mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.78(0.33,1.82)	NS
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Neck - Region of interest (ROI) ofcontralateral hip)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.032 (-0.08, 0.02)	NS
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Neck - Region of interest (ROI) ofcontralateral hip)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.044 (-0.08, -0.00)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Neck - Region of interest (ROI) ofcontralateral hip)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.046 (-0.08, -0.01)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Ward - Region of interest (ROI) ofcontralateral hip)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.029 (-0.07, 0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Ward - Region of interest (ROI) ofcontralateral hip)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.03 (-0.05, -0.01)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Ward - Region of interest (ROI) ofcontralateral hip)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.03 (-0.05, -0.01)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Trochanter - Region of interest (ROI) ofcontralateral hip)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.051 (-0.10, -0.00)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Trochanter - Region of interest (ROI) ofcontralateral hip)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.057 (-0.10, -0.01)	Uncemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Trochanter - Region of interest (ROI) ofcontralateral hip)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.056 (-0.10, -0.01)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Total - Region of interest (ROI) ofcontralateral hip)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.054 (-0.11, -0.00)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Total - Region of interest (ROI) ofcontralateral hip)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.058 (-0.11, -0.00)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Total - Region of interest (ROI) ofcontralateral hip)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.064 (-0.11, -0.02)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (R1 ipsilateral - Region of interest (ROI) ofbilateral distal femur)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.061 (0.00, 0.12)	Cemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (R1 ipsilateral - Region of interest (ROI) ofbilateral distal femur)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.081 (0.02, 0.14)	Cemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (R1 ipsilateral - Region of interest (ROI) ofbilateral distal femur)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.088 (0.03, 0.14)	Cemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Global - Region of interest (ROI) ofbilateral distal femur)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.083 (0.02, 0.15)	Cemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Global - Region of interest (ROI) ofbilateral distal femur)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0.103 (0.05, 0.16)	Cemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Global - Region of interest (ROI) ofbilateral distal femur)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	0 (-0.06, 0.06)	NS
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (R1 contralateral - Region of interest (ROI)of bilateral distal femur)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.085 (-0.17, -0.00)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (R1 contralateral - Region of interest (ROI)of bilateral distal femur)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.089 (-0.16, -0.02)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (R1 contralateral - Region of interest (ROI)of bilateral distal femur)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.1 (-0.17, -0.03)	Uncemented hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Global - Region of interest (ROI) ofbilateral distal femur)	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.081 (-0.16, -0.00)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Global - Region of interest (ROI) ofbilateral distal femur)	6 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.093 (-0.17, -0.02)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Bone mineral density (BMD) (Global - Region of interest (ROI) ofbilateral distal femur)	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Mean Difference	-0.095 (-0.17, -0.02)	Uncemented hemiarthroplasty
Vidovic, D. 2015	Moderate	Mortality	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Author Reported - p>.05	N/A	NS
Vidovic, D. 2015	Moderate	Morbidity	12 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Author Reported - p>.05	N/A	NS
Vidovic, D. 2015	Moderate	Hospital stay	1 mos	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	Author Reported - p>.05	N/A	NS

Table 64. CEMENTED VS UNCEMENTED ARTHROPLASTY: Other cont

Study	Outcome	Time	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Deangelis et al 2012	Mortality	In-hospital	Cemented arthroplasty	Press-fit hemiarthroplasty	130	% risk difference	-1	N/A	0.983	NS
Deangelis et al 2012	Mortality	1 month	Cemented arthroplasty	Press-fit hemiarthroplasty	130	% risk difference	5.1	N/A	0.265	NS
Deangelis et al 2012	Mortality	2 months	Cemented arthroplasty	Press-fit hemiarthroplasty	130	% risk difference	4.6	N/A	0.559	NS
Deangelis et al 2012	Mortality	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	% risk difference	3.1	N/A	0.811	NS
Figved et al 2009	Mortality	7 days	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	213	Risk ratio	0.73	0.67	N/A	NS
Figved et al 2009	Mortality	30 Days	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	213	Risk ratio	0.49	0.23	N/A	NS
Figved et al 2009	Mortality	90 Days	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	213	Risk ratio	0.84	0.63	N/A	NS
Figved et al 2009	Mortality	12 Months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	213	Risk ratio	0.65	0.09	N/A	NS
Figved et al 2009	Mortality	24 Months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	213	Risk ratio	0.86	0.47	N/A	NS
Santini 2006	Mortality	During Hospital Stay	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Risk ratio	1.50	0.65	N/A	NS
Santini et al 2005	Mortality	1 Year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Risk ratio	0.93	0.82	N/A	NS
Santini et al 2005	Mortality	1 Year	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Risk ratio	0.93	0.82	N/A	NS
Taylor et al 2012	Mortality	6 weeks	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Mortality	6 months	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Mortality	1 year	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Taylor et al 2012	Mortality	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS
Deangelis et al 2012	Adverse event	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.756	NS
Deangelis et al 2012	Intensive care unit stay	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.694	NS
Deangelis et al 2012	Pneumonia	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.325	NS
Deangelis et al 2012	MI	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.577	NS
Deangelis et al 2012	Wound Infection	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.983	NS
Deangelis et al 2012	Reoperation	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	0.323	NS
Deangelis et al 2012	Cerebral vascular accident	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	1	NS

Study	Outcome	Time	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Deangelis et al 2012	Major hemorrhage	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	1	NS
Deangelis et al 2012	Thromboembolitic event	1 year	Cemented arthroplasty	Press-fit hemiarthroplasty	130	N/A	N/A	N/A	1	NS
Figved et al 2009	Intraoperative blood loss (ml)	Peri-op	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	219	Mean difference	90.00	0.00	N/A	Favors Uncemented
Figved et al 2009	Post op blood drainage (ml)	Peri-op	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	206	Mean difference	-13.00	0.54	N/A	NS
Figved et al 2009	Blood transfusion needed	Peri-op	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	217	Risk ratio	1.25	0.21	N/A	NS
Santini et al 2005	Complications (Lowest Hemoglobin value (g/dl)	48 Hrs	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	0.80	0.51	N/A	NS
Santini et al 2005	Complications (Blood units Transferred)	Peri-op	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	0.05	0.90	N/A	NS
Santini et al 2005	Complications (Surgical time)	Peri-op	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	18.02	0.03	N/A	Favors Cementless
Santini et al 2005	Complications	Post-op	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Risk ratio	0.73	0.23	N/A	NS
Taylor et al 2012	Cardiovascular event	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	0.99	NS
Taylor et al 2012	Respiratory infection	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	1	NS
Taylor et al 2012	Superficial or deep wound infection	Post-op	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	0.99	NS
Taylor et al 2012	Urinary tract infection	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	1	NS
Taylor et al 2012	Subsidence	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	<.001	Cemented
Taylor et al 2012	Post-op fracture	Post-op	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	0.0023	Cemented
Taylor et al 2012	Intraoperative fracture	Intra-op	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	0.028	Cemented
Taylor et al 2012	Reoperation	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	0.5	NS
Taylor et al 2012	Dislocation	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	0.5	NS
Taylor et al 2012	Other adverse events	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	1	NS

Study	Outcome	Time	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Figved et al 2009	Hospital Stay (days)	Varied	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	215	Mean difference	-0.60	0.53	N/A	NS
Figved et al 2009	Quality of Life (Barthel Index of 19 or 20)	Baseline	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	220	Risk ratio	0.98	0.88	N/A	NS
Figved et al 2009	Quality of Life (Barthel Index of 19 or 20)	7 days	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	213	Risk ratio	0.55	0.15	N/A	NS
Figved et al 2009	Quality of Life (Barthel Index of 19 or 20)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	190	Risk ratio	0.88	0.41	N/A	NS
Figved et al 2009	Quality of Life (Barthel Index of 19 or 20)	12 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	168	Risk ratio	0.79	0.09	N/A	NS
Figved et al 2009	Quality of Life (EQ-5D index)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	143	Mean difference	0.06	0.20	N/A	NS
Figved et al 2009	Quality of Life (EQ-5D index)	12 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	113	Mean difference	0.07	0.19	N/A	NS
Figved et al 2009	Quality of Life (EQ-5D visual analog scale)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	146	Mean difference	-2.00	0.55	N/A	NS
Figved et al 2009	Quality of Life (EQ-5D visual analog scale)	12 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	121	Mean difference	-4.00	0.25	N/A	NS
Santini et al 2005	Length of Stay	Varied	Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Mean difference	-0.23	0.88	N/A	NS
Santini et al 2005	Return Home		Cemented Bipolar Hemiarthroplasty	Cementless Bipolar Hemiarthroplasty	106	Risk ratio	0.72	0.29	N/A	NS

Table 65: CEMENTED VS UNCEMENTED ARTHROPLASTY- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chammout, G. 2016	Moderate	PNRS (Pain numerical rating scale (PNRS))	Postop 3 mos	Cemented Total hip replacement	Uncemented Total hip replacement	Author Reported - p>.05	N/A	NS
Chammout, G. 2016	Moderate	PNRS (Pain numerical rating scale (PNRS))	Postop 12mos	Cemented Total hip replacement	Uncemented Total hip replacement	Author Reported - p>.05	N/A	NS
Chammout, G. 2016	Moderate	PNRS (Pain numerical rating scale (PNRS))	Postop 24mos	Cemented Total hip replacement	Uncemented Total hip replacement	Author Reported - p>.05	N/A	NS
Inngul, C. 2015	Moderate	Harris hip score (Pain subscore)	4 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	2.4 (-0.46, 5.26)	NS
Inngul, C. 2015	Moderate	Harris hip score (Pain subscore)	12 mos	Cemented arthroplasty	Uncemented arthroplasty	Mean Difference	1.8 (-1.14, 4.74)	NS
Moerman, S. 2017	Moderate	Mid-thigh pain (6 weeks)	6 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.72(0.42,1.22)	NS
Moerman, S. 2017	Moderate	Mid-thigh pain (12 weeks)	12 wks	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	0.74(0.41,1.34)	NS
Moerman, S. 2017	Moderate	Mid-thigh pain (1 year)	1 yrs	Cemented hemiarthroplasty	Uncemented hemiarthroplasty	RR	1.14(0.48,2.71)	NS
Movrin, I. 2020	High	VAS score	Postop 6 wks	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	Mean Difference	-0.7 (-1.42, 0.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Movrin, I. 2020	High	VAS score	Postop 6 mos	Cemented bipolar Hemi arthroplasty	Uncemented bipolar Hemi arthroplasty	Mean Difference	0.1 (-0.37, 0.57)	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	8 wks	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	3 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	6 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	9 mos	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS
Parker, M. J. 2020	Moderate	Pain (Mean pain score)	1 yrs	Cemented hemiarthroplasty: Cemented polished tapered stemhemiarthroplasty	Unemented hemiarthroplasty: Uncemented Furlonghydroxyapatite-coated hemiarthroplasty	Author Reported - p>.05	N/A	NS

Table 66. CEMENTED VS UNCEMENTED ARTHROPLASTY: Pain cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Figved et al 2009	Pain (No need for medication)	Baseline	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	220	Risk ratio	0.96	0.57	N/A	NS
Figved et al 2009	Pain (No need for medication)	Discharge (7 Days	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	215	Risk ratio	1.17	0.79	N/A	NS
Figved et al 2009	Pain (No need for medication)	3 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	190	Risk ratio	1.00	1.00	N/A	NS
Figved et al 2009	Pain (No need for medication)	12 months	Cemented Hemiarthroplasty	Uncemented Hemiarthroplasty	168	Risk ratio	0.93	0.37	N/A	NS
Taylor et al 2012	vas pain	2 years	Cemented arthroplasty	Uncemented hemiarthroplasty	160	N/A	N/A	N/A	>.05	NS

Table 67: SURGICAL APPROACH- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jianbo, J. 2019	Moderate	Complications	Postop 1 wks	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Author Reported - p>.05	N/A	NS
Jianbo, J. 2019	Moderate	Complications	Postop 3 mos	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Author Reported - p>.05	N/A	NS
Jianbo, J. 2019	Moderate	Complications	Postop 2 yrs	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Author Reported - p>.05	N/A	NS
Li J. 2017	Moderate	Complications (Peri-operative (Periprothesic fracture, Vancouver typeB1))	Periop 1 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	RD	0.02(-0.02,0.05)	NS
Li J. 2017	Moderate	Complications (Luxation)	Postop 1 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	RD	0.00(0.00,0.00)	NS
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type B1)	Postop 1 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	RD	-0.02(-0.05,0.02)	NS
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type C)	Postop 1 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	RR	1.00(0.06,15.62)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Complications (Peri-operative (Periprothesic fracture, Vancouver typeB1))	Periop 1 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	RD	0.00(0.00,0.00)	NS
Li J. 2017	Moderate	Complications (Luxation)	Postop 1 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	RD	0.02(-0.02,0.05)	NS
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type B1)	Postop 1 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	RD	0.00(0.00,0.00)	NS
Li J. 2017	Moderate	Complications (Periprothesic fracture, Vancouver type C)	Postop 1 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	RD	-0.02(-0.05,0.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Small operative fracture femur)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	6.00(0.73,49.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Larger operative fracture femur)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	-0.01(-0.03,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Wound haematoma)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Super?cial wound infection)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	1.50(0.26,8.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Deep wound infection)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	-0.02(-0.04,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Sciatic nerve palsy)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	-0.02(-0.04,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Dislocation)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	2.00(0.18,21.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Later fracture around implant)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	0.25(0.03,2.20)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Re-operation – revision arthroplasty)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Re-operation – girdlestone)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	1.00(0.06,15.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Re-operation – ?xation fracture)	Postop 1 days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	0.33(0.04,3.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Pneumonia)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	1.50(0.26,8.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Congestive cardiac failure)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	0.50(0.05,5.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Atrial ?brillation)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Acute renal injury)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.02(-0.01,0.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Urinary retention)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Perforated peptic ulcer)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Gastrointestinal bleed)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	-0.02(-0.04,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Deep vein thrombosis)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	1.00(0.06,15.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Pulmonary embolism)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Pressure sores)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	1.33(0.31,5.82)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Delirium)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	4.00(0.87,18.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Cerebrovascular accident)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RD	-0.01(-0.03,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Complications (Intestinal obstruction)	Postop 12mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	2.00(0.18,21.73)	NS
Repantis, T. 2015	Moderate	Complications	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Complications (Postoperative delirium)	Postop 72 hrs	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Infections (Implant related infections)	Postop 1 yrs	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Serious adverse events (SAE during follow up)	Postop 1 yrs	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ugland, T. O. 2019	Moderate	Complications (Dislocation)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RD	0.00(0.00,0.00)	NS
Ugland, T. O. 2019	Moderate	Complications (Prosthetic joint infection)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RR	0.50(0.05,5.40)	NS
Ugland, T. O. 2019	Moderate	Complications (Intraoperative fracture)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RR	0.50(0.05,5.40)	NS
Ugland, T. O. 2019	Moderate	Complications (Late occurring fracture)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RR	0.33(0.04,3.13)	NS
Ugland, T. O. 2019	Moderate	Complications (Nerve injury)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RD	0.01(-0.01,0.04)	NS
Verzellotti, S. 2019	Moderate	Complications (heterotopic ossifications)	Postop 6 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	RR	0.83(0.27,2.55)	NS

Table 68. Surgical Approach- Adverse Events Cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Biber et al 2012	Dislocation	Either inpatient or causing re-admission	Dorsal approach	Transgluteal approach	704	Risk ratio	8.47	0.04	N/A	Favors transgluteal approach
Biber et al 2012	Infection	Unclear	Dorsal approach	Transgluteal approach	704	Risk ratio	0.76	0.57	N/A	NS
Biber et al 2012	Hematoma	Unclear	Dorsal approach	Transgluteal approach	704	Risk ratio	0.22	0.00	N/A	Favors transgluteal approach
Biber et al 2012	Seroma	Unclear	Dorsal approach	Transgluteal approach	704	Risk ratio	2.01	0.37	N/A	NS
Biber et al 2012	Perioperative fracture	Intraoperatively or early postoperatively	Dorsal approach	Transgluteal approach	704	Risk ratio	1.34	0.80	N/A	NS
Skoldenberg et al 2010	Dislocation	Varied	Posterolateral	Anterolateral	372	Risk ratio	7.97	0.01	N/A	Favors anterolateral
Skoldenberg et al 2010	Deep infection leading to reoperation	Varied	Posterolateral	Anterolateral	372	Risk ratio	2.34	0.30	N/A	NS
Skoldenberg et al 2010	Periprosthetic fracture leading to reoperation	Varied	Posterolateral	Anterolateral	372	Risk ratio	0.70	0.64	N/A	NS
Skoldenberg et al 2010	Early aeseptic loosening leading to reoperation	Varied	Posterolateral	Anterolateral	372	% risk difference	0.52	0.28	N/A	NS

Table 69: SURGICAL APPROACH- **Composite**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jianbo, J. 2019	Moderate	Harris hip score (Harris Hip Score - 1 week)	Postop 1 wks	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	12.5 (10.91, 14.09)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Harris hip score (Harris Hip Score - 3 months)	Postop 3 mos	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	0.7 (-0.02, 1.42)	NS
Jianbo, J. 2019	Moderate	Harris hip score (Harris Hip Score - 2 years)	Postop 2 yrs	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	2.7 (1.77, 3.63)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Barthel Index (Barthel Index - 1 week)	Postop 1 wks	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	9.21 (5.93, 12.49)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Barthel Index (Barthel Index - 3 months)	Postop 3 mos	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	9.19 (6.17, 12.21)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Barthel Index (Barthel Index - 2 years)	Postop 2 yrs	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	0.74 (-1.54, 3.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	0.6 (-1.07, 2.27)	NS
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	1.6 (-0.57, 3.77)	NS
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	1.7 (0.14, 3.26)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Harris score (mean ±SD) (Garden stage IV fracture type)	Postop 6 wks	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	1.7 (-0.97, 4.37)	NS
Repantis, T. 2015	Moderate	SF-36 (SF-36 physical function)	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Repantis, T. 2015	Moderate	SF-36 (SF-36 mental health)	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Ugland, T. O. 2019	Moderate	Harris hip score (Harris Hip Score, n; mean (sd))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	2.2 (-2.84, 7.24)	NS
Ugland, T. O. 2019	Moderate	Harris hip score (Harris Hip Score, n; mean (sd))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-0.9 (-5.95, 4.15)	NS
Ugland, T. O. 2019	Moderate	VAS Satisfaction (VAS satisfaction score, n; mean (sd))	Postop 24 hrs	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.2 (-0.63, 1.03)	NS
Ugland, T. O. 2019	Moderate	VAS Satisfaction (VAS satisfaction score, n; mean (sd))	Postop 48 hrs	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.4 (-0.33, 1.13)	NS
Ugland, T. O. 2019	Moderate	VAS Satisfaction (VAS satisfaction score, n; mean (sd))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.1 (-0.69, 0.89)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ugland, T. O. 2019	Moderate	VAS Satisfaction (VAS satisfaction score, n; mean (sd))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.5 (-0.34, 1.34)	NS
Ugland, T. O. 2019	Moderate	HOOS scores at 3 mths, n; mean (sd) (Symptoms (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.2 (-8.79, 9.19)	NS
Ugland, T. O. 2019	Moderate	HOOS scores at 3 mths, n; mean (sd) (ADL (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	3.1 (-4.54, 10.74)	NS
Ugland, T. O. 2019	Moderate	HOOS scores at 3 mths, n; mean (sd) (Sport (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	10.5 (0.03, 20.97)	Anterolateral approach - hip hemiarthroplasty

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ugland, T. O. 2019	Moderate	HOOS scores at 3 mths, n; mean (sd) (QOL (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	3.9 (-5.52, 13.32)	NS
Ugland, T. O. 2019	Moderate	HOOS Scores at 12 mths, n; mean (sd) (Symptoms (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-1.3 (-9.05, 6.45)	NS
Ugland, T. O. 2019	Moderate	HOOS Scores at 12 mths, n; mean (sd) (ADL (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-1.8 (-9.92, 6.32)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ugland, T. O. 2019	Moderate	HOOS Scores at 12 mths, n; mean (sd) (Sport (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.4 (-11.29, 12.09)	NS
Ugland, T. O. 2019	Moderate	HOOS Scores at 12 mths, n; mean (sd) (QOL (Hip DisabilityOsteoarthritis Outcome Scores (HOOS)))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.4 (-10.45, 11.25)	NS
Ugland, T. O. 2019	Moderate	Barthel Index (Barthel Index Score, n; mean (sd))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.1 (-1.00, 1.20)	NS
Ugland, T. O. 2019	Moderate	Barthel Index (Barthel Index Score, n; mean (sd))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.9 (-1.01, 2.81)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Verzellotti, S. 2019	Moderate	ADL score (Activities of Daily Living (ADL) score - 1 month)	Postop 1 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	0.13 (-0.45, 0.71)	NS
Verzellotti, S. 2019	Moderate	ADL score (Activities of Daily Living (ADL) score - 3 month)	Postop 3 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	0.08 (-0.51, 0.67)	NS
Verzellotti, S. 2019	Moderate	ADL score (Activities of Daily Living (ADL) score - 6 month)	Postop 6 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	0.33 (-0.29, 0.95)	NS
Verzellotti, S. 2019	Moderate	CAS score (Cumulated Ambulation Score (CAS)- 1 month)	Postop 1 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	0.19 (-0.30, 0.68)	NS
Verzellotti, S. 2019	Moderate	CAS score (Cumulated Ambulation Score (CAS)- 3 month)	Postop 3 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	0.07 (-0.43, 0.57)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Verzellotti, S. 2019	Moderate	CAS score (Cumulated Ambulation Score (CAS)- 6 month)	Postop 6 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	0.26 (-0.30, 0.82)	NS

Table 70: SURGICAL APPROACH- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Mobility (Mobility score)	Postop 2 mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Parker, M. J. 2015	Moderate	Mobility (Mobility score)	Postop 3 mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Mobility (Mobility score)	Postop 6 mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Parker, M. J. 2015	Moderate	Mobility (Mobility score)	Postop 9 mos	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Mobility (Mobility score)	Postop 1 yrs	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Repantis, T. 2015	Moderate	Walking endurance (Walking endurance (m))	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	DTP (Distribution of duration of TUG performance) (% difference inmedian.)	Postop 5 days	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-28.57, 28.57)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	DTP (Distribution of duration of TUG performance) (% difference inmedian.)	Postop 3 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-37.05, 37.05)	NS
Saxer, F. 2018	Moderate	DTP (Distribution of duration of TUG performance) (% difference inmedian.)	Postop 6 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-38.47, 38.47)	NS
Saxer, F. 2018	Moderate	DTP (Distribution of duration of TUG performance) (% difference inmedian.)	Postop 3 mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-48.51, 48.51)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	DTP (Distribution of duration of TUG performance) (% difference inmedian.)	Postop 12mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-63.92, 63.92)	NS
Saxer, F. 2018	Moderate	Functional Independence Measure (FIM) (Difference in the meanchange from baseline.)	Postop 5 days	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-8.20, 8.20)	NS
Saxer, F. 2018	Moderate	Functional Independence Measure (FIM) (Difference in the meanchange from baseline.)	Postop 3 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-8.63, 8.63)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	Functional Independence Measure (FIM) (Difference in the meanchange from baseline.)	Postop 6 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-9.48, 9.48)	NS
Saxer, F. 2018	Moderate	Functional Independence Measure (FIM) (Difference in the meanchange from baseline.)	Postop 3 mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-11.03, 11.03)	NS
Saxer, F. 2018	Moderate	Functional Independence Measure (FIM) (Difference in the meanchange from baseline.)	Postop 12mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-12.45, 12.45)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	Back to pfFIM-level: (Functional Independence Measure (FIM))	Postop 5 days	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Back to pfFIM-level: (Functional Independence Measure (FIM))	Postop 3 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Back to pfFIM-level: (Functional Independence Measure (FIM))	Postop 6 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Back to pfFIM-level: (Functional Independence Measure (FIM))	Postop 3 mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	Back to pfFIM-level: (Functional Independence Measure (FIM))	Postop 12mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Ugland, T. O. 2019	Moderate	TUG test (Timed Up and Go test, n; mean (sd))	Postop 72 hrs	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-0.9 (-20.55, 18.75)	NS
Ugland, T. O. 2019	Moderate	TUG test (Timed Up and Go test, n; mean (sd))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.1 (-4.92, 5.12)	NS
Ugland, T. O. 2019	Moderate	TUG test (Timed Up and Go test, n; mean (sd))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	2.8 (-2.04, 7.64)	NS

Table 71: SURGICAL APPROACH- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jianbo, J. 2019	Moderate	Surgery duration (Operation time (m))	Intraop 0 days	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	3 (0.44, 5.56)	Traditional posterior approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Blood loss (Blood loss (ml))	Intraop 0 days	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	-24 (-35.17, -12.83)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Blood transfusion (Transfusion rate)	Intraop 0 days	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	RR	0.22(0.05,0.98)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Incision length (Incision length (cm))	Intraop 0 days	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	-10 (-10.55, -9.45)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	Weight-bearing (Weight-bearing (days))	Postop 1 wks	SuperPath approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	-3.9 (-4.42, -3.38)	SuperPath approach - hip hemiarthroplasty
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-10.06 (-10.67, -9.45)	Total hip arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-35.9 (-42.52, -29.28)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-159.7 (-193.48, -125.92)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-94.2 (-115.19, -73.21)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IIIfracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-5.96 (-6.64, -5.28)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-9.86 (-10.73, -8.99)	Total hip arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-35.8 (-45.78, -25.82)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-151 (-202.20, -99.80)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-85.8 (-119.67, -51.93)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IVfracture type)	Intraop 0 days	Total hip arthroplasty (FMWSI procedure)	Total hip arthroplasty (CI operation)	Mean Difference	-5.96 (-7.24, -4.68)	Total hip arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-7.58 (-8.60, -6.56)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-22.4 (-29.62, -15.18)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-185.3 (-204.52, -166.08)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage III fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-44.5 (-55.69, -33.31)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IIIfracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-3.36 (-4.01, -2.71)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Length of incision (cm, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-6.85 (-8.42, -5.28)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li J. 2017	Moderate	Time of surgery (min, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-17.57 (-29.84, -5.30)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Bleeding volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-179.98 (-207.47, -152.49)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Drainage volume (ml, mean ±SD) (Garden stage IV fracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-43.66 (-61.71, -25.61)	Hemi arthroplasty (FMWSI procedure)
Li J. 2017	Moderate	Postoperative ambulation time (days, mean ±SD) (Garden stage IVfracture type)	Intraop 0 days	Hemi arthroplasty (FMWSI procedure)	Hemi arthroplasty (CI operation)	Mean Difference	-3.56 (-4.94, -2.18)	Hemi arthroplasty (FMWSI procedure)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Surgery duration (Length surgery (min))	Intraop 0 hrs	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Parker, M. J. 2015	Moderate	Patients transfused (Number of patients transfused)	Intraop 0 hrs	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	0.67(0.36,1.24)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Blood units transfused (Mean units blood transfused)	Intraop 0 hrs	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Parker, M. J. 2015	Moderate	Mean dif?culty level (Mean dif?culty level)	Intraop 0 hrs	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p<.05	N/A	Treatment 1 (Lateral)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Mortality	Postop 30days	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	0.80(0.22,2.90)	NS
Parker, M. J. 2015	Moderate	Mortality	Postop 1 yrs	Anterio-lateral approach: The lateral approach involved splitting thetendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	RR	0.95(0.54,1.68)	NS
Repantis, T. 2015	Moderate	Hematocrit (Hematocrit (%PCV))	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Repantis, T. 2015	Moderate	Blood units transfused (Blood units transfused)	Postop 10days	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Repantis, T. 2015	Moderate	Heterotopic ossification	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Repantis, T. 2015	Moderate	Bicon cup inclination angle	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Complications (LOS)	Intraop 0 days	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Surgery duration (Operative time)	Intraop 0 days	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Erythrocyte concentrates (Erythrocyte concentrates within 72 h)	Postop 72 hrs	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Mortality (1 year mortality)	Postop 1 yrs	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Ugland, T. O. 2018	HighQuality	Serum marker (CK (U/L))	Postop 0 hrs	Anterolateral approach	Direct lateral approach	Mean Difference	21 (-47.68, 89.68)	NS
Ugland, T. O. 2018	HighQuality	Serum marker (CK (U/L))	Postop 24 hrs	Anterolateral approach	Direct lateral approach	Mean Difference	38 (-46.78, 122.78)	NS
Ugland, T. O. 2018	HighQuality	Serum marker (CK (U/L))	Postop 48 hrs	Anterolateral approach	Direct lateral approach	Mean Difference	76 (-5.90, 157.90)	NS
Ugland, T. O. 2018	HighQuality	Serum marker (CRP (mg/L))	Postop 24 hrs	Anterolateral approach	Direct lateral approach	Mean Difference	1 (-16.84, 18.84)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ugland, T. O. 2018	HighQuality	Serum marker (CRP (mg/L))	Postop 48 hrs	Anterolateral approach	Direct lateral approach	Mean Difference	-13 (-38.78, 12.78)	NS
Ugland, T. O. 2018	HighQuality	Hemoglobin (g/dL)	Postop 48 hrs	Anterolateral approach	Direct lateral approach	Mean Difference	0.1 (-0.38, 0.58)	NS
Ugland, T. O. 2019	Moderate	Mortality (Mortality within 30 days)	Postop 30days	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RR	0.50(0.13,1.93)	NS
Ugland, T. O. 2019	Moderate	Mortality (Mortality within 12 mths)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	RR	1.18(0.57,2.47)	NS
Verzellotti, S. 2019	Moderate	Surgery duration (Surgical time)	Intraop 0 days	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	9.49 (6.51, 12.47)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)
Verzellotti, S. 2019	Moderate	Mortality	Postop 6 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	RR	1.33(0.50,3.56)	NS

Table 72: SURGICAL APPROACH- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Jianbo, J. 2019	Moderate	VAS Pain (VAS - 1 week)	Postop 1 wks	Super Path approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	-1.87 (-2.12, -1.62)	SuperPath approach - hip hemiarthroplasty
Jianbo, J. 2019	Moderate	VAS Pain (VAS - 3 months)	Postop 3 mos	Super Path approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	-0.17 (-0.36, 0.02)	NS
Jianbo, J. 2019	Moderate	VAS Pain (VAS - 2 years)	Postop 2 yrs	Super Path approach - hip hemiarthroplasty	Traditional posterior approach - hip hemiarthroplasty	Mean Difference	-0.1 (-0.21, 0.01)	NS
Parker, M. J. 2015	Moderate	Pain score (Modified Charnley pain score)	Postop 2 mos	Anterio-lateral approach: The lateral approach involved splitting the tendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Pain score (Modified Charnley pain score)	Postop 3 mos	Anterio-lateral approach: The lateral approach involved splitting the tendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Parker, M. J. 2015	Moderate	Pain score (Charnley pain score)	Postop 6 mos	Anterio-lateral approach: The lateral approach involved splitting the tendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Parker, M. J. 2015	Moderate	Pain score (ModifiedCharnley pain score)	Postop 9 mos	Anterio-lateral approach: The lateral approach involved splitting the tendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2015	Moderate	Pain score (ModifiedCharnley pain score)	Postop 1 yrs	Anterio-lateral approach: The lateral approach involved splitting the tendon to the gluteus medius muscle with two thirds being left intact and a third of the muscle retracted anteriorly to expose the anterior hip joint capsule. The capsule was opened with a T shaped cut and later repaired after insertion of the prosthesis	Posterior approach: The posterior approach the piriformis tendon was preserved and the other short rotators cut and retracted posteriorly. An L shaped cut to the capsule was made along the line of the femur and then posteriorly immediately distal to the piriformis tendon. After insertion of the prosthesis both the capsule and tendons to the short rotators were repaired	Author Reported - p>.05	N/A	NS
Repantis, T. 2015	Moderate	VAS (VAS (at 10 days post-op))	Postop 10days	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p<.05	N/A	Treatment 2 (Conventional)
Repantis, T. 2015	Moderate	AVAS (VAS (at 4 years post-op))	Postop 4 yrs	MIS (Minimally invasive approach)	Conventional open technique approach	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	VAS (Difference in mean VAS score)	Postop 5 days	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	1.6 (0.46, 2.74)	Anterior minimally-invasive (AMIS) - Hemiarthroplasty
Saxer, F. 2018	Moderate	VAS (Difference in mean VAS score)	Postop 3 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	1.4 (0.41, 2.39)	Anterior minimally-invasive (AMIS) - Hemiarthroplasty
Saxer, F. 2018	Moderate	VAS (Difference in mean VAS score)	Postop 6 wks	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0.4 (-0.11, 0.91)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	VAS (Difference in mean VAS score)	Postop 3 mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-0.57, 0.57)	NS
Saxer, F. 2018	Moderate	VAS (Difference in mean VAS score)	Postop 12mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Mean Difference	0 (-0.57, 0.57)	NS
Ugland, T. O. 2019	Moderate	VAS pain (VAS pain score, n; mean (sd))	Postop 24 hrs	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-0.5 (-1.26, 0.26)	NS
Ugland, T. O. 2019	Moderate	VAS Pain (VAS pain score, n; mean (sd))	Postop 48 hrs	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-0.4 (-1.18, 0.38)	NS
Ugland, T. O. 2019	Moderate	VAS Pain (VAS pain score, n; mean (sd))	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.3 (-0.25, 0.85)	NS
Ugland, T. O. 2019	Moderate	VAS Pain (VAS pain score, n; mean (sd))	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	0.7 (-0.02, 1.42)	NS
Ugland, T. O. 2019	Moderate	HOOS scores at 3 mths, n; mean (sd) (Pain)	Postop 3 mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	1.9 (-4.71, 8.51)	NS
Ugland, T. O. 2019	Moderate	HOOS Scores at 12 mths, n; mean (sd) (Pain)	Postop 12mos	Anterolateral approach - hip hemiarthroplasty	Direct lateral approach - hip hemiarthroplasty	Mean Difference	-3.1 (-10.49, 4.29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Verzellotti, S. 2019	Moderate	Pain (Numeric rating scale (NRS))	Postop 3 days	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	-0.98 (-1.23, -0.73)	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)
Verzellotti, S. 2019	Moderate	Pain (Numeric rating scale (NRS))	Postop 1 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	-0.57 (-0.74, -0.40)	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)
Verzellotti, S. 2019	Moderate	Pain (Numeric rating scale (NRS))	Postop 3 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	-0.01 (-0.16, 0.14)	NS
Verzellotti, S. 2019	Moderate	Pain (Numeric rating scale (NRS))	Postop 6 mos	Direct anterior (DA group) - (Bipolar hip hemiarthroplasty)	Posterolateral (PL group) - (Bipolar hip hemiarthroplasty)	Mean Difference	-0.02 (-0.13, 0.09)	NS

Table 73: SURGICAL APPROACH- Return to Activity

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Saxer, F. 2018	Moderate	Return to no walking aids (Return to no WA at 3 months)	Postop 3 mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS
Saxer, F. 2018	Moderate	Return to no walking aids (Return to no WA at 12 months)	Postop 12mos	Lateral Hardinge (LAT) approach - Hemiarthroplasty	Anterior minimally-invasive (AMIS) - Hemiarthroplasty	Author Reported - p>.05	N/A	NS

Table 74: CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cai, L. 2016	High	Complications (Superficial wound infection)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	1.54(0.35,6.69)	NS
Cai, L. 2016	High	Complications (Deep wound infection)	12 mos	Extramedullary fixation	Intramedullary fixation	RD	0.00(0.00,0.00)	NS
Cai, L. 2016	High	Complications (Pneumonia)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	0.38(0.15,1.02)	NS
Cai, L. 2016	High	Complications (Urinary tract infection)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	0.96(0.30,3.04)	NS
Cai, L. 2016	High	Complications (Mortality)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	0.86(0.20,3.76)	NS
Cai, L. 2016	High	Complications (Delayed union)	12 mos	Extramedullary fixation	Intramedullary fixation	RD	0.00(0.00,0.00)	NS
Cai, L. 2016	High	Complications (Nonunion)	12 mos	Extramedullary fixation	Intramedullary fixation	RD	0.00(0.00,0.00)	NS
Cai, L. 2016	High	Complications (Cutting of the lag screw)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	1.54(0.35,6.69)	NS
Cai, L. 2016	High	Complications (Implant failure)	12 mos	Extramedullary fixation	Intramedullary fixation	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cai, L. 2016	High	Complications (Electrolyte imbalance)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	0.44(0.23,0.87)	Extramedullary fixation
Cai, L. 2016	High	Complications (Hypoproteinemia)	12 mos	Extramedullary fixation	Intramedullary fixation	RR	0.47(0.25,0.89)	Extramedullary fixation
Carulli, C. 2017	Moderate	Complication (Pulmonary infection)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	0.97(0.06,15.23)	NS
Carulli, C. 2017	Moderate	Complication (Deep Venous Thrombosis)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	1.94(0.18,20.95)	NS
Carulli, C. 2017	Moderate	Complication (Urinary tract infection)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RD	-0.03(-0.07,0.01)	NS
Carulli, C. 2017	Moderate	Complication (Superficial wound infection)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RD	-0.01(-0.04,0.01)	NS
Carulli, C. 2017	Moderate	Complications (mechanical) (Spiral Blade migration)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RD	0.03(-0.01,0.07)	NS
Carulli, C. 2017	Moderate	Complications (mechanical) (Lateral blade protrusion)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RD	0.01(-0.01,0.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carulli, C. 2017	Moderate	Complications (mechanical) (Migration of plate screws)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RD	-0.01(-0.04,0.01)	NS
Carulli, C. 2017	Moderate	Complications (mechanical) (Failure)	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	0.97(0.06,15.23)	NS
Li, H. 2018	Moderate	Complications (Total incidence)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.32(0.14,0.71)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Complications (Coxa vara)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.04,3.07)	NS
Li, H. 2018	Moderate	Complications (Loose nail)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.04,3.07)	NS
Li, H. 2018	Moderate	Complications (Bone non-union)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.04,3.07)	NS
Li, H. 2018	Moderate	Complications (Delayed union of fracture)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.25(0.03,2.14)	NS
Li, H. 2018	Moderate	Complications (Femoral head necrosis)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.04,3.07)	NS
Li, H. 2018	Moderate	Complications (Deep venous thrombosis)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.04,3.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu, R. 2018	Moderate	Complications (Total complications)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	1.14(0.84,1.55)	NS
Xu, R. 2018	Moderate	Complications (Hip varus rate)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.50(0.05,5.34)	NS
Xu, R. 2018	Moderate	Complications (Femoral shaft fracture)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RD	-0.04(-0.09,0.01)	NS
Xu, R. 2018	Moderate	Complications (Cutout of femoral head)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RD	-0.02(-0.06,0.02)	NS
Xu, R. 2018	Moderate	Complications (Fracture site infection)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	1.00(0.06,15.55)	NS
Xu, R. 2018	Moderate	Complications (Internal fixation breakage)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.50(0.05,5.34)	NS
Xu, R. 2018	Moderate	Complications (Total complications)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.38(0.16,0.88)	Proximal femoral nail antirotation (PFNA)

Table 75. Cephalomedullary Device Versus Sliding Hip Screw: Complications cont

Study	Comparison	Outcome	Follow-up	Statistic	Result	p value	Favors
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Mortality	31-90 days	Risk ratio	0.2	0.14	NS

Table 75. Cephalomedullary Device Versus Sliding Hip Screw: Complications cont

Study	Comparison	Outcome	Follow-up	Statistic	Result	p value	Favors
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Mortality	91-180 days	Risk ratio	7.13	0.19	NS
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Mortality	181-365 days	Risk ratio	1.36	0.56	NS
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Mortality	30 days	Risk ratio	0.71	0.48	NS
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Stable Fractures	12 months	Mean difference	0.3	0.41	NS
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Walking ability score	12 months	Mean difference	1.2	<.01	Trochanteric Gamma Nail

Table 76: CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carulli, C. 2017	Moderate	SF 12 (physical) (SF12 mean value at 12 months - physical)	Postop 12mos	PFNA: Proximal Femoral Nail "antirotation" (PFNa)	Sliding hip screw (SHS)	Author Reported - p>.05	N/A	NS
Carulli, C. 2017	Moderate	SF 12 (mental) (SF12 mean value at 12 months - mental)	Postop 12mos	PFNA: Proximal Femoral Nail "antirotation" (PFNa)	Sliding hip screw (SHS)	Author Reported - p>.05	N/A	NS
Li, H. 2018	Moderate	Harris hip joint function	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	13 (12.11, 13.89)	Proximal femoral nail antirotation (PFNA)
Sanders, D. 2017	Moderate	FIM total score (Discharge)	1 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	3.9 (3.55, 4.25)	InterTAN
Sanders, D. 2017	Moderate	FIM total score	6 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	1.1 (0.69, 1.51)	InterTAN
Sanders, D. 2017	Moderate	FIM total score	3 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	1.7 (1.28, 2.12)	InterTAN

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	FIM total score	6 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	2 (1.55, 2.45)	InterTAN
Sanders, D. 2017	Moderate	FIM total score	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	-0.8 (-1.26, -0.34)	Sliding Hip Screw
Sanders, D. 2017	Moderate	FIM motor subscale (Discharge)	1 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	3.2 (2.90, 3.50)	InterTAN
Sanders, D. 2017	Moderate	FIM motor subscale	6 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0.5 (0.13, 0.87)	InterTAN
Sanders, D. 2017	Moderate	FIM motor subscale	3 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	1.3 (0.93, 1.67)	InterTAN
Sanders, D. 2017	Moderate	FIM motor subscale	6 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	1.3 (0.91, 1.69)	InterTAN
Sanders, D. 2017	Moderate	FIM motor subscale	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	-0.8 (-1.17, -0.43)	Sliding Hip Screw

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	FIM cognitive subscale (Discharge)	1 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0.7 (0.61, 0.79)	InterTAN
Sanders, D. 2017	Moderate	FIM cognitive subscale	6 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0.4 (0.33, 0.47)	InterTAN
Sanders, D. 2017	Moderate	FIM cognitive subscale	3 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	1.1 (1.03, 1.17)	InterTAN
Sanders, D. 2017	Moderate	FIM cognitive subscale	6 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0.5 (0.43, 0.57)	InterTAN
Sanders, D. 2017	Moderate	FIM cognitive subscale	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0 (-0.12, 0.12)	NS
Sanders, D. 2017	Moderate	LEM (Lower Extremity Measure (LEM))	6 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0 (-0.56, 0.56)	NS
Sanders, D. 2017	Moderate	LEM (Lower Extremity Measure (LEM))	3 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	0.1 (-0.48, 0.68)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	LEM (Lower Extremity Measure (LEM))	6 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	1.6 (1.02, 2.18)	Sliding Hip Screw
Sanders, D. 2017	Moderate	LEM (Lower Extremity Measure (LEM))	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	Mean Difference	-0.3 (-0.92, 0.32)	NS

Table 77: CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cai, L. 2016	High	Zuckerman FRC (function recovery scores)	6 mos	Extramedullary fixation	Intramedullary fixation	Mean Difference	-0.47 (-1.30, 0.36)	NS
Cai, L. 2016	High	Zuckerman FRC (function recovery scores)	12 mos	Extramedullary fixation	Intramedullary fixation	Mean Difference	-0.14 (-0.75, 0.47)	NS
Cai, L. 2016	High	Time to union	12 mos	Extramedullary fixation	Intramedullary fixation	Mean Difference	1.11 (0.76, 1.46)	Intramedullary fixation
Carulli, C. 2017	Moderate	Weight-bearing (Walking with partial or full weight-bearing beforedischarge)	Postop 1 wks	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	0.36(0.25,0.48)	PFNA
Carulli, C. 2017	Moderate	Walking ability (Independent walking ability at 3 months (n))	Postop 3 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	1.25(1.03,1.52)	PFNA

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carulli, C. 2017	Moderate	Walking activity (Restore walking activity and health status pre-fractureat 12 months (n))	Postop 12mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	1.12(0.89,1.41)	NS
Li, H. 2018	Moderate	10-meter walking speed (m/s)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	0.7 (0.63, 0.77)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Five-fold-sit-to-stand test time (s)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-22.3 (-27.58, -17.02)	Proximal femoral nail antirotation (PFNA)
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (TUG (sec))	3 days	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.66(0.72,3.88)	NS
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (TUG (sec))	6 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.07(0.84,1.37)	NS
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (TUG (sec))	3 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.15(0.95,1.38)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (TUG (sec))	6 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.19(1.01,1.41)	InterTAN
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (TUG (sec))	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.22(1.01,1.46)	InterTAN
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (2MWT, meters)	6 wks	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.94(0.73,1.22)	NS
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (2MWT, meters)	3 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.13(0.94,1.36)	NS
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (2MWT, meters)	6 mos	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.17(0.98,1.40)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	Performance-Based Functional Ability (completion) (2MWT, meters)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.19(0.99,1.44)	NS
Xu, R. 2018	Moderate	Hip function Harris score (Excellent)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	1.18(0.99,1.42)	NS
Xu, R. 2018	Moderate	Hip function Harris score (Good)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.07,1.57)	NS
Xu, R. 2018	Moderate	Hip function Harris score (Fair)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.67(0.12,3.82)	NS
Xu, R. 2018	Moderate	Hip function Harris score (Poor)	3 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	RR	0.33(0.04,3.10)	NS

Table 78. Cephalomedullary Device Versus Sliding Hip Screw: Function cont

Study	Comparison	Outcome	Follow-up	Statistic	Result	p value	Favors
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Walking Ability	12 months	Mean difference	0.2	0.65	NS
Varela et al 2009	Gamma 3 versus Percutaneous Compression Plate	Activity Level: No Walk	12 months	Risk ratio	0.2	0.29	NS
Varela et al 2009	Gamma 3 versus Percutaneous Compression Plate	Activity Level: Walker	12 months	Risk ratio	1	1	NS
Varela et al 2009	Gamma 3 versus Percutaneous Compression Plate	Activity Level: No Help	12 months	Risk ratio	0.82	0.61	NS

Table 78. Cephalomedullary Device Versus Sliding Hip Screw: Function cont

Study	Comparison	Outcome	Follow-up	Statistic	Result	p value	Favors
Varela et al 2009	Gamma 3 versus Percutaneous Compression Plate	Activity Level: Cane	12 months	Risk ratio	1.4	0.18	NS

Table 79: CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Cai, L. 2016	High	Total blood loss(ml)	1 days	Extramedullary fixation	Intramedullary fixation	Mean Difference	-195.52 (-307.11, -83.93)	Extramedullary fixation
Cai, L. 2016	High	Observed blood loss(ml)	1 days	Extramedullary fixation	Intramedullary fixation	Mean Difference	-3.38 (-13.73, 6.97)	NS
Cai, L. 2016	High	Hidden blood loss(ml)	1 days	Extramedullary fixation	Intramedullary fixation	Mean Difference	-192.14 (-303.09, -81.19)	Extramedullary fixation
Cai, L. 2016	High	Blood transfusion rate	1 days	Extramedullary fixation	Intramedullary fixation	RR	0.46(0.25,0.85)	Extramedullary fixation
Carulli, C. 2017	Moderate	Amplioscopic time	Intraop 1 days	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	Mean Difference	14.56 (10.26, 18.86)	Sliding hip screw (SHS)
Carulli, C. 2017	Moderate	Blood loss (Estimated intraoperative blood loss (cc))	Intraop 1 days	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	Mean Difference	-122.36 (-147.00, -97.72)	PFNA
Carulli, C. 2017	Moderate	Blood bags (Postoperative blood bags (n))	Intraop 1 days	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	Mean Difference	0.04 (-0.09, 0.17)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carulli, C. 2017	Moderate	Hospital stay (Hospital Stay (days))	Postop 1 wks	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	Mean Difference	-1.14 (-1.83, -0.45)	PFNA
Carulli, C. 2017	Moderate	Radiologic healing (Radiologic healing at 6 months (n))	Postop 6 mos	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	1.03(0.89,1.19)	NS
Carulli, C. 2017	Moderate	Mortality (Death)	Postop 1 yrs	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	RR	0.49(0.09,2.57)	NS
Carulli, C. 2017	Moderate	Surgery duration (Surgical time (minutes))	Intraop 1 days	PFNA: Proximal Femoral Nail “antirotation” (PFNa)	Sliding hip screw (SHS)	Mean Difference	-15.15 (-19.40, -10.90)	PFNA
Li, H. 2018	Moderate	Perioperative conditions (Operation duration (min))	Periop 0 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-5.1 (-8.40, -1.80)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Perioperative conditions (Hemorrhage during operation (ml))	Periop 0 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-146.1 (-155.46, -136.74)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Perioperative conditions (Postoperative drainage volume (ml))	Periop 0 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-61.5 (-68.93, -54.07)	Proximal femoral nail antirotation (PFNA)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li, H. 2018	Moderate	Bone mineral density (g/cm2)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	0.12 (0.10, 0.14)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Bone calcitonin (ng/L)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	5.31 (5.21, 5.41)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Time to fracture healing (weeks)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-1.8 (-2.26, -1.34)	Proximal femoral nail antirotation (PFNA)
Li, H. 2018	Moderate	Time to weight bearing (d)	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-17.3 (-19.16, -15.44)	Proximal femoral nail antirotation (PFNA)
Sanders, D. 2017	Moderate	Incomplete union	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.48(0.27,0.85)	InterTAN
Sanders, D. 2017	Moderate	Hardware failure	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.28(0.06,1.34)	NS
Sanders, D. 2017	Moderate	Shortening <1 cm	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.42(1.15,1.76)	InterTAN

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	Shortening 1–2 cm	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.63(0.31,1.25)	NS
Sanders, D. 2017	Moderate	Shortening >2 cm	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.21(0.08,0.53)	InterTAN
Sanders, D. 2017	Moderate	Alignment—coronal >5 deg valgus	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.95(0.49,1.84)	NS
Sanders, D. 2017	Moderate	Alignment—coronal >10 deg valgus	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RD	-0.04(-0.07,0.00)	NS
Sanders, D. 2017	Moderate	Alignment—coronal No excess varus/valgus	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.03(0.89,1.19)	NS
Sanders, D. 2017	Moderate	Alignment—sagittal (>10 deg flexion)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	2.50(0.26,23.60)	NS
Sanders, D. 2017	Moderate	Alignment—sagittal (>10 deg extension)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RD	-0.07(-0.13,-0.02)	InterTAN

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Sanders, D. 2017	Moderate	No excess flexion/extension	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	1.04(0.96,1.13)	NS
Sanders, D. 2017	Moderate	Tip-to-apex distance, (10-15mm)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.77(0.58,1.01)	NS
Sanders, D. 2017	Moderate	Tip-to-apex distance, (15-20mm)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	0.71(0.40,1.26)	NS
Sanders, D. 2017	Moderate	Tip-to-apex distance, (20-15mm)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	2.13(1.04,4.35)	Sliding Hip Screw
Sanders, D. 2017	Moderate	Tip-to-apex distance, (>25mm)	1 yrs	InterTAN: Novel Intramedullary Device (InterTAN)	Sliding Hip Screw: Conventional Treatment (Sliding Hip Screw)	RR	2.17(0.80,5.83)	NS
Wang, B. 2019	Moderate	Surgical indications (Operation time)		Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-15.68 (-17.90, -13.46)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Surgical indications (Intraoperative blood loss)		Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-87.67 (-93.75, -81.59)	Proximal femoral nail antirotation (PFNA)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wang, B. 2019	Moderate	Surgical indications (Postoperative drainage volume)		Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-21.28 (-25.32, -17.24)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Surgical indications (Weight-bearing time)		Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-1.94 (-2.41, -1.47)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum inflammatory factors (CRP (mg/L))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-2 (-2.99, -1.01)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum inflammatory factors (IL-1 (ng/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-2.08 (-2.97, -1.19)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum inflammatory factors (IL-6 (?g/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-6.1 (-7.73, -4.47)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum inflammatory factors (TNF-? (ng/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-40.64 (-52.25, -29.03)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum levels of myocardial injury markers and heart failure markers(cTnT (ng/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-0.21 (-0.32, -0.10)	Proximal femoral nail antirotation (PFNA)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wang, B. 2019	Moderate	Serum levels of myocardial injury markers and heart failure markers(CK-MB (ng/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-1.14 (-1.70, -0.58)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum levels of myocardial injury markers and heart failure markers(Myo (ng/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-10.68 (-13.01, -8.35)	Proximal femoral nail antirotation (PFNA)
Wang, B. 2019	Moderate	Serum levels of myocardial injury markers and heart failure markers(BNP (pg/mL))	Postop 7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw: DHS internal fixation	Mean Difference	-12.36 (-14.75, -9.97)	Proximal femoral nail antirotation (PFNA)
Xu, R. 2018	Moderate	Operation time ((min))	0 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-33.76 (-42.94, -24.58)	Proximal femoral nail antirotation (PFNA)
Xu, R. 2018	Moderate	Length of hospital stay ((days))	1 mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-4.32 (-6.11, -2.53)	Proximal femoral nail antirotation (PFNA)
Xu, R. 2018	Moderate	Intra?operative bleeding volume (ml)	0 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-127.5 (-160.17, -94.83)	Proximal femoral nail antirotation (PFNA)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu, R. 2018	Moderate	Post?operative weight?bearing time (days)	2 wks	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-3.11 (-4.39, -1.83)	Proximal femoral nail antirotation (PFNA)
Xu, R. 2018	Moderate	Callusing time (days)	30 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-11.8 (., .)	NS
Xu, R. 2018	Moderate	Swelling reduction (days)	30 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-5.3 (., .)	NS
Xu, R. 2018	Moderate	TGF??2 expression (Post?surgical)	1 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	21.3 (9.66, 32.94)	Dynamic Hip Screw
Xu, R. 2018	Moderate	TGF??2 expression (Post?surgical)	7 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	34.1 (19.10, 49.10)	Dynamic Hip Screw
Xu, R. 2018	Moderate	TGF??2 expression (Post?surgical)	15 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	49.6 (33.80, 65.40)	Dynamic Hip Screw
Xu, R. 2018	Moderate	TGF??2 expression (Post?surgical)	30 days	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	21.9 (10.07, 33.73)	Dynamic Hip Screw

Table 80. CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- Other cont

Study	Comparison	Outcome	Follow-up	Statistic	Result	p value	Favors
Utrilla et al 2005	Trochanteric Gamma Nail versus Compression Hip Screw	Operating Time (mins)	In hospital	Mean difference	2	0.27	NS
Varela et al 2009	Gamma 3 versus Percutaneous Compression Plate	Surgical Time (min)	In hospital	Mean difference	-0.69	>.05	NS

Study	Comparison	Outcome	Follow-up	Statistic	Result	p value	Favors
Varela et al 2009	Gamma 3 versus Percutaneous Compression Plate	Postoperative Stay (days)	In hospital	Mean difference	1.03	>.05	NS

Table 81: CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Li, H. 2018	Moderate	VAS	Postop 12mos	Proximal femoral nail antirotation (PFNA)	Dynamic Hip Screw	Mean Difference	-1.2 (-1.31, -1.09)	Proximal femoral nail antirotation (PFNA)

Table 82: CEPHALOMEDULLARY DEVICE (STABLE INTERTROCHANTERIC FRACTURES)- QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carulli, C. 2017	Moderate	Patient satisfaction score (Patients'satisfaction at 6 months (n))	Postop 6 mos	PFNA: Proximal Femoral Nail "antirotation" (PFNa)	Sliding hip screw (SHS)	RR	1.35(1.02,1.78)	PFNA

Table 83: CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Fernandez, M. A. 2017	Moderate	Failure (lag screw cut-outs)	1 yrs	X-Bolt	Sliding Hip Screw	RD	-0.04(-0.10,0.01)	NS
Reindl, R. 2015	Moderate	Complications (Surgery failure)	Postop 12mos	INTERTAN nail	Sliding Hip Screw	RR	0.46(0.04,4.97)	NS
Reindl, R. 2015	Moderate	Infections	Postop 12mos	INTERTAN nail	Sliding Hip Screw	RD	0.00(0.00,0.00)	NS
Tao, R. 2013	Moderate	Complications (Postoperative complications (cases))	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.75(0.21,2.60)	NS
Tao, R. 2013	Moderate	Complications (Postoperative complications - Pressure sore)	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.47(0.04,4.96)	NS
Tao, R. 2013	Moderate	Complications (Postoperative complications - Urinary infection)	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.47(0.04,4.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tao, R. 2013	Moderate	Complications (Postoperative complications - Pulmonary infection)	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.93(0.06,14.45)	NS
Tao, R. 2013	Moderate	Complications (Postoperative complications - Deep venous thrombosis)	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RD	0.02(-0.02,0.07)	NS
Zehir, S.2015	High	Infection (Superficial wound infection)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.61(0.18,2.01)	NS
Zehir, S.2015	High	Hematoma (Hematoma)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.53(0.10,2.83)	NS
Zehir, S.2015	High	Cutout (Cutout)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.93(0.35,2.47)	NS
Zehir, S.2015	High	Screw migration (Screw migration)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RD	0.05(0.01,0.10)	DHS (Dynamic hip screw)
Zehir, S.2015	High	Reoperation (Reoperation)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RD	-0.03(-0.06,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zehir, S.2015	High	Deep venous thrombosis (Deep venous thrombosis)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.24(0.43,3.56)	NS
Zehir, S.2015	High	Pulmonary embolism (Pulmonary embolism)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.07,16.75)	NS
Zehir, S.2015	High	Decompensated heart failure (Decompensated heart failure)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.22,5.14)	NS
Zehir, S.2015	High	Urinary tract infection (Urinary tract infection)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.83(0.32,2.13)	NS
Zehir, S.2015	High	Pneumonia (Pneumonia)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.27,4.13)	NS
Zehir, S.2015	High	Pressure ulcer (Pressure ulcer)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.96(0.41,2.25)	NS
Zehir, S.2015	High	Arthroplasty required	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RD	-0.03(-0.06,0.00)	NS

Table 84. : CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Adverse Events cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Hardy et al 1998	Mortality	12 months	Intramedullary Hip Screw	Compression hip screw	71	Risk ratio	0.69	0.32	N/A	NS
Miedel et al 2005	Mortality	12 months	Gamma nail	Medoff sliding plate	217	Risk ratio	0.50	0.04	N/A	Gamma nail
Papasimos et al 2005	In hospital mortality	Varied	Gamma nail	Dynamic hip screw	80	Mean difference	1.00	1	-	NS
Papasimos et al 2005	In hospital mortality	Varied	Proximal Femoral Nail	Dynamic hip screw	80	Mean difference	0.00	-	>.05	NS
Miedel et al 2005	Revision trochanteric fractures	12 months	Gamma nail	Medoff sliding plate	189	Risk ratio	0.52	0.34	N/A	NS
Miedel et al 2005	Revision subtrochanteric fractures	12 months	Gamma nail	Medoff sliding plate	28	% risk difference	-25.00	0.03	N/A	Gamma nail
Hardy et al 1998	Limb length discrepancy (cm)	12 months	Intramedullary Hip Screw	Compression hip screw	62	N/A	-	-	>.05	NS
Miedel et al 2005	No complication Trochanteric fractures	12 months	Gamma nail	Medoff sliding plate	189	Risk ratio	0.99	0.72	N/A	NS
Miedel et al 2005	Penetration of lag screw Trochanteric fractures	12 months	Gamma nail	Medoff sliding plate	189	Risk ratio	0.77	0.73	N/A	NS
Miedel et al 2005	Redisplacement/edialization Trochanteric fractures	12 months	Gamma nail	Medoff sliding plate	189	% risk difference	-1.04	0.28	N/A	NS
Miedel et al 2005	Intra-operative femoral fracture Trochanteric fractures	Intra-op	Gamma nail	Medoff sliding plate	189	% risk difference	3.23	0.06	N/A	NS
Miedel et al 2005	No complication Subtrochanteric fractures	12 months	Gamma nail	Medoff sliding plate	28	% risk difference	16.67	0.09	N/A	NS
Miedel et al 2005	Penetration of lag screw Subtrochanteric fractures	12 months	Gamma nail	Medoff sliding plate	28	% risk difference	0.00	1.00	N/A	NS
Miedel et al 2005	Redisplacement/edialization Subtrochanteric fractures	12 months	Gamma nail	Medoff sliding plate	28	% risk difference	-16.67	0.09	N/A	NS
Miedel et al 2005	Intra-operative femoral fracture Subtrochanteric fractures	intra-op	Gamma nail	Medoff sliding plate	28	% risk difference	0.00	1.00	N/A	NS
Miedel et al 2005	Superficial wound infection	12 months	Gamma nail	Medoff sliding plate	217	Risk ratio	0.33	0.17	N/A	NS
Miedel et al 2005	Severe complication (cardiacpulmonary, thromboembolic or cerebrovascular)	12 months	Gamma nail	Medoff sliding plate	217	Risk ratio	0.74	0.69	N/A	NS
Adams et al 2001	Failure of fixation	8.4 average follow up	IM nail	Dynamic screw and plate	367	N/A	-	-	>.05	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Papasimos et al 2005	Fracture consolidation time (months)	Varied	Gamma nail	Dynamic hip screw	80	Mean difference	-0.30	-	>.05	NS
Papasimos et al 2005	Fracture consolidation time (months)	Varied	Proximal Femoral Nail	Dynamic hip screw	80	Mean difference	-0.20	-	>.05	NS
Papasimos et al 2005	Reoperation rate	12	Gamma nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	Reoperation rate	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	1.33	0.69	N/A	NS
Leung et al 1992	Blood loss ml	intra-operative	Gamma nail	Dynamic hip screw	136	Mean difference	-174.44	0.04	N/A	Favors Gamma Nail
Leung et al 1992	Chest infection	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	0.77	0.77	N/A	NS
Leung et al 1992	Heart failure	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	0.29	0.26	N/A	NS
Leung et al 1992	Renal failure	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	4.63	0.17	N/A	NS
Leung et al 1992	Cerebrovascular accident	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	0.58	0.65	N/A	NS
Papasimos et al 2005	Blood loss (ml)	In surgery	Gamma nail	Dynamic hip screw	80	Mean difference	-32.40	-	>.05	NS
Papasimos et al 2005	Chest infection	12	Gamma nail	Dynamic hip screw	80	% risk difference	0.00	1.00	N/A	NS
Papasimos et al 2005	Pulmonary embolism	12	Gamma nail	Dynamic hip screw	80	Risk ratio	0.50	0.56	N/A	NS
Papasimos et al 2005	Respiratory distress	12	Gamma nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	Urinary tract infection	12	Gamma nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	Urinary retention	12	Gamma nail	Dynamic hip screw	80	% risk difference	-2.50	0.27	N/A	NS
Papasimos et al 2005	DVT	12	Gamma nail	Dynamic hip screw	80	Risk ratio	0.50	0.56	N/A	NS
Papasimos et al 2005	Hematoma	12	Gamma nail	Dynamic hip screw	80	Risk ratio	0.67	0.65	N/A	NS
Papasimos et al 2005	Superficial wound infection	12	Gamma nail	Dynamic hip screw	80	% risk difference	-2.50	0.27	N/A	NS
Papasimos et al 2005	Delayed wood healing	12	Gamma nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	Blood loss (ml)	in surgery	Proximal Femoral Nail	Dynamic hip screw	80	Mean difference	-17.40	-	>.05	NS
Papasimos et al 2005	Chest infection	12	Proximal Femoral Nail	Dynamic hip screw	80	% risk difference	0.00	1.00	N/A	NS
Papasimos et al 2005	Pulmonary embolism	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	0.50	0.56	N/A	NS
Papasimos et al 2005	Respiratory distress	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	2.00	0.56	N/A	NS
Papasimos et al 2005	Urinary tract infection	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	0.50	0.56	N/A	NS
Papasimos et al 2005	Urinary retention	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	DVT	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	0.50	0.56	N/A	NS
Papasimos et al 2005	Hematoma	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	Superficial wound infection	12	Proximal Femoral Nail	Dynamic hip screw	80	Risk ratio	1.00	1.00	N/A	NS
Papasimos et al 2005	Delayed wood healing	12	Proximal Femoral Nail	Dynamic hip screw	80	% risk difference	-2.50	0.27	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Papasimos et al 2005	Intra-operative fracture	in surgery	Gamma nail	Dynamic hip screw	80	% risk difference	2.50	0.27	N/A	NS
Papasimos et al 2005	Intra-operative fracture	in surgery	Proximal Femoral Nail	Dynamic hip screw	80	% risk difference	0.00	1.00	N/A	NS
Utrilla et al 2005	Blood transfusions	intra-operative	Gamma nail	compression hip screw	210	Mean difference	-0.30	0.05	N/A	NS
Verettas et al 2010	Blood loss (ml)	10 days	Gamma nail	Dynamic hip screw	118	Mean difference	-50.00	-	.237	NS
Verettas et al 2010	Blood units transfused	10 days	Gamma nail	Dynamic hip screw	118	Mean difference	0.00	-	.847	NS
Verettas et al 2010	Respiratory complication	10 days	Gamma nail	Dynamic hip screw	118	% risk difference	1.69	0.27	N/A	NS
Verettas et al 2010	Cardiovascular complication	10 days	Gamma nail	Dynamic hip screw	118	Risk ratio	1.00	1.00	N/A	NS
Verettas et al 2010	DVT	10 days	Gamma nail	Dynamic hip screw	118	Risk ratio	2.00	0.57	N/A	NS
Verettas et al 2010	Neurologic complication	10 days	Gamma nail	Dynamic hip screw	118	Risk ratio	2.00	0.57	N/A	NS
Verettas et al 2010	Intensive Care unit admissions	10 days	Gamma nail	Dynamic hip screw	118	Risk ratio	1.00	1.00	N/A	NS
Verettas et al 2010	Superficial wound infection	10 days	Gamma nail	Dynamic hip screw	118	% risk difference	-3.39	0.12	N/A	NS
Verettas et al 2010	Delayed wound healing	10 days	Gamma nail	Dynamic hip screw	118	Risk ratio	1.00	1.00	N/A	NS

Table 85: CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Aktselis, I. 2014	Moderate	Barthel	1 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	7 (-3.03, 17.03)	NS
Aktselis, I. 2014	Moderate	Barthel	3 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	2.9 (-6.79, 12.59)	NS
Aktselis, I. 2014	Moderate	Barthel	6 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	5 (-3.56, 13.56)	NS
Aktselis, I. 2014	Moderate	Barthel	12 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	8.6 (0.71, 16.49)	Intramedullary nail
Aktselis, I. 2014	Moderate	EQ-5D	1 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.07 (-0.05, 0.19)	NS
Aktselis, I. 2014	Moderate	EQ-5D	3 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.04 (-0.07, 0.15)	NS
Aktselis, I. 2014	Moderate	EQ-5D	6 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.08 (-0.02, 0.18)	NS
Aktselis, I. 2014	Moderate	EQ-5D	12 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.12 (0.02, 0.22)	Intramedullary nail
Aktselis, I. 2014	Moderate	Parker	1 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.7 (0.03, 1.37)	Intramedullary nail
Aktselis, I. 2014	Moderate	Parker	3 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.8 (-0.13, 1.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Aktselis, I. 2014	Moderate	Parker	6 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.8 (-0.20, 1.80)	NS
Aktselis, I. 2014	Moderate	Parker	12 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.8 (-0.25, 1.85)	NS
Griffin, X. L. 2016	Moderate	EQ-5D (EuroQoL 5 Dimension Score)	Postop 1 yrs	X-BOLT: X-BOLT DYNAMIC HIP PLATING SYSTEM	Sliding Hip Screw	Author Reported - p>.05	N/A	NS
Griffin, X. L. 2016	Moderate	OHS (Oxford Hip Score)	Postop 1 yrs	X-BOLT: X-BOLT DYNAMIC HIP PLATING SYSTEM	Sliding Hip Screw	Author Reported - p>.05	N/A	NS
Griffin, X. L. 2016	Moderate	ASA (American Society Anesthesiologists Score)	Postop 1 yrs	X-BOLT: X-BOLT DYNAMIC HIP PLATING SYSTEM	Sliding Hip Screw	Author Reported - p>.05	N/A	NS
Griffin, X. L. 2016	Moderate	ICECAP (ICEpop Capability measure for Older people)	Postop 1 yrs	X-BOLT: X-BOLT DYNAMIC HIP PLATING SYSTEM	Sliding Hip Screw	Author Reported - p>.05	N/A	NS
Tao, R. 2013	Moderate	Harris Hip score (Harris hip score (pt.))	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	0.8 (-3.39, 4.99)	NS

Table 86: CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Reindl, R. 2015	Moderate	Timed 2-min walk test (m)	Postop 6 wks	INTERTAN nail	Sliding Hip Screw	Mean Difference	-1 (-7.71, 5.71)	NS
Reindl, R. 2015	Moderate	Timed 2-min walk test (m)	Postop 3 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-9 (-17.71, -0.29)	INTERTAN nail
Reindl, R. 2015	Moderate	Timed 2-min walk test (m)	Postop 6 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-5 (-14.38, 4.38)	NS
Reindl, R. 2015	Moderate	Timed 2-min walk test (m)	Postop 12mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-1 (-11.86, 9.86)	NS
Reindl, R. 2015	Moderate	TUG (sec) (Timed “Up & Go” (TUG) test)	Postop 6 wks	INTERTAN nail	Sliding Hip Screw	Mean Difference	14 (0.81, 27.19)	Sliding Hip Screw
Reindl, R. 2015	Moderate	TUG (sec) (Timed “Up & Go” (TUG) test)	Postop 3 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	0 (-5.71, 5.71)	NS
Reindl, R. 2015	Moderate	TUG (sec) (Timed “Up & Go” (TUG) test)	Postop 6 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	3 (-2.36, 8.36)	NS
Reindl, R. 2015	Moderate	TUG (sec) (Timed “Up & Go” (TUG) test)	Postop 12mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-1 (-6.91, 4.91)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Reindl, R. 2015	Moderate	FIM total (points) (Functional Independence Measure (FIM))	Postop 6 wks	INTERTAN nail	Sliding Hip Screw	Mean Difference	-5 (-11.32, 1.32)	NS
Reindl, R. 2015	Moderate	FIM total (points) (Functional Independence Measure (FIM))	Postop 3 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-4 (-10.77, 2.77)	NS
Reindl, R. 2015	Moderate	FIM total (points) (Functional Independence Measure (FIM))	Postop 6 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-2 (-8.99, 4.99)	NS
Reindl, R. 2015	Moderate	FIM total (points) (Functional Independence Measure (FIM))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-5 (-11.21, 1.21)	NS
Tao, R. 2013	Moderate	Postoperative walking ability (Postoperative walking ability - Independent walking)	1 mos	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	1.02(0.83,1.24)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tao, R. 2013	Moderate	Postoperative walking ability (Postoperative walking ability - Assistedwalking)	1 mos	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.80(0.29,2.19)	NS
Tao, R. 2013	Moderate	Postoperative walking ability (Postoperative walking ability - Bedridden)	1 mos	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	1.87(0.18,19.84)	NS
Zehir, S.2015	High	Walking ability (Recovery of walking ability)	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.14(0.96,1.36)	NS
Zehir, S.2015	High	Independent (Walking)	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.94(1.36,2.77)	PFNA (Proximal femoral nail antirotation)

Table 87. CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Function cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Hardy et al 1998	Mobility	12 months	Intramedullary Hip Screw	Compression hip screw	71	Mean difference	1.90	0.02	N/A	Favors intra-medullary hip scr
Hardy et al 1998	Ability to walk outside	12 months	Intramedullary Hip Screw	Compression hip screw	71	Mean difference	1.28	0.02	N/A	Favors intra-medullary hip scr
Miedel et al 2005	Katz ADL index category A or B (independent in at least 5 of 6 functions)	12 months	Gamma nail	Medoff sliding plate	168	Risk ratio	0.82	0.15	N/A	NS
Miedel et al 2005	Katz ADL index category A or B (independent in at least 5 of 6 functions)	4 months	Gamma nail	Medoff sliding plate	156	Risk ratio	0.90	0.43	N/A	NS
Miedel et al 2005	Health related quality of life	12 months	Gamma nail	Medoff sliding plate	217	N/A	-	-	>.05	NS
Leung et al 1992	General debilitation	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	1.54	0.56	N/A	NS
Leung et al 1992	Weeks to full weight bearing	Varied	Gamma nail	Dynamic hip screw	136	Mean difference	-0.50	0.00	N/A	Gamma nail
Leung et al 1992	Independent walking ability	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	1.11	0.67	N/A	NS
Leung et al 1992	Walking with aids	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	0.99	0.96	N/A	NS
Leung et al 1992	Chair/bedbound	6 months	Gamma nail	Dynamic hip screw	136	Risk ratio	0.72	0.55	N/A	NS
Papasimos et al 2005	Return to prefracture level of ambulation and independence	In surgery	Gamma nail	Dynamic hip screw	80	N/A	-	-	>.05	NS
Papasimos et al 2005	Return to prefracture level of ambulation and independence	In surgery	Proximal Femoral Nail	Dynamic hip screw	80	N/A	-	-	>.05	NS
Utrilla et al 2005	Walking ability: Parker and Palmer mobility score (0-9)	12 months	Gamma nail	Compression hip screw	156	Mean difference	1.20	0.00	N/A	Gamma nail
Verettas et al 2010	Number of independent walking days	10 days	Gamma nail	Dynamic hip screw	118	Mean difference	-0.80	0.12	N/A	NS

Table 88: CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Aktselis, I. 2014	Moderate	Duration of surgery (min)	2 wks	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	-29.8 (-40.17, -19.43)	Intramedullary nail
Aktselis, I. 2014	Moderate	Amount of radiation	0 days	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	4.5 (-1.90, 10.90)	NS
Aktselis, I. 2014	Moderate	Hospital stay (days)	0 days	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	0.2 (-2.44, 2.84)	NS
Aktselis, I. 2014	Moderate	Length of incision, median (IQR)	0 days	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	Mean Difference	-11 (., .)	NS
Aktselis, I. 2014	Moderate	Failure of fixation [n (%)]	0 days	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	RD	0.08(-0.01,0.17)	NS
Griffin, X. L. 2016	Moderate	Mortality	Postop 1 yrs	X-BOLT: X-BOLT DYNAMIC HIP PLATING SYSTEM	Sliding Hip Screw	RR	1.33(0.73,2.41)	NS
Reindl, R. 2015	Moderate	Radiographic finding (Femoral neck shortening (cm))	Postop 6 wks	INTERTAN nail	Sliding Hip Screw	Mean Difference	-0.8 (-1.01, -0.59)	INTERTAN nail
Reindl, R. 2015	Moderate	Radiographic finding (Femoral neck shortening (cm))	Postop 3 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-1 (-1.23, -0.77)	INTERTAN nail

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Reindl, R. 2015	Moderate	Radiographic finding (Femoral neck shortening (cm))	Postop 6 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-0.8 (-1.03, -0.57)	INTERTAN nail
Reindl, R. 2015	Moderate	Radiographic finding (Femoral neck shortening (cm))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-0.8 (-1.01, -0.59)	INTERTAN nail
Reindl, R. 2015	Moderate	LEM (points) (Lower Extremity Measure (LEM))	Postop 6 wks	INTERTAN nail	Sliding Hip Screw	Mean Difference	1.9 (-3.83, 7.63)	NS
Reindl, R. 2015	Moderate	LEM (points) (Lower Extremity Measure (LEM))	Postop 3 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	0.6 (-6.20, 7.40)	NS
Reindl, R. 2015	Moderate	LEM (points) (Lower Extremity Measure (LEM))	Postop 6 mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	-2.9 (-9.58, 3.78)	NS
Reindl, R. 2015	Moderate	LEM (points) (Lower Extremity Measure (LEM))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	Mean Difference	1.6 (-5.45, 8.65)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Reindl, R. 2015	Moderate	Radiographic finding (Brooker Stage of Heterotopic Ossification (none))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	RR	0.61(0.47,0.81)	Sliding Hip Screw
Reindl, R. 2015	Moderate	Radiographic finding (Brooker Stage of Heterotopic Ossification (stage1))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	RR	2.68(1.50,4.80)	Sliding Hip Screw
Reindl, R. 2015	Moderate	Radiographic finding (Brooker Stage of Heterotopic Ossification (stage2))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	RR	1.18(0.46,3.03)	NS
Reindl, R. 2015	Moderate	Radiographic finding (Brooker Stage of Heterotopic Ossification (stage3))	Postop 12mos	INTERTAN nail	Sliding Hip Screw	RR	1.15(0.32,4.13)	NS
Tao, R. 2013	Moderate	Duration from injury to surgery (day) ((mean))	1 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	-0.16 (-1.67, 1.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tao, R. 2013	Moderate	Duration of surgery (min.) ((mean))	1 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	-26 (-32.40, -19.60)	PFNA
Tao, R. 2013	Moderate	Fluoroscopy time (sec.) ((mean))	1 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	-56 (-87.70, -24.30)	PFNA
Tao, R. 2013	Moderate	Blood loss (mL) ((mean))	1 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	-14 (-61.54, 33.54)	NS
Tao, R. 2013	Moderate	Open reduction cases (# cases)	NR	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.70(0.17,2.94)	NS
Tao, R. 2013	Moderate	Quality of reduction ((Good))	NR	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	0.96(0.85,1.07)	NS
Tao, R. 2013	Moderate	Quality of reduction ((Acceptable))	NR	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	1.87(0.36,9.67)	NS
Tao, R. 2013	Moderate	Quality of reduction ((Poor))	NR	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RD	0.00(0.00,0.00)	NS
Tao, R. 2013	Moderate	Hospital stay (day) ((mean))	1 mos	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	-1.9 (-4.15, 0.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tao, R. 2013	Moderate	Bone healing time ((weeks))	1 mos	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	Mean Difference	-2 (-3.72, -0.28)	PFNA
Tao, R. 2013	Moderate	Mortality (Death (cases))	52 wks	PFNA: Proximal femur nail antirotation	LISS: Reverse less invasive stabilisation system (LISS)	RR	1.24(0.30,5.24)	NS
Zehir, S.2015	High	Infection (Deep wound infection)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RD	-0.04(-0.08,-0.00)	PFNA (Proximal femoral nail antirotation)
Zehir, S.2015	High	Mortality (In-hospital mortality)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.43(0.08,2.14)	NS
Zehir, S.2015	High	Time to healing ((weeks))	20 wks	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	Mean Difference	1.21 (-1.09, 3.51)	NS
Zehir, S.2015	High	Hospital stay (Time of hospital stay)	8 wks	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	Mean Difference	-1.39 (-1.93, -0.85)	PFNA (Proximal femoral nail antirotation)
Zehir, S.2015	High	Screw cutout	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.39,2.92)	NS
Zehir, S.2015	High	Mean TAD	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	Author Reported - p>.05	N/A	NS
Zehir, S.2015	High	Trochanteric fractures (new)	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.22,5.14)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zehir, S.2015	High	Femoral shift fractures (new)	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.07,16.75)	NS
Zehir, S.2015	High	Femoral shortening (none/mild (below 5 mm))	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	2.30(1.75,3.02)	PFNA (Proximal femoral nail antirotation)
Zehir, S.2015	High	Femoral shortening (moderate (5–10 mm))	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	0.25(0.14,0.42)	PFNA (Proximal femoral nail antirotation)
Zehir, S.2015	High	Femoral shortening (severe (>10 mm)	6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RD	-0.04(-0.08,-0.00)	PFNA (Proximal femoral nail antirotation)
Zehir, S.2015	High	Survival Rate (1 year)	1 yrs	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.97,1.17)	NS
Zehir, S.2015	High	Survival Rate (3 years)	3 yrs	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.14(0.90,1.43)	NS
Zehir, S.2015	High	Tip-Apex index (mean)	Periop 6 mos	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	Mean Difference	-1.56 (-5.36, 2.24)	NS
Fernandez, M. A. 2017	Moderate	Tip-apex distance (Mean tip-apex distance (mm) - centre-centreposition)		X-Bolt	Sliding Hip Screw	Author Reported - p<.05	N/A	Treatment 2 (SHS)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Fernandez, M. A. 2017	Moderate	Tip-apex distance (Mean tip-apex distance (mm) - centre-posteriorposition)		X-Bolt	Sliding Hip Screw	Author Reported - p<.05	N/A	Treatment 2 (SHS)

Table 89. CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Other cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Leung et al 1992	Acute hospital stay (days)	Varied	Gamma nail	Dynamic hip screw	136	Mean difference	-0.10	0.88	N/A	NS
Leung et al 1992	Convalescent hospital stay (days)	Varied	Gamma nail	Dynamic hip screw	136	Mean difference	-3.20	0.05	N/A	Gamma Nail; p=0.05
Papasimos et al 2005	Hospital stay (days)	Varied	Gamma nail	Dynamic hip screw	80	Mean difference	-1.30	-	>.05	NS
Papasimos et al 2005	Hospital stay (days)	Varied	Proximal Femoral Nail	Dynamic hip screw	80	Mean difference	-1.10	-	>.05	NS
Verettas et al 2010	Hospital stay	Varied	Gamma nail	Dynamic hip screw	118	Mean difference	-0.10	-	.144	NS
Schipper et al 2004	Harris hip Score Mobility	Pre-op	Proximal femoral Nail	Gamma Nail	424	Mean difference	-1.30	0.34	N/A	NS
Schipper et al 2004	Mortality	4 weeks	Proximal femoral Nail	Gamma Nail	424	Risk ratio	1.21	0.50	N/A	NS
Schipper et al 2004	Re-operation	4 weeks	Proximal femoral Nail	Gamma Nail	424	Risk ratio	0.71	0.47	N/A	NS
Schipper et al 2004	Local complication	4 weeks	Proximal femoral Nail	Gamma Nail	424	Risk ratio	0.77	0.22	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Schipper et al 2004	Mortality	4 months	Proximal femoral Nail	Gamma Nail	424	Risk ratio	1.38	0.41	N/A	NS
Schipper et al 2004	Fracture Consolidation	4 months	Proximal femoral Nail	Gamma Nail	424	Risk ratio	0.88	0.27	N/A	NS
Schipper et al 2004	Re-operation	4 months	Proximal femoral Nail	Gamma Nail	424	Risk ratio	3.03	0.05	N/A	NS
Schipper et al 2004	Local complication	4 months	Proximal femoral Nail	Gamma Nail	424	Risk ratio	2.16	0.08	N/A	NS
Schipper et al 2004	Mortality	1 year	Proximal femoral Nail	Gamma Nail	424	Risk ratio	0.64	0.35	N/A	NS
Schipper et al 2004	Fracture Consolidation	1 year	Proximal femoral Nail	Gamma Nail	424	Risk ratio	1.22	0.21	N/A	NS
Schipper et al 2004	Local complication	1 year	Proximal femoral Nail	Gamma Nail	424	Risk ratio	2.02	0.32	N/A	NS
Schipper et al 2004	Reoperation	1 year	Proximal femoral Nail	Gamma Nail	424	Risk ratio	1.77	0.36	N/A	NS
Papasimos et al 2005	Mental disturbances	12 months	Gamma nail	Dynamic hip screw	80	Risk ratio	1.50	0.65	N/A	NS
Verettas et al 2010	Mini Mental State Examination	1st postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-1.17	0.33	N/A	NS
Verettas et al 2010	Mini Mental State Examination	3rd postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-1.34	0.28	N/A	NS
Verettas et al 2010	Mini Mental State Examination	10th postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.83	0.49	N/A	NS
Verettas et al 2010	Mini Mental State Examination	Minimum value	Gamma nail	Dynamic hip screw	118	Mean difference	-1.14	0.35	N/A	NS
Verettas et al 2010	Hct (%)	1st postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	0.88	0.17	N/A	NS
Verettas et al 2010	Hct (%)	3rd postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.10	0.87	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Verettas et al 2010	Hct (%)	10th postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	0.22	0.59	N/A	NS
Verettas et al 2010	Hct (%)	Minimum value	Gamma nail	Dynamic hip screw	118	Mean difference	0.97	0.12	N/A	NS
Verettas et al 2010	PO2 (mmHg)	1st postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.32	0.84	N/A	NS
Verettas et al 2010	PO2 (mmHg)	3rd postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.78	0.65	N/A	NS
Verettas et al 2010	PO2 (mmHg)	10th postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.37	0.80	N/A	NS
Verettas et al 2010	PO2 (mmHg)	Minimum value	Gamma nail	Dynamic hip screw	118	Mean difference	-0.86	0.55	N/A	NS
Verettas et al 2010	SO (%)	1st postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	0.71	0.42	N/A	NS
Verettas et al 2010	SO (%)	3rd postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.59	0.41	N/A	NS
Verettas et al 2010	SO (%)	10th postoperative day	Gamma nail	Dynamic hip screw	118	Mean difference	-0.26	0.59	N/A	NS
Verettas et al 2010	SO (%)	Minimum value	Gamma nail	Dynamic hip screw	118	Mean difference	-0.17	0.88	N/A	NS
Verettas et al 2010	ASA score	Postoperative	Gamma nail	Dynamic hip screw	118	Mean difference	-0.10	0.41	N/A	NS

Table 90: CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Aktselis, I. 2014	Moderate	Hip pain	1 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	RR	0.46(0.27,0.80)	Intramedullary nail
Aktselis, I. 2014	Moderate	Hip pain	3 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	RR	0.28(0.10,0.76)	Intramedullary nail
Aktselis, I. 2014	Moderate	Hip pain	6 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	RR	0.14(0.02,1.07)	NS
Aktselis, I. 2014	Moderate	Hip pain	12 mos	Intramedullary nail: G3 Gamma nail	Sliding Hip Screw: AMBI sliding hip screw device	RD	-0.09(-0.18,0.01)	NS
Zehir, S.2015	High	Pain (Pain at hip)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	1.06(0.22,5.14)	NS
Zehir, S.2015	High	Pain (Pain at thigh)	1 days	PFNA (Proximal femoral nail antirotation)	DHS (Dynamic hip screw)	RR	3.72(0.79,17.46)	NS

Table 91. CEPHALOMEDULLARY DEVICE (SUBTROCHANTERIC/REVERSE OBLIQUITY/ UNSTABLE INTERTROCHANTERIC FRACTURES)- Pain cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Verettas et al 2010	VAS pain	5 days	Gamma nail	Dynamic hip screw	118	Mean difference	-0.20	-	.563	NS
Verettas et al 2010	VAS pain	10 days	Gamma nail	Dynamic hip screw	118	Mean difference	-0.10	-	.747	NS

Table 92: SHORT VS LONG CEPHALOMEDULLARY DEVICES- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Bovbjerg, P. E. 2020	Low	Failure (Cut out)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RR	1.27(0.26,6.17)	NS
Bovbjerg, P. E. 2020	Low	Failure (Ipsilateral fracture)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RR	1.27(0.08,20.10)	NS
Bovbjerg, P. E. 2020	Low	Failure (Implant failure)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RD	0.00(0.00,0.00)	NS
Bovbjerg, P. E. 2020	Low	Failure (Non-union)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RD	-0.01(-0.02,0.01)	NS
Bovbjerg, P. E. 2020	Low	Failure (Infection)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RD	0.00(0.00,0.00)	NS
Bovbjerg, P. E. 2020	Low	Failure (Complaints related to implant)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RD	-0.01(-0.02,0.01)	NS
Bovbjerg, P. E. 2020	Low	Failure (Other/unknown)	Postop 2 yrs	Short cephalomedullary nail (SN)	Long cephalomedullary nail (LN)	RR	1.27(0.08,20.10)	NS
Frisch, N. B. 2017	LowQuality	Complications (Orthopedic) (Infection)	8 wks	13. Short Cephalomedullary device	13. Long Cephalomedullary device	RR	0.45(0.05,4.23)	NS
Frisch, N. B. 2017	LowQuality	Complications (Orthopedic) (Screw cutout)	8 wks	13. Short Cephalomedullary device	13. Long Cephalomedullary device	RD	-0.05(-0.10,-0.01)	13. Short Cephalomedullary device

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Frisch, N. B. 2017	LowQuality	Complications (Orthopedic) (Femur fracture)	8 wks	13. Short Cephalomedullary device	13. Long Cephalomedullary device	RD	0.08(0.02,0.15)	13. Long Cephalomedullary device
Frisch, N. B. 2017	LowQuality	Complications (Orthopedic) (Implant failure)	8 wks	13. Short Cephalomedullary device	13. Long Cephalomedullary device	RR	1.35(0.09,21.18)	NS
Guo, X. F. 2015	Low	Complications (Periprosthetic fracture)	Postop 21mos	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	RR	0.75(0.05,11.72)	NS
Guo, X. F. 2015	Low	Complications (Infection)	Postop 21mos	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	RR	0.75(0.05,11.72)	NS
Guo, X. F. 2015	Low	Complications (Nonunion)	Postop 21mos	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Guo, X. F. 2015	Low	Complications (Malunion)	Postop 21mos	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	RD	-0.01(-0.04,0.01)	NS
Guo, X. F. 2015	Low	Complications (Screw cut-out)	Postop 21mos	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	RD	0.01(-0.01,0.03)	NS
Horner, N. S. 2017	Low	Complications (Overall complication rate (%))	Postop 3 yrs	Short gamma nail	Long gamma nail	Author Reported - p>.05	N/A	NS
Liu, J. 2018	LowQuality	Complications (Pulmonary embolism)	30 days	Short Nail	Long Nail	RR	0.85(0.29,2.45)	NS
Liu, J. 2018	LowQuality	Complications (Blood transfusion)	30 days	Short Nail	Long Nail	RR	0.92(0.81,1.04)	NS
Liu, J. 2018	LowQuality	Complications (Myocardial infarction)	30 days	Short Nail	Long Nail	RR	1.93(0.71,5.28)	NS
Liu, J. 2018	LowQuality	Complications (Stroke)	30 days	Short Nail	Long Nail	RR	2.26(0.51,10.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, J. 2018	LowQuality	Complications (Deep venous thrombosis)	30 days	Short Nail	Long Nail	RR	0.68(0.30,1.52)	NS
Liu, J. 2018	LowQuality	Complications (Mortality)	30 days	Short Nail	Long Nail	RR	1.30(0.77,2.19)	NS
Liu, J. 2018	LowQuality	Complications (Non–surgical site infection)	30 days	Short Nail	Long Nail	RR	1.14(0.75,1.73)	NS
Liu, J. 2018	LowQuality	Complications (Superficial surgical site infection)	30 days	Short Nail	Long Nail	RR	0.34(0.04,2.88)	NS
Liu, J. 2018	LowQuality	Complications (Deep surgical site infection)	30 days	Short Nail	Long Nail	RD	-0.00(-0.01,0.00)	NS
Liu, J. 2018	LowQuality	Complications (Any complication)	30 days	Short Nail	Long Nail	RR	0.96(0.87,1.06)	NS
Liu, J. 2018	LowQuality	Complications (orthopaedic) (Ipsilateral refracture)	NR	Short Nail	Long Nail	RR	1.13(0.19,6.71)	NS
Liu, J. 2018	LowQuality	Complications (orthopaedic) (Contralateral hip fracture)	NR	Short Nail	Long Nail	RR	1.01(0.24,4.22)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, J. 2018	LowQuality	Complications (orthopaedic) (Non–hip fracture)	NR	Short Nail	Long Nail	RR	0.85(0.08,9.29)	NS
Liu, J. 2018	LowQuality	Complications (orthopaedic) (Ipsilateral hardware failure)	NR	Short Nail	Long Nail	RD	-0.01(-0.01,-0.00)	Short Nail
Rai, S. 2020	Low	Complications (Immediate post operative infection)	Postop 1 days	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.70(0.30,1.62)	NS
Rai, S. 2020	Low	Complications (Delayed infection)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.26(0.06,1.26)	NS
Rai, S. 2020	Low	Complications (Loosening of implants)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.85(0.17,20.32)	NS
Rai, S. 2020	Low	Complications (Neck screw back out)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.93(0.06,14.74)	NS
Rai, S. 2020	Low	Complications (Neck Screw cut out)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.85(0.17,20.32)	NS
Rai, S. 2020	Low	Complications (Nonunion)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.11(0.34,3.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rai, S. 2020	Low	Complications (Heterotrophic ossi?cation)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.46(0.04,5.08)	NS
Rai, S. 2020	Low	Complications (Peri-implant fracture)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.93(0.06,14.74)	NS
Rai, S. 2020	Low	Complications (Total (acute infection excluded))	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.77(0.40,1.50)	NS
Raval, P. 2016	Low	Reoperation (Reoperations(n))	Postop 1 yrs	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	RR	0.50(0.05,5.30)	NS
Shannon, S. F. 2019	Moderate	Complications (Total complications)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	RR	1.10(0.52,2.31)	NS
Shannon, S. F. 2019	Moderate	Complications (Reoperation for any reason)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	RR	0.69(0.23,2.02)	NS
Shannon, S. F. 2019	Moderate	Complications (Peri-implant fracture)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	RR	1.10(0.16,7.63)	NS
Shannon, S. F. 2019	Moderate	Complications (Lag-screw cutout)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	RR	1.65(0.28,9.62)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shannon, S. F. 2019	Moderate	Complications (Deep surgical site infection)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	RR	0.55(0.05,5.95)	NS

able 93: SHORT VS LONG CEPHALOMEDULLARY DEVICES- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rai, S. 2020	Low	Harris hip score (Excellent)	3 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.07(0.81,1.43)	NS
Rai, S. 2020	Low	Harris hip score (Excellent)	6 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.05(0.80,1.37)	NS
Rai, S. 2020	Low	Harris hip score (Excellent)	9 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.07(0.92,1.25)	NS
Rai, S. 2020	Low	Harris hip score (Good)	3 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.13(0.90,1.43)	NS
Rai, S. 2020	Low	Harris hip score (Good)	6 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.98(0.77,1.24)	NS
Rai, S. 2020	Low	Harris hip score (Good)	9 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.24(0.92,1.66)	NS
Rai, S. 2020	Low	Harris hip score (Fair)	3 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.86(0.68,1.08)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rai, S. 2020	Low	Harris hip score (Fair)	6 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.97(0.76,1.24)	NS
Rai, S. 2020	Low	Harris hip score (Fair)	9 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.52(0.33,0.82)	Long PFNA
Rai, S. 2020	Low	Harris hip score (Poor)	3 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.56(0.13,2.30)	NS
Rai, S. 2020	Low	Harris hip score (Poor)	6 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.85(0.17,20.32)	NS
Rai, S. 2020	Low	Harris hip score (Poor)	9 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.77(0.24,2.50)	NS
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	1 (-6.81, 8.81)	NS
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	4 (-7.31, 15.31)	NS
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	-9 (-24.81, 6.81)	NS
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	16 (8.19, 23.81)	NS
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	-7 (-23.55, 9.55)	NS
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	23 (7.44, 38.56)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	5 (-1.40, 11.40)	NS
Shannon, S. F. 2019	Moderate	Harris Hip score	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	5 (1.39, 8.61)	Short (SN) cephalomedullary nail

Table 94: SHORT VS LONG CEPHALOMEDULLARY DEVICES- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Frisch, N. B. 2017	LowQuality	Surgery time, min	Periop 1 days	13. Short Cephalomedullary device	13. Long Cephalomedullary device	Mean Difference	-18.8 (-25.80, -11.80)	13. Short Cephalomedullary device
Frisch, N. B. 2017	LowQuality	Estimated blood loss, mL	Periop 1 days	13. Short Cephalomedullary device	13. Long Cephalomedullary device	Mean Difference	-46.7 (-83.31, -10.09)	13. Short Cephalomedullary device
Frisch, N. B. 2017	LowQuality	Fluoroscopy time, s	Periop 1 days	13. Short Cephalomedullary device	13. Long Cephalomedullary device	Mean Difference	-51.6 (-64.92, -38.28)	13. Short Cephalomedullary device
Guo, X. F. 2015	Low	Blood loss (ml)	Intraop 0 days	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	Mean Difference	-37.1 (-58.77, -15.43)	Closed reduction and short intramedullary nail (Gamma 3)fixation.
Guo, X. F. 2015	Low	Operation time (min)	Intraop 0 days	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	Mean Difference	-15 (-20.15, -9.85)	Closed reduction and short intramedullary nail (Gamma 3)fixation.

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Guo, X. F. 2015	Low	Postoperative blood transfusion rate (%)	Postop 12days	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	Author Reported - p<.05	N/A	Treatment 1 (short)
Guo, X. F. 2015	Low	Length of hospital stay (d)	Postop 12days	Closed reduction and short intramedullary nail (Gamma 3) fixation.: Thelength of short nail was 180 mm	Closed reduction and long intramedullary nail (Gamma 3) fixation.: Thelength of long nail was 320-360 mm	Mean Difference	0.2 (-1.68, 2.08)	NS
Horner, N. S. 2017	Low	Estimated blood loss* (mL)	Intraop 0 days	Short gamma nail	Long gamma nail	Mean Difference	-280.9 (-395.86, -165.94)	Short gamma nail
Horner, N. S. 2017	Low	Operative time* (min)	Intraop 0 days	Short gamma nail	Long gamma nail	Mean Difference	-81.8 (-91.11, -72.49)	Short gamma nail
Horner, N. S. 2017	Low	Fluoroscopy time* (min)	Intraop 0 days	Short gamma nail	Long gamma nail	Mean Difference	-3.1 (-4.17, -2.03)	Short gamma nail
Horner, N. S. 2017	Low	Length of hospital stay* (days)	Postop 5 days	Short gamma nail	Long gamma nail	Mean Difference	-0.6 (-1.56, 0.36)	NS
Liu, J. 2018	LowQuality	Operating room time , mean±SD, min	1 days	Short Nail	Long Nail	Mean Difference	-17.3 (-22.96, -11.64)	Short Nail

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, J. 2018	LowQuality	Blood loss, mean±SD, mL	1 days	Short Nail	Long Nail	Mean Difference	-40.7 (-65.82, -15.58)	Short Nail
Liu, J. 2018	LowQuality	ASA Score 1 (American Society of Anesthesiologists score)	1 days	Short Nail	Long Nail	RR	2.11(0.57,7.82)	NS
Liu, J. 2018	LowQuality	ASA Score 2 (American Society of Anesthesiologists score)	1 days	Short Nail	Long Nail	RR	1.05(0.72,1.54)	NS
Liu, J. 2018	LowQuality	ASA Score 3 (American Society of Anesthesiologists score)	1 days	Short Nail	Long Nail	RR	0.94(0.85,1.04)	NS
Liu, J. 2018	LowQuality	ASA Score 4 (American Society of Anesthesiologists score)	1 days	Short Nail	Long Nail	RR	1.08(0.81,1.43)	NS
Liu, J. 2018	LowQuality	ASA Score 5 (American Society of Anesthesiologists score)	1 days	Short Nail	Long Nail	RD	0.00(-0.00,0.01)	NS
Liu, J. 2018	LowQuality	Postoperative hemoglobin, mean±SD, g/dL	1 days	Short Nail	Long Nail	Mean Difference	-0.2 (-0.61, 0.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Liu, J. 2018	LowQuality	Fluoroscopy, mean±SD, min	1 days	Short Nail	Long Nail	Mean Difference	0.7 (0.46, 0.94)	Long Nail
Liu, J. 2018	LowQuality	Hospital stay (Length of stay, mean, d)	30 days	Short Nail	Long Nail	Author Reported - p>.05	N/A	NS
Liu, J. 2018	LowQuality	Discharge location (Home)	30 days	Short Nail	Long Nail	RR	1.11(0.79,1.54)	NS
Liu, J. 2018	LowQuality	Discharge location (Rehabilitation)	30 days	Short Nail	Long Nail	RR	0.97(0.91,1.04)	NS
Liu, J. 2018	LowQuality	Discharge location (Hospice/transfer)	30 days	Short Nail	Long Nail	RR	0.28(0.03,2.33)	NS
Liu, J. 2018	LowQuality	Discharge location (Died)	30 days	Short Nail	Long Nail	RR	3.81(1.18,12.26)	Long Nail
Liu, J. 2018	LowQuality	Readmission within 30 days, No.	30 days	Short Nail	Long Nail	RR	1.18(0.85,1.63)	NS
Rai, S. 2020	Low	Surgery duration (Duration of surgery (minutes))	Intraop 0 days	Short PFNA: Various sizes used	Long PFNA: Various sizes used	Mean Difference	-21.7 (-25.49, -17.91)	Short PFNA
Rai, S. 2020	Low	Blood loss (Intra-operative blood loss (ml))	Intraop 0 days	Short PFNA: Various sizes used	Long PFNA: Various sizes used	Mean Difference	-112 (-138.69, -85.31)	Short PFNA

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rai, S. 2020	Low	Injury to surgery time (Time between injury and surgery (days) MeanSD)	Preop 2 days	Short PFNA: Various sizes used	Long PFNA: Various sizes used	Mean Difference	-0.2 (-0.60, 0.20)	NS
Rai, S. 2020	Low	Fracture union time (Time Taken for Fracture Union (Months) Mean ±SD)	Postop 11mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	Mean Difference	0.56 (0.21, 0.91)	Long PFNA
Rai, S. 2020	Low	Fracture union (Number of patient Showing Union)	Postop 3 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	0.98(0.89,1.07)	NS
Rai, S. 2020	Low	Fracture union (Number of patient Showing Union)	Postop 6 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.02(0.98,1.06)	NS
Rai, S. 2020	Low	Fracture union (Number of patient Showing Union)	Postop 9 mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.01(0.98,1.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rai, S. 2020	Low	Fracture union (Number of patient Showing Union)	Postop 12mos	Short PFNA: Various sizes used	Long PFNA: Various sizes used	RR	1.01(0.98,1.03)	NS
Raval, P. 2016	Low	Surgery length (Duration of surgery (minutes) Mean +/- SD)	Intraop 0 days	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	Mean Difference	-29.1 (-39.93, -18.27)	Short proximal femoral nail antirotation
Raval, P. 2016	Low	Open reduction of fracture (Open reduction of fracture (n))	Intraop 0 days	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	RR	0.25(0.03,2.14)	NS
Raval, P. 2016	Low	Blood loss (Intra-operative blood loss (ml) Mean +/- SD)	Intraop 0 days	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	Mean Difference	-169 (-245.79, -92.21)	Short proximal femoral nail antirotation
Raval, P. 2016	Low	Blood transfusion (Blood transfusion (n))	Intraop 0 days	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	RR	0.50(0.16,1.53)	NS
Raval, P. 2016	Low	Hospital stay (Hospital stay (days))	Postop 2 wks	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	Mean Difference	0.2 (-2.23, 2.63)	NS
Raval, P. 2016	Low	Mortality (Mortality (n))	Postop 1 yrs	Short proximal femoral nail antirotation	Long proximal femoral nail antirotation	RR	0.60(0.15,2.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shannon, S. F. 2019	Moderate	Length of surgery (Operative time, min)	1 days	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	-29 (-37.06, -20.94)	Short (SN) cephalomedullary nail
Shannon, S. F. 2019	Moderate	Blood loss (Estimated blood loss, mL)	1 days	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	-137 (-160.77, -113.23)	Short (SN) cephalomedullary nail

Table 95: SHORT VS LONG CEPHALOMEDULLARY DEVICES- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shannon, S. F. 2019	Moderate	SF-36 score (IQR)	3 mos	Short (SN) cephalomedullary nail	Long (LN) cephalomedullary nail	Mean Difference	6 (-2.49, 14.49)	NS

Table 96: TRANSFUSION THRESHOLD- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2016	High	Infections (Incidence of one or more infections (%))	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.11(0.85,1.46)	NS
Gregersen, M. 2016	High	Infections (Pneumonia (%))	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.97(0.53,1.79)	NS
Gregersen, M. 2016	High	Infections (UTI* (%))	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.21(0.84,1.74)	NS
Gregersen, M. 2016	High	Infections (Other infections (%))	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.65(0.11,3.82)	NS
Gruber-Baldini, A. L. 2013	Moderate	Complications (Infections)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.92(0.19,4.38)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Complications (Pulmonary Embolism)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RD	-0.03(-0.07,0.01)	NS
Gruber-Baldini, A. L. 2013	Moderate	Complications (Congestive Heart Failure)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	1.83(0.17,19.75)	NS
Gruber-Baldini, A. L. 2013	Moderate	Complications (Hemorrhaging (>100cc))		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.61(0.18,2.07)	NS
Parker, M. J. 2013	Moderate	Complications (Pneumonia)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	2.50(0.50,12.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2013	Moderate	Complications (Pressure sores)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	1.50(0.44,5.15)	NS
Parker, M. J. 2013	Moderate	Complications (Deep vein thrombosis)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	0.50(0.05,5.43)	NS
Parker, M. J. 2013	Moderate	Complications (Pulmonary embolism)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2013	Moderate	Complications (Delirium)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	0.03(-0.00,0.06)	NS
Parker, M. J. 2013	Moderate	Complications (Cerebrovascular accident)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	0.01(-0.01,0.03)	NS
Parker, M. J. 2013	Moderate	Complications (Cardiac failure)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	2.00(0.18,21.71)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2013	Moderate	Complications (Cardiac arrhythmia)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2013	Moderate	Complications (Clostridial diarrhoea)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	1.00(0.06,15.77)	NS
Parker, M. J. 2013	Moderate	Complications (Gastrointestinal bleed)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	0.01(-0.01,0.03)	NS
Parker, M. J. 2013	Moderate	Complications (Urine retention)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	0.33(0.04,3.15)	NS
Parker, M. J. 2013	Moderate	Complications (Acute renal failure)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	0.01(-0.01,0.03)	NS
Parker, M. J. 2013	Moderate	Complications (Super?cial wound infection)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	0.33(0.04,3.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2013	Moderate	Complications (Deep wound infection)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	0.00(0.00,0.00)	NS
Parker, M. J. 2013	Moderate	Complications (Fat embolism)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2013	Moderate	Complications (Pseudo intestinal obstruction)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2013	Moderate	Complications (Septicaemia with septic shock)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RD	-0.01(-0.03,0.01)	NS
Parker, M. J. 2013	Moderate	Complications (Total)	1 yrs	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	1.10(0.65,1.85)	NS

Table 97. TRANSFUSION THRESHOLD: Adverse Events cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Carson et al 2011	Mortality	30 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	1995	Risk ratio	1.22	0.33	N/A	NS
Carson et al 2011	Mortality	60 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	1999	Risk ratio	1.15	0.37	N/A	NS

Table 98: TRANSFUSION THRESHOLD- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2015	Moderate	MMSE (MMSE < 5 points)	Postop 1 yrs	Restrictive strategy: Restrictive RBC strategy (Hb < 9.7 g/dL, 6 mmol/L)	Liberal strategy: Liberal RBC transfusion strategy (Hb < 11.3 g/dL, 7mmol/L)	RR	0.97(0.40,2.38)	NS
Gregersen, M. 2015	Moderate	Oqol (Overall quality of life)	Postop 1 yrs	Restrictive strategy: Restrictive RBC strategy (Hb < 9.7 g/dL, 6 mmol/L)	Liberal strategy: Liberal RBC transfusion strategy (Hb < 11.3 g/dL, 7mmol/L)	Author Reported - p>.05	N/A	NS
Gregersen, M. 2015	Moderate	MBI sum-score (median) (Modified Barthel Index (MBI))	Postop 1 yrs	Restrictive strategy: Restrictive RBC strategy (Hb < 9.7 g/dL, 6 mmol/L)	Liberal strategy: Liberal RBC transfusion strategy (Hb < 11.3 g/dL, 7mmol/L)	Author Reported - p<.05	N/A	

Table 99: TRANSFUSION THRESHOLD- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2016	High	Modified Barthel Index - Independent or moderate dependent	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.15(0.77,1.74)	NS
Gregersen, M. 2016	High	Modified Barthel Index - Substantially dependent	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.85(0.64,1.15)	NS
Gregersen, M. 2016	High	Modified Barthel Index - Completely dependent	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.07(0.79,1.45)	NS
Gregersen, M. 2016	High	New Mobility Score - Median (IQR)	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	Author Reported - p>.05	N/A	NS
Gregersen, M. 2016	High	CAS Score - Walking ability	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.15(0.62,2.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2016	High	CAS Score - Sit-to-stand-to-sit	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.85(0.67,1.08)	NS
Gregersen, M. 2016	High	CAS Score - Bedridden	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.09(0.80,1.47)	NS
Gregersen, M. 2016	High	Transfer from bed to chair - Independent	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.28(0.74,2.22)	NS
Gregersen, M. 2016	High	Transfer from bed to chair - Dependent	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.96(0.87,1.06)	NS
Gregersen, M. 2016	High	Walking ability - Independent	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.97(0.06,15.39)	NS
Gregersen, M. 2016	High	Walking ability - Walking aids	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.97(0.59,1.61)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2016	High	Walking ability - Person support	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.87(0.67,1.13)	NS
Gregersen, M. 2016	High	Walking ability - None	Postop 10days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.20(0.88,1.62)	NS

Table 100. TRANSFUSION THRESHOLD: Function cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Carson et al 2011	Inability to walk independently	30 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	1995	Risk ratio	0.93	0.19	N/A	NS
Carson et al 2011	Inability to walk independently	60 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	1999	Risk ratio	0.98	0.80	N/A	NS
Carson et al 2011	Lower extremity physical ADL	30 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	2016	Mean difference	-0.10	0.57	N/A	NS
Carson et al 2011	Instrumental ADL	30 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	2016	Mean difference	0.00	1.00	N/A	NS
Carson et al 2011	Lower extremity physical ADL	60 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	2016	Mean difference	0.00	1.00	N/A	NS
Carson et al 2011	Instrumental ADL	60 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	2016	Mean difference	0.00	1.00	N/A	NS

Table 101: TRANSFUSION THRESHOLD- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carson, J. L. 2015	Moderate	Mortality (Total)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.06(0.96,1.18)	NS
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Cardiovascular disease)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.03(0.83,1.29)	NS
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Cancer)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.11(0.76,1.61)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Infection)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.11(0.72,1.72)	NS
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Stroke)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	0.90(0.54,1.51)	NS
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Dementia)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.08(0.75,1.56)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Pulmonary)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.00(0.60,1.67)	NS
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Other)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	1.17(0.85,1.59)	NS
Carson, J. L. 2015	Moderate	Mortality (Mortality due to Unknown)	Postop 3 yrs	Liberal transfusion: Patients received blood transfusion to maintainhaemoglobin level at 100 g/L or higher	Restrictive transfusion: Patients received blood transfusion whenhaemoglobin level was lower than 80 g/L or if they had symptoms ofanaemia	RR	0.72(0.23,2.25)	NS
Gregersen, M. 2015	Moderate	Mortality	Postop 1 yrs	Restrictive strategy: Restrictive RBC strategy (Hb < 9.7 g/dL, 6 mmol/L)	Liberal strategy: Liberal RBC transfusion strategy (Hb < 11.3 g/dL, 7mmol/L)	RR	1.73(0.79,3.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2015	Moderate	State of frailty	Postop 1 yrs	Restrictive strategy: Restrictive RBC strategy (Hb < 9.7 g/dL, 6 mmol/L)	Liberal strategy: Liberal RBC transfusion strategy (Hb < 11.3 g/dL, 7mmol/L)	Author Reported - p>.05	N/A	NS
Gregersen, M. 2016	High	Postoperative RBC* units	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	Author Reported - p<.05	N/A	
Gregersen, M. 2016	High	Length of hospital stay Median days (IQR)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	Author Reported - p>.05	N/A	NS
Gregersen, M. 2016	High	Discharged from OD† to (%) Home	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.78(0.62,1.00)	Liberal strategy
Gregersen, M. 2016	High	Discharged from OD† to Geriatric Department	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.24(0.96,1.59)	NS
Gregersen, M. 2016	High	Discharged from OD† to Another Department	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.62(0.39,6.65)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2016	High	Discharged from OD† to Dead	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	3.89(0.44,34.37)	NS
Gregersen, M. 2016	High	Follow-up (IQR) - Telephone consultation	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	Author Reported - p>.05	N/A	NS
Gregersen, M. 2016	High	Follow-up (IQR) - Home visit	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	Author Reported - p<.05	N/A	
Gregersen, M. 2016	High	Fluid therapy‡ (%)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.89(0.74,1.08)	NS
Gregersen, M. 2016	High	Fluid therapy‡ (%) - Liter (IQR)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	Author Reported - p>.05	N/A	NS
Gregersen, M. 2016	High	Iron therapy (tablets) (%)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.00(0.88,1.14)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gregersen, M. 2016	High	Antibiotic treatment (%)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.01(0.90,1.12)	NS
Gregersen, M. 2016	High	Osteoporosis treatment (%)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.05(0.82,1.34)	NS
Gregersen, M. 2016	High	Medication adjustment**	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	0.99(0.83,1.18)	NS
Gregersen, M. 2016	High	Time to discontinuation of strong pain killers (days)	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.17(0.61,2.22)	NS
Gregersen, M. 2016	High	Mortality	Postop 30days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.70(0.87,3.33)	NS
Gregersen, M. 2016	High	Mortality (Intention to treat)	Postop 90days	Restrictive strategy: Restrictive RBC transfusion strategy (Hb <9.7 g/dL;6 mmol/L)	Liberal strategy: Liberal strategy (Hb <11.3 g/dL; 7 mmol/L)	RR	1.30(0.86,1.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Memorial Delirium Assessment Scale, Mean (SD) (Post-rand day 1)	Postop 1 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	0.1 (-1.60, 1.80)	NS
Gruber-Baldini, A. L. 2013	Moderate	Memorial Delirium Assessment Scale, Mean (SD) (Post-rand day 2)	Postop 2 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	0.5 (-1.79, 2.79)	NS
Gruber-Baldini, A. L. 2013	Moderate	Memorial Delirium Assessment Scale, Mean (SD) (Post-rand day 3)	Postop 3 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	0.3 (-2.34, 2.94)	NS
Gruber-Baldini, A. L. 2013	Moderate	Memorial Delirium Assessment Scale, Mean (SD) (Post-rand day 4)	Postop 4 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	2 (-1.07, 5.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Memorial Delirium Assessment Scale, Mean (SD) (Post-rand day 5)	Postop 5 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	-2.5 (-6.63, 1.63)	NS
Gruber-Baldini, A. L. 2013	Moderate	Confusion Assessment Method, n (% delirium) (Post-rand day 1)	Postop 1 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	1.33(0.79,2.23)	NS
Gruber-Baldini, A. L. 2013	Moderate	Confusion Assessment Method, n (% delirium) (Post-rand day 2)	Postop 2 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.78(0.40,1.53)	NS
Gruber-Baldini, A. L. 2013	Moderate	Confusion Assessment Method, n (% delirium) (Post-rand day 3)	Postop 3 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.62(0.21,1.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Confusion Assessment Method, n (% delirium) (Post-rand day 4)	Postop 4 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	2.00(0.22,18.33)	NS
Gruber-Baldini, A. L. 2013	Moderate	Confusion Assessment Method, n (% delirium) (Post-rand day 5)	Postop 5 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RD	-0.20(-0.55,0.15)	NS
Gruber-Baldini, A. L. 2013	Moderate	Hemoglobin value, mean (std. dev.) (Post-rand day 1)	Postop 1 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	-1.4 (-1.74, -1.06)	Liberal strategy
Gruber-Baldini, A. L. 2013	Moderate	Hemoglobin value, mean (std. dev.) (Post-rand day 2)	Postop 2 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	-1.7 (-2.00, -1.40)	Liberal strategy

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Hemoglobin value, mean (std. dev.) (Post-rand day 3)	Postop 3 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	-2.1 (-2.38, -1.82)	Liberal strategy
Gruber-Baldini, A. L. 2013	Moderate	Hemoglobin value, mean (std. dev.) (Post-rand day 4)	Postop 4 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	-1.5 (-1.80, -1.20)	Liberal strategy
Gruber-Baldini, A. L. 2013	Moderate	Hemoglobin value, mean (std. dev.) (Post-rand day 5)	Postop 5 days	Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	-1.6 (-1.95, -1.25)	Liberal strategy
Gruber-Baldini, A. L. 2013	Moderate	Hospital Length of Stay, mean (std. dev.)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Mean Difference	0.1 (-1.16, 1.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Number of units of blood transfused post-randomization None (1 unit)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.75(0.47,1.18)	NS
Gruber-Baldini, A. L. 2013	Moderate	Number of units of blood transfused post-randomization None (2 units)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.34(0.17,0.68)	Restrictive strategy
Gruber-Baldini, A. L. 2013	Moderate	Number of units of blood transfused post-randomization None (3 units)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RD	-0.12(-0.20,-0.04)	Restrictive strategy
Gruber-Baldini, A. L. 2013	Moderate	Number of units of blood transfused post-randomization None (4 units)		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	RR	0.46(0.09,2.42)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Gruber-Baldini, A. L. 2013	Moderate	Total units of blood transfused post-randomization		Restrictive strategy: Restrictive: received transfusions if developedsymptoms of anemia or hemoglobin fell below 8 g/dL	Liberal strategy: Liberal: received one unit of packed red blood cellsand as much blood as needed to maintain hemoglobin >10 g/dL	Author Reported	N/A	NS
Parker, M. J. 2013	Moderate	Haemoglobin g/dl (Mean haemoglobin at 6 weeks)	6 wks	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	Author Reported - p>.05	pvalue (-7.50,2.10)	NS
Parker, M. J. 2013	Moderate	Mobility score change (Mean change in mobility score)	8 wks	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	Author Reported - p>.05	pvalue (-1.20,0.42)	NS
Parker, M. J. 2013	Moderate	Orthopaedic ward stay (days) (Orthopaedic ward stay (days))	3 wks	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	Author Reported - p>.05	pvalue (-3.20,5.00)	NS
Parker, M. J. 2013	Moderate	Hospital stay (Total hospital stay (days))	3 wks	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	Author Reported - p>.05	pvalue (-4.80,7.90)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parker, M. J. 2013	Moderate	Discharged to residence (Discharged to original residence)	Postop	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	1.06(0.93,1.21)	NS
Parker, M. J. 2013	Moderate	Mortality (Died by 30 days from surgery)	30 days	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	0.60(0.15,2.44)	NS
Parker, M. J. 2013	Moderate	Mortality (Died by 90 days from surgery)	90 days	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	0.91(0.40,2.04)	NS
Parker, M. J. 2013	Moderate	Mortality (Died by 120 days from surgery)	120 days	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	1.18(0.56,2.51)	NS
Parker, M. J. 2013	Moderate	Mortality (Died by 365 days from surgery)	365 days	Restrictive strategy: No Transfusion	Liberal strategy: Transfusion to raise the haemoglobin to at least 10.0 gdl_x0002_1	RR	1.04(0.65,1.65)	NS

Table 102. TRANSFUSION THRESHOLD : Other cont

Study	Outcome	Month	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Carson et al 2011	FACIT Fatigue Scale	30 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	2016	Mean difference	0.10	0.77	N/A	NS
Carson et al 2011	FACIT Fatigue Scale	60 days	Threshold Group (10g per decileter)	Symptomatic Group or physician discression at <8 g per decileter	2016	Mean difference	-0.50	0.13	N/A	NS

Table 103: MULTIMODAL ANALGESIA- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Clemmesen C. 2018	High	Infection in first 3 postoperative days	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.71(0.48,1.05)	NS

Cooper, A. L. 2019	Moderate	Complications (Failed blocks)	1 days	Ultrasound-guided femoral nerve block (FNB): FNBs were performedusing a high frequency linear probe covered with a short sterile sheathwith non-sterile gel inside the sheath. The ultrasound machine waspositioned on the contralateral side to the fracture. The skin wasprepared using 70% alcohol + 1% chlorhexidine. Either sterile gel orthe chlorhexidine and alcohol solution were used as the ultrasoundcoupling medium at the discretion of the operator. The femoral vesselswere located in the groin skin crease in a transverse plane and theprobe moved cranially if required to ensure it was positioned craniallyto the bifurcation of the artery. The nerve was identified as anechogenic triangular region lateral to the femoral vein. A 22G × 50 mmultrasound needle with extension tubing (SonoPlex STIM; PAJUNKGmbH, Geisingen, Germany) was inserted using an in-line techniqueuntil the tip was positioned immediately adjacent to the femoral nerve.After ensuring negative aspiration for blood, a small volume injectionwas performed to ensure it was expa ding the space under the fasciailiaca. After negative aspiration, 20 mL was injected under ultrasoundvisualisation,	Ultrasound-guided fascia iliaca compartment block (FICB): FICBs wereperformed using a similar preparation and approach to the FNBtechnique (i.e. transverse in-line approach). After identification of thefemoral vessels, the ultrasound probe was slid laterally whileidentifying the psoas muscle until the most anterior position of the curveof the psoas muscle was identified. The needle was inserted andadvanced using an inplane technique until the tip was positioned at thispoint, noting the ‘pop’ through the fascia lata and fascia iliaca. A smalltest injection was made to ensure that the fluid was seen to lift thefascia iliaca and flow between the fascia and the psoas muscle. Afternegative aspiration, 20 mL was injected under ultrasound visualisation,with repeat test aspiration after 10 mL and at the end of the injection.	RR	1.39(0.56,3.45)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				with repeat test aspiration after 10 mL and at the end ofthe injection.				
Ergenoglu P. 2015	High	Hypotension	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	RR	0.89(0.40,1.99)	NS
Ergenoglu P. 2015	High	Bradycardia	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	RR	1.20(0.41,3.51)	NS
Ma Y. 2018	High	Analgesia satisfaction scores and analgesia?associated side effects. (0day)	Preop 0 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 60 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Mean Difference	-29.09 (-33.45, -24.73)	Ultrasound?guided continuous fascia iliaca compartmentblock
Ma Y. 2018	High	Nausea (%) (1 day)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 61 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma Y. 2018	High	Vomiting (%) (1 day)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 62 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	Complications (N2-N1)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 64 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	Complications (N3-N1)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 65 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma Y. 2018	High	Complications (N4-N1)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 66 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	Complications (N3-N2)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 67 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	Complications (N4-N2)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 68 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - P=0.016	N/A	Treatment 1 (1 Fascia iliaca block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moppett I. 2015	High	Number of patients developing one or more complications	Postop days	Anaesthetist-directed fluid therapy: Standard care: expedited admissionfor patients when possible;† i.v. fluids (0.9% saline) from time ofadmission untilsurgery;† orthogeriatric assessment within 48 h ofadmission withcombined orthopaedic and orthogeriatricpostoperativecare;† surgeryondedicated, scheduled orthopaedictraumalists(run daily from 09:00 to 21:00) with senior surgicalandanaesthetic care;† standardized surgical repairs: internalfixation for undisplacedintracapsular fractures; cementedhemiarthroplastyfor displaced intracapsular fractures; dynamichipscrew for extracapsular neck fractures, andintramedullarynails for reverse oblique andsubtrochantericfractures;† postoperative mobilization isattempted with all patientswithin 24 h of surgery;† all patientsreceive routine prophylactic antibiotics andthromboprophylaxis.	Pulse-contour-guided fluid optimization strategy using colloid(Gelofusine) boluses to optimize stroke volume: Targeted i.v. colloidboluses [Gelofusine; B.Braun Medical, Sheffield, UK, or Geloplasma;Fresenius Kabi, Runcorn, UK (one patient)] using invasive pulsecontour analysis continuous cardiac output monitoring to optimize SV.Boluses of 250 ml were given and the SV response was recorded. If aresponse was recorded (SV increase .10%), a further bolus was given.If no response (SV did not increase or increased ,10%), no furtherbolus was given unless the SV decreased by 10%.	RR	1.11(0.80,1.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Severe opioid-related side effect complaint (% (percentage))	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - OR=0.20, 95% CI .04, .96,p=.044, q=.048	N/A	Treatment 1 (Methylprednisolone)
Nie, H. 2015	Moderate	Delirium	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RR	3.46(1.01,11.87)	PCIA group
Phruetthiphat, O. A. 2021	HighQuality	Nausea/vomiting	3 days	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	RD	-0.10(-0.21,0.01)	NS
Phruetthiphat, O. A. 2021	HighQuality	Complications (Surgical complication Wound dehiscence)	3 days	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	RR	1.00(0.07,15.26)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Complications (Number of complications)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	-0.1 (-0.74, 0.54)	NS
Unneby, A. 2020	High	Complications (Delirium preoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.77(0.57,1.04)	NS
Unneby, A. 2020	High	Complications (Delirium postoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.07(0.92,1.25)	NS
Unneby, A. 2020	High	Complications (Delirium)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	-0.3 (-1.04, 0.44)	NS
Unneby, A. 2020	High	Complications (Pneumonia)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.90(0.45,1.80)	NS
Unneby, A. 2020	High	Complications (Urinary Tract Infection)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.98(0.74,1.29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Complications (Wound Infection)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.10(0.57,2.13)	NS
Unneby, A. 2020	High	Complications (DVT)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.03(0.07,16.35)	NS
Unneby, A. 2020	High	Complications (Pulmonary Embolism)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RD	0.01(-0.01,0.03)	NS
Unneby, A. 2020	High	Complications (Constipation)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.03(0.85,1.25)	NS
Unneby, A. 2020	High	Complications (Diarrhea)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.71(0.45,1.12)	NS
Unneby, A. 2020	High	Complications (Urinary Retention)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.73(0.46,1.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Complications (Heart Failure)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.94(0.53,1.65)	NS
Unneby, A. 2020	High	Complications (Myocardial Infarction)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.52(0.13,2.02)	NS
Unneby, A. 2020	High	Complications (Stroke)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.52(0.10,2.77)	NS
Unneby, A. 2020	High	Complications (TIA)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.03(0.07,16.35)	NS
Unneby, A. 2020	High	Complications (Anaemia)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.98(0.82,1.18)	NS
Unneby, A. 2020	High	Complications (Decubitus)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	0.99(0.73,1.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Complications (Sleep Disturbance)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.37(0.87,2.15)	NS
Unneby, A. 2020	High	Complications (Nutritional Problems)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.00(0.85,1.18)	NS
Unneby, A. 2020	High	Complications (Gastritis)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.03(0.37,2.86)	NS
Unneby, A. 2020	High	Complications (Ulcus)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.55(0.26,9.12)	NS
Unneby, A. 2020	High	Complications (Luxation)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.03(0.07,16.35)	NS
Unneby, A. 2020	High	Complications (Fracture during hospital stay)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RD	0.01(-0.01,0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Complications (Falls during hospital stay)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RR	1.03(0.62,1.71)	NS
Unneby, A. 2020	High	Complications (Documented drugs adverse effects)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	RD	0.07(0.02,0.12)	Conventional pain management
Xu L. 2020	Moderate	Total dose of anesthesia (mg)	Periop 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-75.46 (-94.50, -56.42)	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),
Xu L. 2020	Moderate	Postoperative language statement time (min)	Not Reported 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-5.09 (-7.27, -2.91)	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu L. 2020	Moderate	Wake time (min)	Periop 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-13.64 (-16.75, -10.53)	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),
Xu L. 2020	Moderate	Feel sick and vomit	Postop 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	RR	0.25(0.03,2.13)	NS
Xu L. 2020	Moderate	Respiratory depression	Postop 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	RR	0.50(0.05,5.27)	NS
Xu L. 2020	Moderate	Itching	Postop 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	RD	-0.06(-0.13,0.02)	NS
Xu L. 2020	Moderate	Total incidence (%)	Postop 0 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	RR	0.25(0.06,1.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Postoperative delirium (POD) (T1)	1 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	0.52(0.30,0.89)	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h)
Zhang W. 2020	High	Postoperative delirium (POD) (T2)	2 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	0.67(0.19,2.30)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Postoperative delirium (POD) (T3)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	0.67(0.11,3.92)	NS
Zhang W. 2020	High	Postoperative delirium (POD) (Total)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	0.56(0.34,0.90)	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Intraoperative adverse events (Tachycardia)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	0.90(0.38,2.14)	NS
Zhang W. 2020	High	Intraoperative adverse events (Bradycardia)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	1.11(0.62,1.99)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Intraoperative adverse events (Hypertension)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	1.38(0.76,2.49)	NS
Zhang W. 2020	High	Intraoperative adverse events (Hypotension)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	RR	1.25(0.51,3.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Complications (Nausea)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RR	0.67(0.11,3.88)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Complications (Vomiting)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RR	0.13(0.02,0.98)	Femoral obturator nerve block (FONB) - (ultrasound-guided) .FONB was also performed while the patients were in thesupine position, and the probe was placed in the sameposition as with the FICB. The

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Complications (Vertigo)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RD	0.01(-0.01,0.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Complications (Drowsiness)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Complications (Itch)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Complications (Urinary)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RD	0.00(0.00,0.00)	NS

Table 104: MULTIMODAL ANALGESIA- Adverse Events cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Matot et al 2003	Cardiac Events	Preop	Epidural Group	Control	68	% risk difference	-20.59	0.00	N/A	Favors Epidural
Matot et al 2003	Cardiac Events	Postop	Epidural Group	Control	68	Risk ratio	0.50	0.40	N/A	NS
Matot et al 2003	Pre-op death	Preop	Epidural Group	Control	68	% risk difference	-11.8	0.00	N/A	Favors Epidural
Kang et al 2013	Complications: Nausea	Discharge	analgesic and perioperative cocktail	Control	82	Risk ratio	0.79	0.62	N/A	NS
Kang et al 2013	Complications: Vomiting	Discharge	analgesic and perioperative cocktail	Control	82	Risk ratio	0.68	0.60	N/A	NS
Kang et al 2013	Complications: Delirium	Discharge	analgesic and perioperative cocktail	Control	82	Risk ratio	0.91	0.83	N/A	NS
Kang et al 2013	Mortality	Discharge	analgesic and perioperative cocktail	Control	82	Risk ratio	0.91	0.94	N/A	NS
Kang et al 2013	ICU Admission	Discharge	analgesic and perioperative cocktail	Control	82	Risk ratio	1.36	0.73	N/A	NS

Table 105: MULTIMODAL ANALGESIA- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Clemmesen C. 2018	High	Cumulative CAM-S score, postoperative day 3	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.49(0.05,5.27)	NS
Nie, H. 2015	Moderate	ASAS score of 1 (ASAS score of 1 - American Society ofAnesthesiologists score)	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RR	3.12(0.34,29.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	ASAS score of 2 (ASAS score of 2 - American Society ofAnesthesiologists score)	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RR	0.67(0.44,1.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	ASAS score of 3 (ASAS score of 3 - American Society ofAnesthesiologists score)	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RR	1.39(0.91,2.10)	NS
Rowlands, M. 2018	Moderate	Cumulated Ambulation Score	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	0.1 (-1.19, 1.39)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	SPMSQ category on admission to hospital (Category 0-2)	0 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	1.18(0.58,2.39)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	SPMSQ category on admission to hospital (Category 3-5)	0 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	0.72(0.29,1.81)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	SPMSQ category on admission to hospital (Category 6-7)	0 days	Ropivacaine: The medication used in the study was either 30ml ofropivacaine 2mg/ml (active substance) or 30 ml of isotonic saline(placebo). The FICB was administered to the affected hip by aperpendicular injection with a two-pop technique as a complement topreoperative analgesia by the orthopaedic surgeon who examined thepatient. The insertion point was identified by drawing a line between thespina iliaca anterior superior and os pubis, 1 cm lateral to theconjunction of the two thirds closest to the spina iliaca anterior superior.The insertion was made with a regular needle for intramuscularinjections by loss of resistance when passing first the fascia lata andthen the fascia iliaca (two pops). The investigation fluid was theninjected [28]. Thirty-four physicians performed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	0.65(0.26,1.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	SPMSQ category on admission to hospital (Category 8-10)	0 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	1.13(0.82,1.56)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	Postoperative SPMSQ category (Category 0-2)	1 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	1.17(0.66,2.09)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	Postoperative SPMSQ category (Category 3-5)	1 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	0.46(0.09,2.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	Postoperative SPMSQ category (Category 6-7)	1 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	1.58(0.67,3.76)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	Postoperative SPMSQ category (Category 8-10)	1 days	Ropivacaine: The FICB was performed in accordance with Dalen'stechnique and administered as a complement to regular analgesia [28].The medication used in the study was either 30ml of ropivacaine2mg/ml (active substance) or 30 ml of isotonic saline (placebo). TheFICB was administered to the affected hip by a perpendicular injectionwith a two-pop technique as a complement to preoperative analgesiaby the orthopaedic surgeon who examined the patient. The insertionpoint was identified by drawing a line between the spina iliaca anteriorsuperior and os pubis, 1 cm lateral to the conjunction of the two thirdsclosest to the spina iliaca anterior superior. The insertion was madewith a regular needle for intramuscular injections by loss of resistancewhen passing first the fascia lata and then the fascia iliaca (two pops).The investigation fluid was then injected [28]. Thirty-four physiciansperformed the FICB.	Placebo saline: 30 ml of isotonic saline (placebo).	RR	0.87(0.62,1.22)	NS
Xu L. 2020	Moderate	MMSE	Postop 1 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	2.27 (., .)	NS
Xu L. 2020	Moderate	MMSE	Postop 3 days	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-0.01 (-0.42, 0.40)	NS
Zhang J. 2019	Moderate	Self-pain scores	2 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Author Reported - p<.05	N/A	Treatment 1 (Intervention group)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang J. 2019	Moderate	Self-pain scores	2 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Author Reported - p<.05	N/A	Treatment 1 (Intervention group)
Zhang J. 2019	Moderate	Self-pain scores	2 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Author Reported - p<.05	N/A	Treatment 1 (Intervention group)

Zhou Y. 2019	High	ADL score (Postoperative activity of daily living (ADL))	0 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and	Mean Difference	1.9 (-0.49, 4.29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	ADL score (Postoperative activity of daily living (ADL))	30 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and	Mean Difference	1.7 (-1.95, 5.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Table 106: MULTIMODAL ANALGESIA- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Walking greater than 70 feet in 2 minutes on POD 3 ((in feet))	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Ability to walk beyond a bedside chair by POD 3 ((%) - percentage)	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Walking and stair climbing ability (Mean FIM locomotion scores)	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)

Table 107: MULTIMODAL ANALGESIA Function cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Kang et al 2013	Postoperative walking activity (Koval)	Discharge	analgesic and intraoperative periarticular injections	Control	82	Mean difference	0.00	-	p>.05	NS
Kang et al 2013	Hospital Stay Length (days)	Discharge	analgesic and intraoperative periarticular injections	Control	82	Mean difference	-0.10	-	p>.05	NS
Kang et al 2013	Satisfaction Score	Discharge	analgesic and intraoperative periarticular injections	Control	82	Mean difference	1.10	-	0.016	Favors Treatment

Table 108: MULTIMODAL ANALGESIA- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Aprato A. 2018	High	Preoperative Systemic Analgesia (Oxycodone administration (% ofpatients))	48 hrs	FICB	IAHI	RR	2.55(1.60,4.08)	IAHI
Aprato A. 2018	High	Preoperative Systemic Analgesia (Dose of oxycodone per patient (mg)	48 hrs	FICB	IAHI	Author Reported - p<.0001	N/A	
Clemmesen C. 2018	High	Postoperative delirium (single day CAM-S ? 5)	1 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.52(0.26,1.02)	NS
Clemmesen C. 2018	High	Cumulative CAS by postoperative day 3	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.98(0.42,2.30)	NS
Clemmesen C. 2018	High	Independent mobility, cumulative CAS > 9 by postoperative day 3	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	1.03(0.64,1.66)	NS
Clemmesen C. 2018	High	Cumulative VRS fatigue by postoperative day 3	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.82(0.26,2.54)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Clemmesen C. 2018	High	Antipsychotic drug administered in first 3 postoperative days	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.76(0.31,1.92)	NS
Clemmesen C. 2018	High	Length of postoperative inpatient stay; days	0 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.87(0.36,2.11)	NS
Clemmesen C. 2018	High	Physiotherapy completion (On postoperative day 1)	1 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	1.03(0.84,1.27)	NS
Clemmesen C. 2018	High	Physiotherapy completion (On postoperative day 2)	2 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	1.05(0.86,1.29)	NS
Clemmesen C. 2018	High	Physiotherapy completion (On postoperative day 3)	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	1.03(0.84,1.25)	NS
Clemmesen C. 2018	High	Mortality (30 day - mortality)	30 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.98(0.26,3.75)	NS
Clemmesen C. 2018	High	Mortality (90 day - mortality)	90 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.98(0.37,2.63)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ergenoglu P. 2015	High	Heart rate ((SBP, DBP, SpO2))	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	Author Reported - p>.005	N/A	NS
Ergenoglu P. 2015	High	Time to achieveBIS ? 80 (min)	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	Mean Difference	2.57 (2.01, 3.13)	Group control (Group C): Saline infusion for premedi-cation,midazolam 0.02 mg/kg; spinal block (hyperbaricbupivacaine0.5%, 12.5 mg, n = 30).
Ergenoglu P. 2015	High	Time to reach toOAA/S score 4(min)	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	Mean Difference	1.25 (0.91, 1.59)	Group control (Group C): Saline infusion for premedi-cation,midazolam 0.02 mg/kg; spinal block (hyperbaricbupivacaine0.5%, 12.5 mg, n = 30).

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ergenoglu P. 2015	High	Propofol dose forBIS ? 80 (mg)	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	Mean Difference	-37.17 (-39.26, -35.08)	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02mg/kg; spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n= 30).
Ergenoglu P. 2015	High	Total propofolconsumption (mg)	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	Mean Difference	-115 (-134.72, -95.28)	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02mg/kg; spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n= 30).

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ergenoglu P. 2015	High	Recovery time(BIS ? 90) (min)	1 days	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02 mg/kg;spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n = 30).	Group control (Group C): Saline infusion for premedi-cation, midazolam0.02 mg/kg; spinal block (hyperbaricbupivacaine 0.5%, 12.5 mg, n =30).	Mean Difference	-9.43 (-10.28, -8.58)	Group DEX (Group D): 0.5 _x0002_g/kg/10 mindexmedetomidineinfusion for premedication, midazolam 0.02mg/kg; spinalblock (hyperbaric bupivacaine 0.5%, 12.5 mg, n= 30).
Ma Y. 2018	High	Mortality (2 day)	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 63 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	RD	-0.07(-0.14,0.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moppett I. 2015	High	Time until medically fit for discharge ((days))	Postop days	Anaesthetist-directed fluid therapy: Standard care: expedited admissionfor patients when possible;† i.v. fluids (0.9% saline) from time ofadmission untilsurgery;† orthogeriatric assessment within 48 h ofadmission withcombined orthopaedic and orthogeriatricpostoperativecare; † surgeryondedicated, scheduled orthopaedictraumalists(run daily from 09:00 to 21:00) with senior surgicalandanaesthetic care;† standardized surgical repairs: internalfixation for undisplacedintracapsular fractures; cementedhemiarthroplastyfor displaced intracapsular fractures; dynamichipscrew for extracapsular neck fractures, andintramedullarynails for reverse oblique andsubtrochantericfractures;† postoperative mobilization isattempted with all patientswithin 24 h of surgery;† all patientsreceive routine prophylactic antibiotics andthromboprophylaxis.	Pulse-contour-guided fluid optimization strategy using colloid(Gelofusine) boluses to optimize stroke volume: Targeted i.v. colloidboluses [Gelofusine; B.Braun Medical, Sheffield, UK, or Geloplasma;Fresenius Kabi, Runcorn, UK (one patient)] using invasive pulsecontour analysis continuous cardiac output monitoring to optimize SV.Boluses of 250 ml were given and the SV response was recorded. If aresponse was recorded (SV increase .10%), a further bolus was given.If no response (SV did not increase or increased ,10%), no furtherbolus was given unless the SV decreased by 10%.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moppett I. 2015	High	Overall length of stay ((days))	Postop days	Anaesthetist-directed fluid therapy: Standard care: expedited admissionfor patients when possible;† i.v. fluids (0.9% saline) from time ofadmission untilsurgery;† orthogeriatric assessment within 48 h ofadmission withcombined orthopaedic and orthogeriatricpostoperativecare; † surgeryondedicated, scheduled orthopaedictraumalists(run daily from 09:00 to 21:00) with senior surgicalandanaesthetic care;† standardized surgical repairs: internalfixation for undisplacedintracapsular fractures; cementedhemiarthroplastyfor displaced intracapsular fractures; dynamichipscrew for extracapsular neck fractures, andintramedullarynails for reverse oblique andsubtrochantericfractures;† postoperative mobilization isattempted with all patientswithin 24 h of surgery;† all patientsreceive routine prophylactic antibiotics andthromboprophylaxis.	Pulse-contour-guided fluid optimization strategy using colloid(Gelofusine) boluses to optimize stroke volume: Targeted i.v. colloidboluses [Gelofusine; B.Braun Medical, Sheffield, UK, or Geloplasma;Fresenius Kabi, Runcorn, UK (one patient)] using invasive pulsecontour analysis continuous cardiac output monitoring to optimize SV.Boluses of 250 ml were given and the SV response was recorded. If aresponse was recorded (SV increase .10%), a further bolus was given.If no response (SV did not increase or increased ,10%), no furtherbolus was given unless the SV decreased by 10%.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moppett I. 2015	High	Postoperative length of stay ((days))	Postop days	Anaesthetist-directed fluid therapy: Standard care: expedited admissionfor patients when possible;† i.v. fluids (0.9% saline) from time ofadmission untilsurgery;† orthogeriatric assessment within 48 h ofadmission withcombined orthopaedic and orthogeriatricpostoperativecare; † surgeryondedicated, scheduled orthopaedictraumalists(run daily from 09:00 to 21:00) with senior surgicalandanaesthetic care;† standardized surgical repairs: internalfixation for undisplacedintracapsular fractures; cementedhemiarthroplastyfor displaced intracapsular fractures; dynamichipscrew for extracapsular neck fractures, andintramedullarynails for reverse oblique andsubtrochantericfractures;† postoperative mobilization isattempted with all patientswithin 24 h of surgery;† all patientsreceive routine prophylactic antibiotics andthromboprophylaxis.	Pulse-contour-guided fluid optimization strategy using colloid(Gelofusine) boluses to optimize stroke volume: Targeted i.v. colloidboluses [Gelofusine; B.Braun Medical, Sheffield, UK, or Geloplasma;Fresenius Kabi, Runcorn, UK (one patient)] using invasive pulsecontour analysis continuous cardiac output monitoring to optimize SV.Boluses of 250 ml were given and the SV response was recorded. If aresponse was recorded (SV increase .10%), a further bolus was given.If no response (SV did not increase or increased ,10%), no furtherbolus was given unless the SV decreased by 10%.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Moppett I. 2015	High	Postoperative time until medically fit for discharge ((days))	Postop days	Anaesthetist-directed fluid therapy: Standard care: expedited admissionfor patients when possible;† i.v. fluids (0.9% saline) from time ofadmission untilsurgery;† orthogeriatric assessment within 48 h ofadmission withcombined orthopaedic and orthogeriatricpostoperativecare; † surgeryondedicated, scheduled orthopaedictraumalists(run daily from 09:00 to 21:00) with senior surgicalandanaesthetic care;† standardized surgical repairs: internalfixation for undisplacedintracapsular fractures; cementedhemiarthroplastyfor displaced intracapsular fractures; dynamichipscrew for extracapsular neck fractures, andintramedullarynails for reverse oblique andsubtrochantericfractures;† postoperative mobilization isattempted with all patientswithin 24 h of surgery;† all patientsreceive routine prophylactic antibiotics andthromboprophylaxis.	Pulse-contour-guided fluid optimization strategy using colloid(Gelofusine) boluses to optimize stroke volume: Targeted i.v. colloidboluses [Gelofusine; B.Braun Medical, Sheffield, UK, or Geloplasma;Fresenius Kabi, Runcorn, UK (one patient)] using invasive pulsecontour analysis continuous cardiac output monitoring to optimize SV.Boluses of 250 ml were given and the SV response was recorded. If aresponse was recorded (SV increase .10%), a further bolus was given.If no response (SV did not increase or increased ,10%), no furtherbolus was given unless the SV decreased by 10%.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Less likelihood to have a physical therapy session missed or shortened	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)
Morrison R. 2016	High	Need of parenteral morphine sulfate equivalents (mg/hour)	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Delirium rates (% (percentage))	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p>.05	N/A	NS
Nie, H. 2015	Moderate	Duration of hospital stay, days	3 wks	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Mean Difference	1.5 (1.04, 1.96)	PCIA group
Nie, H. 2015	Moderate	Blood loss ((mL))	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Mean Difference	-11 (-21.25, -0.75)	FIB group

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	Wound length, cm ((cm))	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Mean Difference	-0.1 (-0.22, 0.02)	NS
Nie, H. 2015	Moderate	Satisfaction ((%))	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p>.05	N/A	NS
Nie, H. 2015	Moderate	Postoperative nausea and vomiting ((PONV))	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RD	-0.11(-0.20,-0.03)	FIB group

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	Pruritus	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RD	-0.09(-0.17,-0.02)	FIB group
Nie, H. 2015	Moderate	Additional analgesia required	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	RR	0.94(0.59,1.51)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Opioid requirement (mg of morphine)	0 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	3.578 (1.45, 5.70)	Quadratus lumborum block (ultrasound-guided). All patientswere monitored (NIBP, ECG and pulsioximetry) andintravenous peripheral access was placed; none werepremedicated. An ultrasound scanner was

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Opioid requirement (mg of morphine)	24 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	7.188 (3.37, 11.00)	Quadratus lumborum block (ultrasound-guided). All patientswere monitored (NIBP, ECG and pulsioximetry) andintravenous peripheral access was placed; none werepremedicated. An ultrasound scanner was

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Motor block	0 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Motor block	6 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Motor block	12 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Motor block	18 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Motor block	24 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Sensory block	0 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Sensory block	6 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Sensory block	12 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Sensory block	18 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Sensory block	24 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Author Reported - p>.05	N/A	NS
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	8 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-2.8 (-4.26, -1.34)	Periarticular injection (PAI) group
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	16 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.27 (-2.66, 0.12)	NS
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	24 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.2 (-2.46, 0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	36 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-0.97 (-2.06, 0.12)	NS
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	48 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-0.26 (-1.43, 0.91)	NS
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	60 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-0.33 (-0.91, 0.25)	NS
Phruetthiphat, O. A. 2021	HighQuality	Morphine Consumption (Milligrams)	72 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	0.03 (-0.69, 0.75)	NS
Phruetthiphat, O. A. 2021	HighQuality	Hospital stay (d)	3 days	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Author Reported - p>.05	N/A	NS
Phruetthiphat, O. A. 2021	HighQuality	Satisfaction score	3 days	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Author Reported - p>.05	N/A	NS
Phruetthiphat, O. A. 2021	HighQuality	Discharge ambulation (Dependent)	3 days	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	RR	0.85(0.45,1.58)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Temelkovska-Stevanovska,M. 2014	Moderate	VDS at rest ((Verbal descriptive scale) at rest)	1 hrs	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p>.05	N/A	NS
Temelkovska-Stevanovska,M. 2014	Moderate	VDS at rest ((Verbal descriptive scale) at rest)	2 hrs	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Temelkovska-Stevanovska,M. 2014	Moderate	VDS at rest ((Verbal descriptive scale) at rest)	12 hrs	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p>.05	N/A	NS
Temelkovska-Stevanovska,M. 2014	Moderate	VDS at rest ((Verbal descriptive scale) at rest)	24 hrs	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p<.05	N/A	Treatment 1 (FNB group)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Temelkovska-Stevanovska,M. 2014	Moderate	VDS at rest ((Verbal descriptive scale) at rest)	36 hrs	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p<.05	N/A	Treatment 1 (FNB group)
Temelkovska-Stevanovska,M. 2014	Moderate	VDS at rest ((Verbal descriptive scale) at rest)	48 hrs	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p<.05	N/A	Treatment 1 (FNB group)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Temelkovska-Stevanovska,M. 2014	Moderate	Analgesic agent needed (Time of the first additionally introducedanalgesic agent (hours))	Postop 1 days	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Mean Difference	0.6 (0.13, 1.07)	FIC group – patients with a single fascia iliaca compartmentblock
Temelkovska-Stevanovska,M. 2014	Moderate	Patients Needing Additional Analgesia with Tramadol (Additionally applied tramadol (First postoperative day))	Postop 1 days	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	RR	1.00(0.32,3.10)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Temelkovska-Stevanovska,M. 2014	Moderate	Patients Needing Additional Analgesia with Tramadol (Additionally applied tramadol (Second postoperative day))	Postop 2 days	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	RR	-0.77(-0.92,-0.62)	FNB group – patients with continuous femoral nerve block
Temelkovska-Stevanovska,M. 2014	Moderate	Nausea and dizziness	Postop 2 days	FNB group – patients with continuous femoral nerve block: Contiplex DSet: 50 mm long, 18 G insulated stimulation needles with PTFEcatheter guide and a peripheral nerve stimulator were used to performthis block, while the patient was in a supine position. Bupivacaine of0.25%, 20 ml, was applied after negative aspiration of blood. Constantinfusion of bupivacaine of 0.25% was continued with 0.1 ml/kg/h duringthe next 48 hours.	FIC group –patients with a single fascia iliaca compartment block: AStimuplex D 50 mm long, top blunted "bullet – type" 22 G needle wasused for performing this block. A peripheral nerve stimulator was notused. The patient was again in a supine position. Bupivacaine of0.25%, 40 ml, was applied, once, after previously performed aspirationtest.	Author Reported - p<.05	N/A	Treatment 1 (FNB group)
Unneby A. 2020	Moderate	Time of surgery (minutes)	Periop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-5.8 (-15.99, 4.39)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	Saturation, mean	Preop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-0.5 (-1.22, 0.22)	NS
Unneby A. 2020	Moderate	Bleeding (ml), mean	Preop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	7.3 (-69.26, 83.86)	NS
Unneby A. 2020	Moderate	Blood pressure (baseline), mean	Preop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	8.2 (1.32, 15.08)	Conventional pain management (with opioid use if needed)
Unneby A. 2020	Moderate	Blood pressure (lowest), mean	Preop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1.8 (-2.51, 6.11)	NS
Unneby A. 2020	Moderate	Blood pressure (highest), mean	Preop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	6.1 (-0.34, 12.54)	NS
Unneby A. 2020	Moderate	Blood pressure (difference) ?, mean	Preop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	4.2 (-2.23, 10.63)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	MMSE, mean (±SD)	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1.6 (-0.67, 3.87)	NS
Unneby A. 2020	Moderate	GDS, mean	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0.3 (-0.44, 1.04)	NS
Unneby A. 2020	Moderate	PGCMS,	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-0.1 (-1.06, 0.86)	NS
Unneby A. 2020	Moderate	VAS mm 3-5 days postoperative,	Postop 5 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	4.4 (-2.39, 11.19)	NS
Unneby A. 2020	Moderate	Length of hospital stay, days,	Postop 25days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1.6 (-2.73, 5.93)	NS
Unneby A. 2020	Moderate	Number of complications	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-0.1 (-0.74, 0.54)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	Delirium preoperative	Periop 0 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-15 (-26.30, -3.70)	Femoral nerve block
Unneby A. 2020	Moderate	Delirium postoperative	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	3 (-15.74, 21.74)	NS
Unneby A. 2020	Moderate	Delirium	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-0.3 (-1.04, 0.44)	NS
Unneby A. 2020	Moderate	Pneumonia	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-2 (-5.03, 1.03)	NS
Unneby A. 2020	Moderate	Urinary Tract Infection	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-3 (-14.65, 8.65)	NS
Unneby A. 2020	Moderate	Wound Infection	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1 (-2.36, 4.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	DVT	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0 (-0.22, 0.22)	NS
Unneby A. 2020	Moderate	Pulmonary Embolism	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1 (0.84, 1.16)	Conventional pain management (with opioid use if needed)
Unneby A. 2020	Moderate	Constipation	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0 (-16.30, 16.30)	NS
Unneby A. 2020	Moderate	Diarrhea	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-11 (-17.47, -4.53)	Femoral nerve block
Unneby A. 2020	Moderate	Urinary Retention	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-10 (-16.31, -3.69)	Femoral nerve block
Unneby A. 2020	Moderate	Heart Failure	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-2 (-6.33, 2.33)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	Myocardial Infarction	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-3 (-4.01, -1.99)	Femoral nerve block
Unneby A. 2020	Moderate	Stroke	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-2 (-2.67, -1.33)	Femoral nerve block
Unneby A. 2020	Moderate	TIA	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0 (-0.22, 0.22)	NS
Unneby A. 2020	Moderate	Anaemia	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-4 (-20.87, 12.87)	NS
Unneby A. 2020	Moderate	Decubitus	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-2 (-12.37, 8.37)	NS
Unneby A. 2020	Moderate	Sleep Disturbance	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	8 (1.63, 14.37)	Conventional pain management (with opioid use if needed)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	Nutritional Problems	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	-3 (-21.06, 15.06)	NS
Unneby A. 2020	Moderate	Gastritis	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0 (-1.52, 1.52)	NS
Unneby A. 2020	Moderate	Ulcus	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1 (0.44, 1.56)	Conventional pain management (with opioid use if needed)
Unneby A. 2020	Moderate	Luxation	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0 (-0.22, 0.22)	NS
Unneby A. 2020	Moderate	Fracture during hospital stay	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	1 (0.84, 1.16)	Conventional pain management (with opioid use if needed)
Unneby A. 2020	Moderate	Falls during hospital stay	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	0 (-5.29, 5.29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2020	Moderate	Documented drugs adverse effects	Postop 7 days	Femoral nerve block: FNB and opioids if required. Forty milliliters oflocal anesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management (with opioid use if needed):conventional pain management using opioids if required	Mean Difference	8 (6.71, 9.29)	Conventional pain management (with opioid use if needed)
Unneby, A. 2020	High	Time of surgery (minutes)	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	-5.8 (-15.99, 4.39)	NS
Unneby, A. 2020	High	Saturation	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	-0.5 (-1.22, 0.22)	NS
Unneby, A. 2020	High	Bleeding (ml)	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	7.3 (-69.26, 83.86)	NS
Unneby, A. 2020	High	Blood pressure (baseline)	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	8.2 (1.32, 15.08)	Conventional pain management
Unneby, A. 2020	High	Blood pressure (lowest)	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	1.8 (-2.51, 6.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Blood pressure (highest)	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	6.1 (-0.34, 12.54)	NS
Unneby, A. 2020	High	Blood pressure (difference) ?	Periop 1 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	4.2 (-2.23, 10.63)	NS
Unneby, A. 2020	High	MMSE (Postoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	1.6 (-0.67, 3.87)	NS
Unneby, A. 2020	High	GDS (Postoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	0.3 (-0.44, 1.04)	NS
Unneby, A. 2020	High	PGCMS (Postoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	-0.1 (-1.06, 0.86)	NS
Unneby, A. 2020	High	VAS mm 3-5 days postoperative (Postoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	4.4 (-2.39, 11.19)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby, A. 2020	High	Length of hospital stay (Postoperative)	Postop 7 days	Intervention group: FNB and opioids if required. Forty milliliters of localanesthetic (levobubivacaine, 0.25%) were administered after anaspiration check.	Conventional pain management: Conventional pain management usingopioids if required	Mean Difference	1.6 (-2.73, 5.93)	NS
Wennberg P. 2019	High	Morphine (mg) (Intravenous morphine, which was given on demand)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	0.5 (-0.95, 1.95)	NS
Wennberg P. 2019	High	Morphine (mg) (Intravenous morphine, which was given on demand)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	-0.1 (-0.94, 0.74)	NS
Wennberg P. 2019	High	Morphine (mg) (Intravenous morphine, which was given on demand)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	0 (-1.64, 1.64)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu L. 2020	Moderate	Extubation time (min)	Periop	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-7.25 (-9.03, -5.47)	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),
Zhang W. 2020	High	Pro-Inflammatory Markers (IL-1b)	0 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	-0.09 (-0.26, 0.08)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Pro-Inflammatory Markers (IL-1b)	1 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	0.17 (-0.24, 0.58)	NS
Zhang W. 2020	High	Pro-Inflammatory Markers (IL-1b)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	0 (-0.31, 0.31)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Pro-Inflammatory Markers (IL-6)	0 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	0.77 (-0.58, 2.12)	NS
Zhang W. 2020	High	Pro-Inflammatory Markers (IL-6)	1 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	-16.11 (-19.42, -12.80)	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Pro-Inflammatory Markers (IL-6)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	-1.9 (-6.57, 2.77)	NS
Zhang W. 2020	High	Pro-Inflammatory Markers (TNF-a)	0 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	0.05 (-0.13, 0.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Pro-Inflammatory Markers (TNF-a)	1 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	-0.44 (-0.65, -0.23)	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h)
Zhang W. 2020	High	Pro-Inflammatory Markers (TNF-a)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) intravenously infused 30 min beforethe start of anesthesia and continuously infused at 0.3 mg/kg/h duringthe operation	NS group (injected with normal saline): Same volume of normal salinewas administered for the NS group. The medication was discontinued30 min before the end of surgery. Propofol was discontinued when theoperation was completed. Self-controlled analgesia was performedusing patient controlled intravenous analgesia and sufentanil combinedwith flurbiprofen ester immediately after the operation.	Mean Difference	-0.28 (-0.50, -0.06)	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (HR) (Before block (evaluating performance))	0 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	2 (-2.74, 6.74)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (HR) (30 min after block)	30 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	2 (-2.58, 6.58)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (HR) (Arriving the ward)	60 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	3 (-1.90, 7.90)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (MBP) (Before block (evaluating performance))	0 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	-1 (-5.58, 3.58)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (MBP) (30 min after block)	30 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	-1 (-5.12, 3.12)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (MBP) (Arriving the ward)	60 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	-1 (-5.12, 3.12)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (Sp02) (Before block (evaluating performance))	0 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	0 (-0.63, 0.63)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (Sp02) (30 min after block)	30 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	0 (-0.81, 0.81)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Vital signs (Sp02) (Arriving the ward)	60 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	Mean Difference	0 (-0.95, 0.95)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou Y. 2019	High	Analgesic drugs usage (Dosage (mg) [M (Q)] - 2.5/(2.5–2.5))	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details	RR	0.40(0.13,1.22)	NS

Table 109: MULTIMODAL ANALGESIA Other cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Mouzopoulos et al 2009	Severity of Delirium (DRSR-98)	Perioperative period	FICB Prophylaxis Group	Placebo Group	219	Mean difference	-4.27	0.00	N/A	Favors FICB Group
Mouzopoulos et al 2009	Duration of Delirium (days)	Varied	FICB Prophylaxis Group	Placebo Group	219	Mean difference	-5.75	0.00	N/A	Favors FICB Group
Mouzopoulos et al. 2009	Severity of Delirium (DRSR-98)	Postop	FICB Prophylaxis Group	Placebo	219	Mean difference	-4.27	0.00	N/A	Favors FICB
Mouzopoulos et al. 2009	Incidence of Delirium	Postop	FICB Prophylaxis Group	Placebo	219	Risk ratio	0.45	0.02	N/A	Favors FICB

Table 110: MULTIMODAL ANALGESIA- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Aprato A. 2018	High	Preoperative Pain (NRS) - Admission (Rest)	0 min	FICB	IAHI	Mean Difference	-1.17 (-2.05, -0.29)	FICB
Aprato A. 2018	High	Preoperative Pain (NRS) - Admission (Movement)	0 min	FICB	IAHI	Mean Difference	-0.01 (-0.65, 0.63)	NS
Aprato A. 2018	High	Preoperative Pain (NRS) @ 20 min (Rest)	20 min	FICB	IAHI	Mean Difference	0.28 (-0.30, 0.86)	NS
Aprato A. 2018	High	Preoperative Pain (NRS) @ 20 min (Movement)	20 min	FICB	IAHI	Mean Difference	1.34 (0.63, 2.05)	IAHI
Aprato A. 2018	High	Preoperative Pain (NRS) @ 12 hr (Rest)	12 hrs	FICB	IAHI	Mean Difference	1.06 (0.35, 1.77)	IAHI
Aprato A. 2018	High	Preoperative Pain (NRS) @ 12 hr (Movement)	12 hrs	FICB	IAHI	Mean Difference	2.62 (1.81, 3.43)	IAHI
Aprato A. 2018	High	Preoperative Pain (NRS) @ 24 hr (Rest)	24 hrs	FICB	IAHI	Mean Difference	0.45 (-0.10, 1.00)	NS
Aprato A. 2018	High	Preoperative Pain (NRS) @ 24 hr (Movement)	24 hrs	FICB	IAHI	Mean Difference	2.14 (1.38, 2.90)	IAHI
Aprato A. 2018	High	Preoperative Pain (NRS) @ 48 hr (Rest)	48 hrs	FICB	IAHI	Mean Difference	0.76 (-0.10, 1.62)	NS
Aprato A. 2018	High	Preoperative Pain (NRS) @ 48 hr (Movement)	48 hrs	FICB	IAHI	Mean Difference	1.75 (0.97, 2.53)	IAHI

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Clemmesen C. 2018	High	Pain on ambulation, VRS 3 or 4 (On postoperative day 1)	1 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	0.82(0.38,1.75)	NS
Clemmesen C. 2018	High	Pain on ambulation, VRS 3 or 4 (On postoperative day 2)	2 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	1.15(0.41,3.21)	NS
Clemmesen C. 2018	High	Pain on ambulation, VRS 3 or 4 (On postoperative day 3)	3 days	Methylprednisolone single-dose injection: 125 mgdose ofmethylprednisolone	Placebo - single-dose injection	RR	1.47(0.56,3.88)	NS

Cooper, A. L. 2019	Moderate	Reduction in pain	20 min	Ultrasound-guided femoral nerve block (FNB): FNBs were performedusing a high frequency linear probe covered with a short sterile sheathwith non-sterile gel inside the sheath. The ultrasound machine waspositioned on the contralateral side to the fracture. The skin wasprepared using 70% alcohol + 1% chlorhexidine. Either sterile gel orthe chlorhexidine and alcohol solution were used as the ultrasoundcoupling medium at the discretion of the operator. The femoral vesselswere located in the groin skin crease in a transverse plane and theprobe moved cranially if required to ensure it was positioned craniallyto the bifurcation of the artery. The nerve was identified as anechogenic triangular region lateral to the femoral vein. A 22G × 50 mmultrasound needle with extension tubing (SonoPlex STIM; PAJUNKGmbH, Geisingen, Germany) was inserted using an in-line techniqueuntil the tip was positioned immediately adjacent to the femoral nerve.After ensuring negative aspiration for blood, a small volume injectionwas performed to ensure it was expa ding the space under the	Ultrasound-guided fascia iliaca compartment block (FICB): FICBs wereperformed using a similar preparation and approach to the FNBtechnique (i.e. transverse in-line approach). After identification of thefemoral vessels, the ultrasound probe was slid laterally whileidentifying the psoas muscle until the most anterior position of the curveof the psoas muscle was identified. The needle was inserted andadvanced using an inplane technique until the tip was positioned at thispoint, noting the 'pop' through the fascia lata and fascia iliaca. A smalltest injection was made to ensure that the fluid was seen to lift thefascia iliaca and flow between the fascia and the psoas muscle. Afternegative aspiration, 20 mL was injected under ultrasound visualisation,with repeat test aspiration after 10 mL and at the end of the injection.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				fasciailiaca. After negative aspiration, 20 mL was injected under ultrasoundvisualisation, with repeat test aspiration after 10 mL and at the end ofthe injection.				

Cooper, A. L. 2019	Moderate	Initial pain score		Ultrasound-guided femoral nerve block (FNB): FNBs were performedusing a high frequency linear probe covered with a short sterile sheathwith non-sterile gel inside the sheath. The ultrasound machine waspositioned on the contralateral side to the fracture. The skin wasprepared using 70% alcohol + 1% chlorhexidine. Either sterile gel orthe chlorhexidine and alcohol solution were used as the ultrasoundcoupling medium at the discretion of the operator. The femoral vesselswere located in the groin skin crease in a transverse plane and theprobe moved cranially if required to ensure it was positioned craniallyto the bifurcation of the artery. The nerve was identified as anechogenic triangular region lateral to the femoral vein. A 22G × 50 mmultrasound needle with extension tubing (SonoPlex STIM; PAJUNKGmbH, Geisingen, Germany) was inserted using an in-line techniqueuntil the tip was positioned immediately adjacent to the femoral nerve.After ensuring negative aspiration for blood, a small volume injectionwas performed to ensure it was expa ding the space under the	Ultrasound-guided fascia iliaca compartment block (FICB): FICBs wereperformed using a similar preparation and approach to the FNBtechnique (i.e. transverse in-line approach). After identification of thefemoral vessels, the ultrasound probe was slid laterally whileidentifying the psoas muscle until the most anterior position of the curveof the psoas muscle was identified. The needle was inserted andadvanced using an inplane technique until the tip was positioned at thispoint, noting the 'pop' through the fascia lata and fascia iliaca. A smalltest injection was made to ensure that the fluid was seen to lift thefascia iliaca and flow between the fascia and the psoas muscle. Afternegative aspiration, 20 mL was injected under ultrasound visualisation,with repeat test aspiration after 10 mL and at the end of the injection.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
				fasciailiaca. After negative aspiration, 20 mL was injected under ultrasoundvisualisation, with repeat test aspiration after 10 mL and at the end ofthe injection.				
Ma Y. 2018	High	VAS pain scores at rest (prior to administration of analgesia (t0))	Pre-admission0 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 50 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	VAS pain scores at rest (1 hr after administration of analgesia (t1))	Preop 1 hrs	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 51 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma Y. 2018	High	VAS pain scores at rest (0 day in the morning of the day of surgery(before surgery; t2))	Preop 0 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 52 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p=0.023	N/A	Treatment 1 (1 Fascia iliaca block)
Ma Y. 2018	High	VAS pain scores at rest (1 day in the morning of the day after surgery(t3))	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 53 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma Y. 2018	High	VAS pain scores at rest (1 day second morning after the day of surgery(t4))	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 54 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	VAS pain scores at passive movement (prior to administration ofanalgesia (t0))	Pre-admission0 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 55 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma Y. 2018	High	VAS pain scores at passive movement (1 hr after administration ofanalgesia (t1))	Preop 1 hrs	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 56 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p<.05	N/A	Treatment 1 (1 Fascia iliaca block)
Ma Y. 2018	High	VAS pain scores at passive movement (0 day in the morning of the dayof surgery (before surgery; t2))	Preop 0 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 57 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma Y. 2018	High	VAS pain scores at passive movement (1 day in the morning of the dayafter surgery (t3))	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 58 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS
Ma Y. 2018	High	VAS pain scores at passive movement (1 day second morning after theday of surgery (t4))	Postop 1 days	Ultrasound?guided continuous fascia iliaca compartment block	Traditional oral analgesic during pre-operative waiting period: 59 mgTramadol and 500 mg paracetamol orally three times a day fromadmission to surgery. The patients in the control group were notsubjected to CFICB and were administrated with saline.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Pain @ 1 hour	1 hrs	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)
Morrison R. 2016	High	Pain @ 2 hours	2 hrs	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Pain at rest	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)
Morrison R. 2016	High	Pain with transfers	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Morrison R. 2016	High	Pain while walking	3 days	Ultrasound-guided single injection femoral nerve block (intervention):20 mL of 0.5% bupivacaine and was performed under ultrasoundguidance. Within twenty-four hours after the FNB or at the time ofsurgery, whichever was sooner, cFIB infusion catheter underultrasound guidance. A bolus of 15 mL of 0.2% ropivacaine followed bycontinuous infusion of 0.2% ropivacaine at 5 mL/hour.	Continuous fascia iliaca block: Oral and intravenous analgesic therapyat the discretion of the treating physician.	Author Reported - p<.05	N/A	Treatment 1 (Methylprednisolone)
Newman, B. 2013	Moderate	VAS score after block	2 hrs	Femoral nerve block: Insulated plexus block needle 2 cm below theinguinal ligament and 2 cm lateral to the femoral artery, eliciting aquadriceps twitch with a current of 0.4–0.6 mA using a nerve stimulator	Fascia iliaca compartment block: Levobupivacaine 0.5% was injectedafter an aspiration check. Volume of local anaesthetic solution basedon the patient's weight and was the same for both blocks: 30 ml forpatients estimated > 70 kg; 25 ml for estimated weight 50–70 kg; and20 ml for estimated weight < 50 kg.	Mean Difference	-1 (-1.95, -0.05)	Femoral nerve block

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Newman, B. 2013	Moderate	VAS pain score reduction (Reduction in mean VAS pain score)	2 hrs	Femoral nerve block: Insulated plexus block needle 2 cm below theinguinal ligament and 2 cm lateral to the femoral artery, eliciting aquadriceps twitch with a current of 0.4–0.6 mA using a nerve stimulator	Fascia iliaca compartment block: Levobupivacaine 0.5% was injectedafter an aspiration check. Volume of local anaesthetic solution basedon the patient's weight and was the same for both blocks: 30 ml forpatients estimated > 70 kg; 25 ml for estimated weight 50–70 kg; and20 ml for estimated weight < 50 kg.	Mean Difference	0.9 (-0.02, 1.82)	NS
Newman, B. 2013	Moderate	Morphine consumption (0mg Morphine consumption in 12 h after theblock)	2 hrs	Femoral nerve block: Insulated plexus block needle 2 cm below theinguinal ligament and 2 cm lateral to the femoral artery, eliciting aquadriceps twitch with a current of 0.4–0.6 mA using a nerve stimulator	Fascia iliaca compartment block: Levobupivacaine 0.5% was injectedafter an aspiration check. Volume of local anaesthetic solution basedon the patient's weight and was the same for both blocks: 30 ml forpatients estimated > 70 kg; 25 ml for estimated weight 50–70 kg; and20 ml for estimated weight < 50 kg.	RR	1.31(0.92,1.87)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Newman, B. 2013	Moderate	Morphine consumption (5mg or 10mg Morphine consumption in 12 hafter the block)	2 hrs	Femoral nerve block: Insulated plexus block needle 2 cm below theinguinal ligament and 2 cm lateral to the femoral artery, eliciting aquadriceps twitch with a current of 0.4–0.6 mA using a nerve stimulator	Fascia iliaca compartment block: Levobupivacaine 0.5% was injectedafter an aspiration check. Volume of local anaesthetic solution basedon the patient's weight and was the same for both blocks: 30 ml forpatients estimated > 70 kg; 25 ml for estimated weight 50–70 kg; and20 ml for estimated weight < 50 kg.	RR	0.98(0.58,1.67)	NS
Newman, B. 2013	Moderate	Morphine consumption (? 15 mg Morphine consumption in 12 h afterthe block)	2 hrs	Femoral nerve block: Insulated plexus block needle 2 cm below theinguinal ligament and 2 cm lateral to the femoral artery, eliciting aquadriceps twitch with a current of 0.4–0.6 mA using a nerve stimulator	Fascia iliaca compartment block: Levobupivacaine 0.5% was injectedafter an aspiration check. Volume of local anaesthetic solution basedon the patient's weight and was the same for both blocks: 30 ml forpatients estimated > 70 kg; 25 ml for estimated weight 50–70 kg; and20 ml for estimated weight < 50 kg.	RR	0.30(0.09,1.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	Pain	2 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p<.05	N/A	Treatment 1 (FIB block)
Nie, H. 2015	Moderate	Pain	4 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p<.05	N/A	Treatment 1 (FIB block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	Pain	6 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p<.05	N/A	Treatment 1 (FIB block)
Nie, H. 2015	Moderate	Pain	12 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Nie, H. 2015	Moderate	Pain	24 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p<.05	N/A	Treatment 1 (FIB block)
Nie, H. 2015	Moderate	Pain	48 hrs	FIB group: One bolus of 20 mL (body weight <50 kg), 25 mL (bodyweight 50 kg to 70 kg) or 30 mL (body weight >70 kg) 0.5% ropivacainesolution was then infused, after which an electronic pump with prefilledsolution at a concentration of 0.25% ropivacaine was connected to thecatheter. Infusion started at a speed of 0.1 mL/kg/h.	PCIA group: Patient-controlled Intravenous analgesia (PCIA) usingfentanyl for 48 h postoperatively. Fentanyl (110 ?g to 120 ?g) and 4mg tropisetron mixed with saline water for infusion for 48 h using aninfusion pump. Parameters of PCIA were set at a base infusion rate of2 mL/h and bolus application of 2 mL/15 min.	Author Reported - p<.05	N/A	Treatment 1 (FIB block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Visual analogue scale (VAS)	0 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	-0.1221 (-0.94, 0.70)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Visual analogue scale (VAS)	6 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	1.494 (0.46, 2.53)	Quadratus lumborum block (ultrasound-guided). All patientswere monitored (NIBP, ECG and pulsioximetry) andintravenous peripheral access was placed; none werepremedicated. An ultrasound scanner was

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Visual analogue scale (VAS)	12 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	3.1744 (2.28, 4.07)	Quadratus lumborum block (ultrasound-guided). All patientswere monitored (NIBP, ECG and pulsioximetry) andintravenous peripheral access was placed; none werepremedicated. An ultrasound scanner was

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Visual analogue scale (VAS)	18 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	2.5957 (1.78, 3.41)	Quadratus lumborum block (ultrasound-guided). All patientswere monitored (NIBP, ECG and pulsioximetry) andintravenous peripheral access was placed; none werepremedicated. An ultrasound scanner was

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Parras T. 2016	High	Visual analogue scale (VAS)	24 hrs	Transversus abdominis plane block posterior approach(ultrasound-guided). All patients were monitored (NIBP, ECG andpulsioximetry)and intravenous peripheral access was placed; nonewere premedicated. An ultrasound scanner was used in all cases(S-Nerve; Sonosite Iberica S.L., Madrid, Spain), with a linear transducerHFL38x (13---6 MHz) for femoral block and a curvilinear transducerC60x (5---2 MHz) for QLB. Both blocks were performed in supineposition by an anaesthetist with extensive experience in regionalblockade, using a needle-in-plane technique (22-G, 50-mm for femoraland 100-mm for QLB, Polymedic® UPC).: 10 ml of 0.25%levobupivacaine was injected lateral to the femoral artery and belowfascia lata and iliaca.	Quadratus lumborum block (ultrasound-guided). All patients weremonitored (NIBP, ECG and pulsioximetry) and intravenous peripheralaccess was placed; none were premedicated. An ultrasound scannerwas used in all cases (S-Nerve; Sonosite Iberica S.L., Madrid, Spain),with a linear transducer HFL38x (13---6 MHz) for femoral block and acurvilinear transducer C60x (5---2 MHz) for QLB. Both blocks wereperformed in supine position by an anaesthetist with extensiveexperience in regional blockade, using a needle-in-plane technique(22-G, 50-mm for femoral and 100-mm for QLB, Polymedic® UPC).: 30ml of 0.125% levobupivacaine was administered in the anterolateralaspect of the quadratus lumborum muscle.	Mean Difference	1.9039 (1.04, 2.76)	Quadratus lumborum block (ultrasound-guided). All patientswere monitored (NIBP, ECG and pulsioximetry) andintravenous peripheral access was placed; none werepremedicated. An ultrasound scanner was
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	8 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-3.2 (-4.53, -1.87)	Periarticular injection (PAI) group

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	16 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.56 (-2.63, -0.49)	Periarticular injection (PAI) group
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	24 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.83 (-2.95, -0.71)	Periarticular injection (PAI) group
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	36 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.37 (-2.49, -0.25)	Periarticular injection (PAI) group
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	48 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.1 (-2.23, 0.03)	NS
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	60 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-1.66 (-2.73, -0.59)	Periarticular injection (PAI) group
Phruetthiphat, O. A. 2021	HighQuality	VAS pain (Visual Analogue Scale)	72 hrs	Periarticular injection (PAI) group: Patients with spinal anesthesia	Non-Periarticular injection (non-PAI) group: Patients with spinalanesthesia	Mean Difference	-0.87 (-1.89, 0.15)	NS
Rowlands, M. 2018	Moderate	Cumulative Dynamic Pain Score	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.73 (-3.01, 1.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rowlands, M. 2018	Moderate	Length of stay (Length of stay)	2 wks	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	0.3 (-3.47, 4.07)	NS
Rowlands, M. 2018	Moderate	Pain on movement (Pain on movement at 30 min)	30 min	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.51 (-1.02, 0.00)	NS
Rowlands, M. 2018	Moderate	Pain on movement (Pain on movement at 60 min)	60 min	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.56 (-1.23, 0.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rowlands, M. 2018	Moderate	Pain on movement (Pain on movement at 180 min)	180 min	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.67 (-1.26, -0.08)	Intervention group (femoral nerve block)
Rowlands, M. 2018	Moderate	Pain on rest (Pain on rest at 30 min)	30 min	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.72 (-1.74, 0.30)	NS
Rowlands, M. 2018	Moderate	Pain on rest (Pain on rest at 60 min)	60 min	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-1.01 (-1.97, -0.05)	Intervention group (femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rowlands, M. 2018	Moderate	Pain on rest (Pain on rest at 180 min)	180 min	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.6 (-1.52, 0.32)	NS
Rowlands, M. 2018	Moderate	Pain on rest (Cumulative pain score at rest)	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-1.76 (-3.32, -0.20)	Intervention group (femoral nerve block)
Rowlands, M. 2018	Moderate	Delirium (Presence of delirium)	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	RD	-0.07(-0.14,-0.00)	Intervention group (femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rowlands, M. 2018	Moderate	Constipation (Presence of constipation)	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	RR	0.85(0.58,1.24)	NS
Rowlands, M. 2018	Moderate	Nausea/vomiting (Presence of nausea/vomiting)	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	RR	0.85(0.27,2.62)	NS
Rowlands, M. 2018	Moderate	Mobility (New mobility score at 30 days)	30 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.16 (-0.99, 0.67)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Rowlands, M. 2018	Moderate	EQ-5D (EuroQol EQ-5D at 30 days)	30 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.12 (-0.92, 0.68)	NS
Rowlands, M. 2018	Moderate	EQ-5D (EuroQol EQ-5D at 3 days)	3 days	Intervention group (femoral nerve block): 0.5 mL/kg of 0.25%levobupivacaine up to a maximum of 30 mL. Nerve block was thenmaintained with an infusion of 0.2% ropivacaine at 5 mL/ hour bymeans of an elastomeric pump for 48 hours after surgery.	Standard care group: Titrated intravenous morphine to a pain score of 5or less at rest (verbal rating 10-point scale) before transfer to X-ray.	Mean Difference	-0.27 (-0.82, 0.28)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (SCALE) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) (SCALE) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	Baseline 0 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (SCALE) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) (SCALE) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	2 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p=.003	N/A	Treatment 1 (Femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (SCALE) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) (SCALE) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	6 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (SCALE) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) (SCALE) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	12 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (SCALE) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) (SCALE) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	18 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (PROXY) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) - (PROXY) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	Baseline 0 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (PROXY) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) - (PROXY) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	2 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (PROXY) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) - (PROXY) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	6 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (PROXY) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) - (PROXY) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	12 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Pain at rest (PROXY) - Pain assessment at rest using self-rated andproxy VAS on admission, intervention (femoral nerve block) vs controlgroup (opioids if required). (Median (IQR) - (PROXY) - VAS = VisualAnalogue Scale. Q1–Q3 = Medians with 25th and 75th percentiles.Some patients both self-rate their pain and was assessed by the nursesas proxies. Not all patients who were unable to self-rate their pain hadcognitive impairment or dementia.)	18 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Self-rated VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	Baseline 0 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)
Unneby A. 2017	High	Self-rated VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	2 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Self-rated VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	6 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)
Unneby A. 2017	High	Self-rated VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	12 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Proxy - VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	Baseline 0 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)
Unneby A. 2017	High	Proxy - VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	2 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Unneby A. 2017	High	Proxy - VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	6 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)
Unneby A. 2017	High	Proxy - VAS pain (Median (Q1–Q3) Q1–Q3 = Medians with 25th and75th percentiles.)	12 hrs	Femoral nerve block with conventional pain management. FNB andopioids if required (intervention group, n = 129): FNB as soon aspossible after admission; insulated plexus block needle (Pajunk 1GmbH UniPlex NanoLine 22G _x0004_ 50 mm) with a nerve stimulator(Braun Stimuplex1 HNS 12). Forty millilitres of local anaesthetic(levobubivacaine, 0.25%)	Conventional pain management (with opioid use if needed)	Author Reported - p<.05	N/A	Treatment 1 (Femoral nerve block)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Uysal A. 2020	Moderate	VAS (VAS scores at the 4th hour)	Not Reported0 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	Mean Difference	1.15 (0.74, 1.56)	Femoral nerve block and nerve catheter insertion
Uysal A. 2020	Moderate	VAS (Preoperative rescue analgesic need (n))	Not Reported0 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	RD	0.16(0.05,0.26)	Femoral nerve block and nerve catheter insertion
Uysal A. 2020	Moderate	VAS (VAS scores during positioning)	Not Reported0 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	Mean Difference	1.53 (0.80, 2.26)	Femoral nerve block and nerve catheter insertion

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Uysal A. 2020	Moderate	VAS (VAS scores at postop 1st hour)	Postop 1 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	Mean Difference	0.18 (-0.26, 0.62)	NS
Uysal A. 2020	Moderate	VAS (VAS scores at postop 4th hour)	Postop 4 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	Mean Difference	-0.23 (-0.62, 0.16)	NS
Uysal A. 2020	Moderate	VAS (VAS scores at postop12th hour)	Postop 12 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	Mean Difference	0.1 (-0.21, 0.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Uysal A. 2020	Moderate	VAS (VAS scores at postop 24th hour)	Postop 24 hrs	Parasetamol administration: In the first group (Group I), 15 mg/ kgparacetamol within 15 min was administered intravenously. 15 mg/kgparacetamol was administered intravenously every eight hours.	Femoral nerve block and nerve catheter insertion: (Group II),intermittent FNB was performed in the emergency room. In the secondgroup, femoral nerve blockage was performed, and a catheter wasplaced. Then, 0.5 mL/kg bupivacaine 0.25% was applied every eighthours	Mean Difference	0.3 (0.01, 0.59)	Femoral nerve block and nerve catheter insertion
Wennberg P. 2019	High	VAS movement (VAS - pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	1.39 (0.42, 2.36)	Placebo saline
Wennberg P. 2019	High	VAS movement (VAS - pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	0.04 (-0.93, 1.01)	NS
Wennberg P. 2019	High	VAS movement (VAS - pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	0.07 (-1.10, 1.24)	NS
Wennberg P. 2019	High	VAS rest (VAS - pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	0.79 (-0.33, 1.91)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	VAS rest (VAS - pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	-0.25 (-1.31, 0.81)	NS
Wennberg P. 2019	High	VAS rest (VAS - pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	Mean Difference	-0.09 (-1.45, 1.27)	NS
Wennberg P. 2019	High	BRS movement (1) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.44(0.19,1.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (1) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.83(0.34,2.01)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (1) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.10(0.01,0.74)	Supplementation of pre-operative analgesia with low-dosefascia iliaca compartment block (FICB)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (2) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.19(0.74,1.91)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (2) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.32(0.87,2.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (2) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.62(0.96,2.72)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (3) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.33(0.88,1.99)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (3) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.86(0.55,1.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS movement (3) (The BRS (bevavior rating scale) is athree-category scale categorizing pain from the patients' behaviourused when cognitive impairment makes self-assessment difficult. Thethree categories are: 1 - no pain or mild pain; 2 - moderate pain; and 3 -severe pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.77(0.39,1.53)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS rest (1) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.68(0.49,0.96)	Supplementation of pre-operative analgesia with low-dosefascia iliaca compartment block (FICB)
Wennberg P. 2019	High	BRS rest (1) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.07(0.81,1.40)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS rest (1) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.89(0.65,1.21)	NS
Wennberg P. 2019	High	BRS rest (2) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.72(1.02,2.90)	Placebo saline

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS rest (2) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.99(0.57,1.74)	NS
Wennberg P. 2019	High	BRS rest (2) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	2.00(0.76,5.29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS rest (3) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 0 min	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	1.23(0.49,3.09)	NS
Wennberg P. 2019	High	BRS rest (3) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 2 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.94(0.25,3.58)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Wennberg P. 2019	High	BRS rest (3) (The BRS (bevavior rating scale) is a three-category scalecategorizing pain from the patients' behaviour used when cognitiveimpairment makes self-assessment difficult. The three categories are: 1- no pain or mild pain; 2 - moderate pain; and 3 - severe pain)	Preop 6 hrs	Supplementation of pre-operative analgesia with low-dose fascia iliacacompartment block (FICB): 30 ml of 2 mg/ml ropivacaine.	Placebo saline: 30 ml of placebo (saline)	RR	0.60(0.15,2.33)	NS
Xu L. 2020	Moderate	VAS	Postop 6 hrs	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-0.56 (-1.10, -0.02)	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),
Xu L. 2020	Moderate	VAS	Postop 24 hrs	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-0.48 (., .)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xu L. 2020	Moderate	VAS	Postop 48 hrs	The SG underwent the fascia iliaca compartment block (FICB),combined with laryngeal mask general anesthesia (LMA),	CG underwent laryngeal mask general anesthesia (LMA).	Mean Difference	-0.39 (., .)	NS
Zhang J. 2019	Moderate	VAS	2 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Mean Difference	-1 (-1.46, -0.54)	intervention group (treated with femoral nerve block, 95 cases)
Zhang J. 2019	Moderate	VAS	6 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Mean Difference	-0.2 (-0.66, 0.26)	NS
Zhang J. 2019	Moderate	VAS	12 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Mean Difference	-0.7 (-0.99, -0.41)	intervention group (treated with femoral nerve block, 95 cases)
Zhang J. 2019	Moderate	VAS	18 hrs	intervention group (treated with femoral nerve block, 95 cases)	control group (treated with oral opioid drugs, 91 cases)	Mean Difference	-0.9 (-1.47, -0.33)	intervention group (treated with femoral nerve block, 95 cases)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Numeric Rating Scale (NRS) Scores (T1)	1 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) was intravenously infused 30 minbefore the start of anesthesia in the DEX group and was continuouslyinfused at 0.3 mg/kg/h during the operation	NS group (injected with normal saline): The same volume of normalsaline was administered for the NS group. The medication wasdiscontinued 30 min before the end of surgery. Propofol wasdiscontinued when the operation was completed. Self-controlledanalgesia was performed using patient controlled intravenous analgesiaand sufentanil combined with flurbiprofen ester immediately after theoperation.	Author Reported	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Numeric Rating Scale (NRS) Scores (T2)	2 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) was intravenously infused 30 minbefore the start of anesthesia in the DEX group and was continuouslyinfused at 0.3 mg/kg/h during the operation	NS group (injected with normal saline): The same volume of normalsaline was administered for the NS group. The medication wasdiscontinued 30 min before the end of surgery. Propofol wasdiscontinued when the operation was completed. Self-controlledanalgesia was performed using patient controlled intravenous analgesiaand sufentanil combined with flurbiprofen ester immediately after theoperation.	Author Reported	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhang W. 2020	High	Numeric Rating Scale (NRS) Scores (T3)	3 days	DEX group (injected with dexmedetomidine 0.5 ?g/kg/h):Dexmedetomidine (0.5 mg/kg/h) was intravenously infused 30 minbefore the start of anesthesia in the DEX group and was continuouslyinfused at 0.3 mg/kg/h during the operation	NS group (injected with normal saline): The same volume of normalsaline was administered for the NS group. The medication wasdiscontinued 30 min before the end of surgery. Propofol wasdiscontinued when the operation was completed. Self-controlledanalgesia was performed using patient controlled intravenous analgesiaand sufentanil combined with flurbiprofen ester immediately after theoperation.	Author Reported	N/A	NS

Zhou Y. 2019	High	VAS (rest) (Before block (evaluating performance))	0 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	0 (-3.49, 3.49)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (rest) (30 min after block)	30 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	-4 (-7.64, -0.36)	Femoral obturator nerve block (FONB) - (ultrasound-guided) .FONB was also performed while the patients were in thesupine position, and the probe was placed in the samepositio n as with the FICB. The

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (rest) (The first day after admission)	1 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	-5 (-7.73, -2.27)	Femoral obturator nerve block (FONB) - (ultrasound-guided) .FONB was also performed while the patients were in thesupine position, and the probe was placed in the samepositio n as with the FICB. The

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (rest) (The second day after admission)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	-1 (-3.69, 1.69)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (moving) (Before block (evaluating performance))	0 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	2 (-1.17, 5.17)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (moving) (30 min after block)	30 min	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	-7 (-11.12, -2.88)	Femoral obturator nerve block (FONB) - (ultrasound-guided) .FONB was also performed while the patients were in thesupine position, and the probe was placed in the samepositio n as with the FICB. The

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (moving) (The first day after admission)	1 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	-8 (-12.11, -3.89)	Femoral obturator nerve block (FONB) - (ultrasound-guided) .FONB was also performed while the patients were in thesupine position, and the probe was placed in the samepositio n as with the FICB. The

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Zhou Y. 2019	High	VAS (moving) (The second day after admission)	2 days	Femoral obturator nerve block (FONB) - (ultrasound-guided) . FONBwas also performed while the patients were in the supine position, andthe probe was placed in the same position as with the FICB. Thefemoral nerve block was performed following injection of 20ml of localanesthetic solution. The probe was moved beneath the level of theinguinal ligament and was positioned at a 30° to 40° cephalad angle.The thick fascial plane was identified that extended to the pectineusmuscle (Figure 2). The needle was inserted at a 30° to 45° angle to theskin, 2 cm from the center of the ultrasound probe. After injecting 5 mlof anesthetic solution, an ultrasound monitor was used to visualize thehypoechoic shape that was separate from the muscles in the fasciallayer. This procedure allowed for additional cephalad angling, and theadvancement of the needle into the dilated interfascial space,facilitating cephalad local anesthesia. Pressure was applied distal to thepuncture site for 3 minutes to promote the distribution of the localanesthetic.: See Tx1 details	Fascia iliaca compartment block (FICB) - (ultrasound-guided) . Briefly,patients were placed in the supine position, and a line was drawn thatconnected the pubic tubercle and anterior superior iliac spine, whichwas divided into equal thirds. The point where the line intersected themiddle and lateral section was determined, and the probe waspositioned 2 cm beneath this point, and the fascia lata, the iliac fascia,and the iliopsoas were identified. The probe was directed to thefemoral, obturator, and lateral femoral cutaneous nerves. A sterile18-gauge nerve block needle was inserted and advanced until itachieved double puncture. Normalsaline (5 ml) was injected toconfirm the location of the needle tip between the iliac fascia andiliopsoas muscle (Figure 1). Local anesthetic solution (35 ml) wasinjected that contained 0.4% ropivacaine hydrochloride and 5 mg	Mean Difference	-1 (-5.60, 3.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
					ofdexamethasone sodium phosphate. Thirty minutes after the FICB wascompleted, the patient was admitted to the ward.: See Tx2 details			

Table 111: Multimodal Analgesia- : Pain cont

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study p value	Favors
Monzon et al 2010	10 cm VAS pain	Baseline	Fascia Iliaca Block with Bupivacaine	Fascia Iliaca Block with IV NSAID	154	Mean difference	-0.90	0.59	N/A	NS
Monzon et al 2010	10 cm VAS pain	15 minutes	Fascia Iliaca Block with Bupivacaine	Fascia Iliaca Block with IV NSAID	154	Mean difference	3.34	0.00	N/A	Favors Bupivacaine
Monzon et al 2010	10 cm VAS pain	2 Hours	Fascia Iliaca Block with Bupivacaine	Fascia Iliaca Block with IV NSAID	154	Mean difference	-0.52	0.74	N/A	NS
Monzon et al 2010	10 cm VAS pain	8 Hours	Fascia Iliaca Block with Bupivacaine	Fascia Iliaca Block with IV NSAID	154	Mean difference	-2.37	0.08	N/A	NS
Mouzopoulos et al. 2009	VAS Pain Score	Preop	FICB Prophylaxis Group	Placebo	219	Mean difference	-6.80	-	0.59	NS
Mouzopoulos et al. 2009	VAS Pain Score	Postop	FICB Prophylaxis Group	Placebo	219	Mean difference	-8.00	-	0.34	NS
Gorodetskyi et al, 2007	VAS Mean aggregate score	day 10	Non-invasive interactive neurostimulation device	Sham Device	60	Mean difference	-4.30	-	p<.001	Favors NIN

Table 112: FIBRINOLYTIC INHIBITORS- Blood Outcomes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Hb level (Hgb PTD 1 (post-traumatic day) Hgb (g/L))	Baseline 1days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	1.86 (-0.09, 3.81)	NS
Ma, H. 2021	Moderate	Hb level (Hgb PTD 2 (post-traumatic day) Hgb (g/L))	Baseline 2days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	4.39 (2.21, 6.57)	TXA (IV)
Ma, H. 2021	Moderate	Hb level (Hgb PTD 3 (post-traumatic day) Hgb (g/L))	Baseline 3days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	11.81 (9.38, 14.24)	TXA (IV)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Hematocrit (Hct) level (Hct PTA (post-traumatic admission))	Baseline 0days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	0.6 (-0.14, 1.34)	NS
Ma, H. 2021	Moderate	Hematocrit (Hct) level (Hct PTD 1 (post-traumatic day))	Baseline 1days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	0.94 (0.06, 1.82)	TXA (IV)
Ma, H. 2021	Moderate	Hematocrit (Hct) level (Hct PTD 2 (post-traumatic day))	Baseline 2days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	4.05 (3.05, 5.05)	TXA (IV)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Hematocrit (Hct) level (Hct PTD 3 (post-traumatic day))	Baseline 3days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	6.7 (5.61, 7.79)	TXA (IV)
Ma, H. 2021	Moderate	Hidden blood loss (HBL) (HBL PTD 1 (post-traumatic day))	Baseline 1days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	-10.68 (-18.61, -2.75)	TXA (IV)
Ma, H. 2021	Moderate	Hidden blood loss (HBL) (HBL PTD 2 (post-traumatic day))	Baseline 2days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	-70.37 (-81.74, -59.00)	TXA (IV)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Hidden blood loss (HBL) (HBL PTD 3 (post-traumatic day))	Baseline 3days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	-153.53 (-165.54, -141.52)	TXA (IV)
Ma, H. 2021	Moderate	Pre-operative transfusion (POT) rate	Baseline 3days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Author Reported - p<.05	N/A	Treatment 1 (TXA)
Ma, H. 2021	Moderate	Pre-operative transfusion (POT) units	Baseline 3days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Admission to operation length (Length of admission to operation (h))	Baseline 3days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Author Reported - p>.05	N/A	NS
Ma, H. 2021	Moderate	Hospital stay (Length of hospital stay (d))	Baseline 7days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Author Reported - p>.05	N/A	NS

Table 113: FIBRINOLYTIC INHIBITORS- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Perioperative blood loss (mL) ((mL))	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	-205.5 (-237.28, -173.72)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Obvious blood loss (mL) ((mL))	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	-125 (-141.51, -108.49)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Hidden blood loss (mL) ((mL))	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	-76.5 (-97.13, -55.87)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Wound complications	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	0.63(0.21,1.84)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Haematoma	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	0.60(0.15,2.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Infection	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	0.67(0.11,3.89)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Thromboembolic events	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	1.17(0.57,2.38)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Deep vein thrombosis	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	0.91(0.41,2.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Pulmonary embolism	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	2.00(0.18,21.66)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Myocardial infarction	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Cerebrovascular accident	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RD	0.02(-0.01,0.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Postoperative complications (Surgical site (Hematoma))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	0.17(0.02,1.36)	NS
Drakos A. 2016	Moderate	Postoperative complications (Surgical site (Infection))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RD	-0.04(-0.08,-0.00)	TXA

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Postoperative complications (Medical (Wound dehiscence))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	0.50(0.05,5.43)	NS
Drakos A. 2016	Moderate	Postoperative complications (Medical (Deep vein thrombosis))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	1.00(0.06,15.77)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Postoperative complications (Medical (Pulmonary embolism))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	0.67(0.11,3.90)	NS
Drakos A. 2016	Moderate	Postoperative complications (Medical (Myocardial infarction))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	1.50(0.26,8.79)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Postoperative complications (Medical (Cerebral stroke))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	0.80(0.22,2.89)	NS
Drakos A. 2016	Moderate	Postoperative complications (Medical (Respiratory infection))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	1.17(0.41,3.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Postoperative complications (Medical (Renal failure))	Postop 30days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	1.00(0.06,15.77)	NS
Kwak, D. K. 2019	LowQuality	ICU admission (ICU admission (%))	Postop 3 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	1.25(0.86,1.82)	NS
Kwak, D. K. 2019	LowQuality	ICU stay (ICU stay (days))	Postop 3 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	-1.1 (-2.09, -0.11)	TXA (topical)
Kwak, D. K. 2019	LowQuality	Complications (DVT)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	3.00(0.32,28.17)	NS
Kwak, D. K. 2019	LowQuality	Complications (PE)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	0.01(-0.01,0.04)	NS
Kwak, D. K. 2019	LowQuality	Complications (Delirium)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.83(0.49,1.38)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kwak, D. K. 2019	LowQuality	Complications (Readmission)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.50(0.05,5.39)	NS
Kwak, D. K. 2019	LowQuality	Complications (In-hospital mortality)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	0.01(-0.01,0.04)	NS
Kwak, D. K. 2019	LowQuality	Complications (Medical complications (total))	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.56(0.38,0.83)	TXA (topical)
Kwak, D. K. 2019	LowQuality	Complications (Cardiovascular)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.43(0.12,1.59)	NS
Kwak, D. K. 2019	LowQuality	Complications (Pulmonary)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	1.09(0.52,2.31)	NS
Kwak, D. K. 2019	LowQuality	Complications (Cerebrovascular)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	-0.04(-0.09,0.00)	NS
Kwak, D. K. 2019	LowQuality	Complications (Nephrologic)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.14(0.02,1.13)	NS
Kwak, D. K. 2019	LowQuality	Complications (Urologic)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.50(0.18,1.39)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kwak, D. K. 2019	LowQuality	Complications (Gastrointestinal)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	0.67(0.11,3.87)	NS
Kwak, D. K. 2019	LowQuality	Complications (Surgical complications)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	-0.01(-0.04,0.01)	NS
Kwak, D. K. 2019	LowQuality	Complications (Dislocation)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	-0.01(-0.04,0.01)	NS
Kwak, D. K. 2019	LowQuality	Complications (PJI)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	0.00(0.00,0.00)	NS
Kwak, D. K. 2019	LowQuality	Complications (Wound infection)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RD	0.00(0.00,0.00)	NS
Lee, C. 2015	LowQuality	Complications (Thromboembolic event - Detected DVT/PE)	Postop 90days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	RR	0.56(0.06,4.90)	NS
Lei J. 2017	Moderate	Postoperative complications (Surgical site (Hematoma))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RR	0.36(0.04,3.31)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lei J. 2017	Moderate	Postoperative complications (Surgical site (Infection))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RR	0.54(0.05,5.72)	NS
Lei J. 2017	Moderate	Postoperative complications (Medical (Deep vein thrombosis))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RR	2.16(0.20,22.87)	NS
Lei J. 2017	Moderate	Postoperative complications (Medical (Pulmonary embolism))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RR	1.08(0.07,16.67)	NS
Lei J. 2017	Moderate	Postoperative complications (Medical (Myocardial infarction))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lei J. 2017	Moderate	Postoperative complications (Medical (Ischemic cerebral infarction))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RD	0.00(0.00,0.00)	NS
Lei J. 2017	Moderate	Postoperative complications (Medical (Respiratory infection))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RR	0.65(0.17,2.53)	NS
Lei J. 2017	Moderate	Postoperative complications (Medical (Renal failure))	Postop 1 mos	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	RD	-0.03(-0.07,0.02)	NS
Ma, H. 2021	Moderate	Complications (Venous thrombosis (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RR	1.11(0.46,2.68)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Complications (DVT (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RD	0.00(0.00,0.00)	NS
Ma, H. 2021	Moderate	Complications (PE (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RD	0.00(0.00,0.00)	NS
Ma, H. 2021	Moderate	Complications (Respiratory infection (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RR	0.82(0.38,1.76)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Complications (ICI (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RD	0.00(0.00,0.00)	NS
Ma, H. 2021	Moderate	Complications (Stroke (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RD	0.00(0.00,0.00)	NS
Ma, H. 2021	Moderate	Complications (Cardiac infarction (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ma, H. 2021	Moderate	Complications (Acute renal failure (n))	Baseline 3mos	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	RD	0.00(0.00,0.00)	NS
Schiavone, A. 2018	LowQuality	DVT (distal) (Asymptomatic distal DVT [(no.) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RD	0.02(-0.02,0.06)	NS
Schiavone, A. 2018	LowQuality	DVT (proximal) (Asymptomatic proximal DVT [(no.) (%))	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RD	0.02(-0.02,0.06)	NS
Schiavone, A. 2018	LowQuality	Acute coronary syndrome (Acute coronary syndrome [(no.) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RD	0.06(-0.01,0.13)	NS
Schiavone, A. 2018	LowQuality	Stroke (Stroke [(no.) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RD	0.02(-0.02,0.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tengberg P.T. 2016	High	Total blood loss (ml)	1 days	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Mean Difference	-570.8 (-1071.05, -70.55)	Included patients were given 1 gram of TXA (tranexamic acid,Pfizer, Groton, Connecticut) or placebo as an intravenousbolus during draping, just prior to surgery. This was followedby a post-operativ
Tengberg P.T. 2016	High	Surgical blood loss (ml)	1 days	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Mean Difference	-48.5 (-130.22, 33.22)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tian S. 2018	High	Overt blood loss ((ml))	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	Mean Difference	-50.95 (-83.16, -18.74)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.
Tian S. 2018	High	Intraoperative blood loss ((ml))	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	Mean Difference	-34.18 (-46.64, -21.72)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tian S. 2018	High	Total blood loss ((ml))	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	Mean Difference	-181.58 (-290.13, -73.03)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.
Tian S. 2018	High	Hidden blood loss ((ml))	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	Mean Difference	-130.64 (-231.42, -29.86)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.
Tian S. 2018	High	Deep vein thrombosis (Number of deep vein thrombosis events in thelower limbs)	1 wks	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	RR	1.50(0.26,8.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Cumulative blood loss (POD 1)	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	Author Reported - (731 vs.973 mL, P = 0.01)	N/A	
Watts C. 2017	High	Cumulative blood loss (POD 2)	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	Author Reported - (830 vs.1124 mL, P = 0.0002)	N/A	

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Cumulative blood loss (POD 3)	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	Author Reported - (902 vs.1205 mL, P = 0.0005	N/A	
Watts C. 2017	High	TEE (Thromboembolic event)	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	TEE (Thromboembolic event)	90 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RR	0.82(0.26,2.54)	NS
Watts C. 2017	High	Wound complication	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Wound complication	90 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RR	2.46(0.50,12.16)	NS
Watts C. 2017	High	Reoperation	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Reoperation	90 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RR	1.47(0.26,8.50)	NS
Watts C. 2017	High	Readmission	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Readmission	90 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RR	1.44(0.78,2.63)	NS
Xie, J. 2019	LowQuality	Complications (DVT)	Postop 3 mos	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RR	0.37(0.04,3.53)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Complications (PE)	Postop 3 mos	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RD	0.00(0.00,0.00)	NS
Xie, J. 2019	LowQuality	Complications (Mortality)	Postop 3 mos	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Complications (Pulmonary infection)	Postop 3 mos	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RR	1.11(0.16,7.81)	NS
Zhou, X. D. 2019	Moderate	Complications (Deep vein thrombosis)	Postop 1 mos	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RR	0.67(0.12,3.82)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Complications (Pulmonary embolism)	Postop 1 mos	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RD	-0.02(-0.06,0.02)	NS
Zhou, X. D. 2019	Moderate	Complications (Myocardial infarction)	Postop 1 mos	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RD	-0.02(-0.06,0.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Complications (Ischemic cerebral infarction)	Postop 1 mos	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RR	0.50(0.05,5.34)	NS
Zhou, X. D. 2019	Moderate	Complications (Surgical site Hematoma)	Postop 1 mos	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RR	1.00(0.06,15.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Complications (Surgical site Infection)	Postop 1 mos	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RD	-0.02(-0.06,0.02)	NS
Zufferey P. J. 2010	High	Bacterial infection	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RR	0.65(0.37,1.15)	NS
Zufferey P. J. 2010	High	Pneumonia	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	-0.04(-0.09,0.01)	NS
Zufferey P. J. 2010	High	Lower respiratory tract infection other than pneumonia	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RR	0.46(0.04,4.98)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zufferey P. J. 2010	High	Urinary tract infection	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RR	0.81(0.42,1.53)	NS
Zufferey P. J. 2010	High	Superficial wound infection	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	0.04(-0.01,0.08)	NS
Zufferey P. J. 2010	High	Deep wound infection	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	-0.02(-0.06,0.02)	NS
Zufferey P. J. 2010	High	Vascular and death event	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RR	2.79(0.80,9.76)	NS
Zufferey P. J. 2010	High	Asymptomatic distal DVT	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RR	1.24(0.29,5.28)	NS
Zufferey P. J. 2010	High	Asymptomatic proximal DVT	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	0.02(-0.02,0.05)	NS
Zufferey P. J. 2010	High	Acute coronary syndrome	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	0.05(-0.01,0.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zufferey P. J. 2010	High	Stroke	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	0.02(-0.02,0.05)	NS

Table 114: FIBRINOLYTIC INHIBITORS- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kwak, D. K. 2019	LowQuality	Koval score	Postop 6 mos	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	-0.3 (-0.92, 0.32)	NS
Kwak, D. K. 2019	LowQuality	Harris hip score	Postop 6 mos	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	1.1 (-4.17, 6.37)	NS

Table 115: FIBRINOLYTIC INHIBITORS- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ashkenazi, I. 2020	LowQuality	Hb level (Hemoglobin (mg/dL) level change)	Postop 30days	16. Fibrinolytic Inhibitor	No TXA	Mean Difference	0.38 (0.26, 0.50)	16. Fibrinolytic Inhibitor
Ashkenazi, I. 2020	LowQuality	Blood transfusion (Blood transfusions)	Postop 30days	16. Fibrinolytic Inhibitor	No TXA	RR	0.39(0.32,0.48)	16. Fibrinolytic Inhibitor
Ashkenazi, I. 2020	LowQuality	Mortality (30-day mortality)	Postop 30days	16. Fibrinolytic Inhibitor	No TXA	RR	0.62(0.40,0.98)	16. Fibrinolytic Inhibitor
Ashkenazi, I. 2020	LowQuality	Mortality (1-year mortality)	Postop 1 yrs	16. Fibrinolytic Inhibitor	No TXA	RR	0.88(0.71,1.07)	NS
Ashkenazi, I. 2020	LowQuality	Readmission (30-day readmission)	Postop 30days	16. Fibrinolytic Inhibitor	No TXA	RR	1.07(0.80,1.42)	NS
Ashkenazi, I. 2020	LowQuality	Readmission (1-year readmission)	Postop 1 yrs	16. Fibrinolytic Inhibitor	No TXA	RR	1.21(0.67,2.18)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Postoperative Hb (g/dL) (POD 1)	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	0.6 (0.42, 0.78)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Postoperative Hb (g/dL) (POD 2)	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	0.5 (0.32, 0.68)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Postoperative Hb (g/dL) (POD 3)	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	0.4 (0.24, 0.56)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Packed RBC transfusion	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	0.48(0.28,0.83)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	No. of units of packed RBCs per patient transfused	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	Mean Difference	-1 (-1.38, -0.62)	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of thedoses was administered over 10 minutes: the first dose wasused within 10 minutes

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Chen F. 2019	High	Mortality	6 mos	Patients in the TXA group received three doses of 15 mg/kgintravenous TXA dissolved in 100 mL of saline. Each of the doses wasadministered over 10 minutes: the first dose was used within 10minutes just before incision, the second continuously pumpedthroughout the entire surgery, and the third was used at 3 hours aftersurgery (three-dose regimen).	In the placebo group, 100 mL of saline solution was administeredfollowing the same three-dose regimen.	RR	1.67(0.41,6.76)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Hematocrit preoperative * (Laboratory value)	Preop 0 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS
Drakos A. 2016	Moderate	Hematocrit postoperative day 1*	Postop 1 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p<.05	N/A	Treatment 1 (TXA)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Hematocrit postoperative day 3*	Postop 3 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS
Drakos A. 2016	Moderate	Hemoglobin preoperative*	Preop 0 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Hemoglobin postoperative day 1*	Postop 1 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p<.05	N/A	Treatment 1 (TXA)
Drakos A. 2016	Moderate	Hemoglobin postoperative day 3*	Postop 3 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Platelet preoperative *	Preop 0 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS
Drakos A. 2016	Moderate	Platelet postoperative day 1*	Postop 1 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Platelet postoperative day 3*	Postop 3 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p>.05	N/A	NS
Drakos A. 2016	Moderate	Patients required blood transfusion (transfusion rate)	Postop 3 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	0.76(0.47,1.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Drakos A. 2016	Moderate	Transfusion units	Postop 3 days	TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	Author Reported - p<.05	N/A	Treatment 1 (TXA)
Drakos A. 2016	Moderate	Mortality		TXA: Local administration of 3 g of tranexamic acid; A total amount of30 mL (500 mg/5 ml · 6 amps) was injected under the deep fascia ofthe proximal lateral thigh, around the fracture site under x-ray control.	No TXA	RR	0.93(0.46,1.87)	NS
Kwak, D. K. 2019	LowQuality	Surgery duration (Operation time (min))	Periop 0 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	2.3 (-3.61, 8.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kwak, D. K. 2019	LowQuality	Anesthesia (Anesthesia (general: spinal))	Periop 0 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Author Reported - p>.05	N/A	NS
Kwak, D. K. 2019	LowQuality	Hb level (Immediate postoperative Hb (g/dL))	Periop 0 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	0 (-0.50, 0.50)	NS
Kwak, D. K. 2019	LowQuality	Hb level (POD 1 Hb (g/dL))	Postop 1 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	0.3 (-0.08, 0.68)	NS
Kwak, D. K. 2019	LowQuality	Hb level (POD 1 Hct (%))	Postop 1 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	0.6 (-0.69, 1.89)	NS
Kwak, D. K. 2019	LowQuality	Hb level (POD 5 Hb (g/dL))	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	-0.5 (-0.83, -0.17)	No topical TXA
Kwak, D. K. 2019	LowQuality	Hb level (POD 5 Hct (%))	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	-1.4 (-2.71, -0.09)	No topical TXA
Kwak, D. K. 2019	LowQuality	Transfusion (Transfusion rate (%))	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	1.81(1.27,2.57)	No topical TXA
Kwak, D. K. 2019	LowQuality	Transfusion (Transfusion rate (%) in Hb > 8 g/dL)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	1.04(0.51,2.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Kwak, D. K. 2019	LowQuality	Hospital stay (Hospital stay (days))	Postop 3 wks	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	Mean Difference	-2.2 (-4.96, 0.56)	NS
Kwak, D. K. 2019	LowQuality	Mortality (1-year mortality)	Postop 5 days	TXA (topical): TXA via topical administration during surgery	No topical TXA: No topical TXA	RR	1.00(0.26,3.85)	NS
Lee, C. 2015	LowQuality	RBC transfusion (RBC transfusion rate)	Postop 3 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	RR	0.32(0.13,0.78)	Tranexamic acid
Lee, C. 2015	LowQuality	RBC transfusion (RBC transfusion - Avg. units per patient)	Postop 3 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	Author Reported - p>.05	N/A	NS
Lee, C. 2015	LowQuality	Hb level (Postop Hb (g/L) - Day 1 Hb drop >20 g/L)	Postop 1 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	RR	0.62(0.42,0.92)	No TXA
Lee, C. 2015	LowQuality	Hb level (Postop Hb (g/L) - Day 1 Hby)	Postop 1 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	Mean Difference	4.13 (0.09, 8.17)	Tranexamic acid
Lee, C. 2015	LowQuality	Hb level (Postop Hb (g/L) - Day 3 Hby)	Postop 3 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	Mean Difference	6.69 (3.00, 10.38)	Tranexamic acid

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lee, C. 2015	LowQuality	Hb level (Postop Hb (g/L) - Day 1 Hb drop)	Postop 1 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	Mean Difference	-2.83 (-5.62, -0.04)	No TXA
Lee, C. 2015	LowQuality	Hb level (Postop Hb (g/L) - Day 3 Hb drop)	Postop 3 days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	Mean Difference	-5.22 (-8.35, -2.09)	No TXA
Lee, C. 2015	LowQuality	Mortality (Mortality - 30 days)	Postop 30days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	RR	0.99(0.31,3.12)	NS
Lee, C. 2015	LowQuality	Mortality (Mortality - 90 days)	Postop 90days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	RR	0.94(0.43,2.05)	NS
Lee, C. 2015	LowQuality	Hospital stay (Length of stay - Avg. length of stay (days))	Postop 21days	Tranexamic acid: Bolus of 1 g intravenously on induction.	No TXA	Mean Difference	3 (-1.20, 7.20)	NS
Lei J. 2017	Moderate	Postoperative day 2 drainage.	Postop 2 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-0.23 (-17.97, 17.51)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lei J. 2017	Moderate	Hemoglobin preop.	Preop 1 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-2.65 (-9.02, 3.72)	NS
Lei J. 2017	Moderate	Hemoglobin postop. day 1	Postop 1 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-12.57 (-31.92, 6.78)	NS
Lei J. 2017	Moderate	Hemoglobin postop. day 3	Postop 3 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	0.75 (-4.71, 6.21)	NS
Lei J. 2017	Moderate	Hematocrit preop.	Preop 1 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-1.16 (-2.98, 0.66)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lei J. 2017	Moderate	Hematocrit postop. day 1	Postop 1 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-0.62 (-2.32, 1.08)	NS
Lei J. 2017	Moderate	Hematocrit postop. day 3(%)	Postop 3 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	0.89 (-1.21, 2.99)	NS
Lei J. 2017	Moderate	Estimated visible RBC loss day 3 (mL)	Postop 3 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	10.71 (-5.26, 26.68)	NS
Lei J. 2017	Moderate	Transfusion rate (%)		TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	RR	0.50(0.28,0.89)	TXA (before surgery)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Lei J. 2017	Moderate	Estimated total RBC loss day 3 (mL)	Postop 3 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-138.54 (-250.76, -26.32)	TXA (before surgery)
Lei J. 2017	Moderate	Estimated hidden RBC loss day 3 (mL)	Postop 3 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v).	Mean Difference	-149.26 (-260.28, -38.24)	TXA (before surgery)
Lei J. 2017	Moderate	Surgical blood loss (mL)	Periop 1 days	TXA (before surgery): After anesthesia, but before surgery, patients inthe TXA group received i.v. TXA 1 g (200 mL)	Saline (before surgery): After anesthesia, but before surgery, patients inthe NS group received 200 mL of NS (i.v)	Mean Difference	30.55 (-13.16, 74.26)	NS
Ma, H. 2021	Moderate	Hb level (Hgb PTA (post-traumatic admission) Hgb (g/L))	Baseline 0days	TXA (IV): Patients in the TXA group received i.v. TXA (0.5 g; RuiyangPharmaceutical Co., Ltd., Shandong, China) 1 g (200 mL) immediatelypost-traumatic admission (PTA),	No TXA (IV): Patients in NS group received 200 mL of NS (i.v)immediately PTA. All patients received low molecular weight heparinsodium anticoagulation 6 h after injury.	Mean Difference	-0.45 (-2.57, 1.67)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Maalouly, J. 2020	LowQuality	Hb level (Hemoglobin level (Hgb) - Day 1)	Postop 1 days	Combined IV and topical TXA: 30 minutes prior to incision, 1 g of IVTXA was given. Intra-articular tranexamic acid 1 g in 20 mL NaCl wasused after fascia closure in all surgeries.	No TXA	Author Reported - p<.05	N/A	NS
Maalouly, J. 2020	LowQuality	Hb level (Hemoglobin level (Hgb) - Day 5)	Postop 5 days	Combined IV and topical TXA: 30 minutes prior to incision, 1 g of IVTXA was given. Intra-articular tranexamic acid 1 g in 20 mL NaCl wasused after fascia closure in all surgeries.	No TXA	Mean Difference	-0.058 (-0.39, 0.27)	NS
Maalouly, J. 2020	LowQuality	Blood transfusion (Transfusion (total) - Day 5)	Postop 5 days	Combined IV and topical TXA: 30 minutes prior to incision, 1 g of IVTXA was given. Intra-articular tranexamic acid 1 g in 20 mL NaCl wasused after fascia closure in all surgeries.	No TXA	Mean Difference	0.48 (0.09, 0.87)	No TXA

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Schiavone, A. 2018	LowQuality	Alpha-1-acid glycoprotein average (Alpha-1-acid glycoprotein average(Mg/Dl), after surgery)	Postop 1 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Alpha-1-acid glycoprotein average (Alpha-1-acid glycoprotein average(Mg/Dl), after discharge)	Postop 8 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Alb (g/dL) (Alb (g/dL) acid group average, after surgery)	Postop 1 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Alb (g/dL) (Alb (g/dL) acid group average, after discharge)	Postop 8 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	LDL (LDL (n.v. < 200 mg/dL) during hospitalization , after surgery)	Postop 1 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Schiavone, A. 2018	LowQuality	LDL (LDL (n.v. < 200 mg/dL) during hospitalization , after discharge)	Postop 8 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Fibrinogen (Fibrinogen (n.v. 200-400 mg/dL), after surgery)	Postop 1 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Fibrinogen (Fibrinogen (n.v. 200-400 mg/dL), at discharge)	Postop 8 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Fibrinogen (Fibrinogen (n.v. 200-400 mg/dL), at 1st month)	Postop 1 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Fibrinogen (Fibrinogen (n.v. 200-400 mg/dL), at 3rd month)	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	D-dimer (D-dimer changes (n.v. 50-500 ng/mL), after surgery)	Postop 1 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Schiavone, A. 2018	LowQuality	D-dimer (D-dimer changes (n.v. 50-500 ng/mL), at discharge)	Postop 8 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	D-dimer (D-dimer changes (n.v. 50-500 ng/mL), at 1st month)	Postop 1 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	D-dimer (D-dimer changes (n.v. 50-500 ng/mL), at 3rd month)	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported - p>.05	N/A	NS
Schiavone, A. 2018	LowQuality	Hb level (Hb average after surgery [(g/dl))	Postop 1 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported	N/A	NS
Schiavone, A. 2018	LowQuality	Hb level (Hb average before discharge [(g/dl))	Postop 8 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported	N/A	NS
Schiavone, A. 2018	LowQuality	Hb level (Hb average 4 days post-discharge [(g/dl))	Postop 4 days	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported	N/A	NS
Schiavone, A. 2018	LowQuality	Hb level (Hb average at 8 weeks [(g/dl))	Postop 8 wks	Tranexamic acid (group A)	Saline solution-placebo (group B)	Author Reported	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Schiavone, A. 2018	LowQuality	Transfusion (Transfusions 1 U.I. [(n) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RR	0.70(0.47,1.06)	NS
Schiavone, A. 2018	LowQuality	Transfusion (>1 U.I. [(n) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RR	0.55(0.14,2.16)	NS
Schiavone, A. 2018	LowQuality	Vascular death (Vascular and death event [(no.) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RR	2.74(0.79,9.48)	NS
Schiavone, A. 2018	LowQuality	Mortality (Death [(no.) (%)])	Postop 3 mos	Tranexamic acid (group A)	Saline solution-placebo (group B)	RR	1.22(0.29,5.14)	NS
Tengberg P.T. 2016	High	Transfusions (units)	1 days	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Mean Difference	-0.7 (-1.67, 0.27)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tengberg P.T. 2016	High	Mortality (30-day mortality)	30 days	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	RR	4.73(0.56,40.25)	NS
Tengberg P.T. 2016	High	Mortality (90-day mortality)	90 days	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	Included patients were given 1 gram of TXA (tranexamic acid, Pfizer,Groton, Connecticut) or placebo as an intravenous bolus duringdraping, just prior to surgery. This was followed by a post-operative24-hour infusion of 3 grams of TXA or placebo mixed into 1 litre ofisotonic saline.	RR	2.66(0.90,7.85)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tian S. 2018	High	Drainage ((ml))	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	Mean Difference	-16.77 (-24.01, -9.53)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.
Tian S. 2018	High	Transfusion ((ml))	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	Mean Difference	-110 (-146.26, -73.74)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Tian S. 2018	High	Transfusion rate	1 days	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.	The control group did not receive TXA	RR	0.71(0.50,1.00)	In the TXA group, all patients received TXA at a dose of 10mg/kg_x0001_1 intravenously, 10 min preoperatively and 5 hpostoperatively.
Virani, S. R. 2016	LowQuality	Hb level (Haemoglobin (Postoperative))	Postop 1 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	Mean Difference	0.3 (-0.34, 0.94)	NS
Virani, S. R. 2016	LowQuality	Drain output ((mean))	Postop 1 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	Mean Difference	-9.3 (-22.75, 4.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Virani, S. R. 2016	LowQuality	Drain output ((mean))	Postop 2 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	Mean Difference	-6.8 (-13.72, 0.12)	NS
Virani, S. R. 2016	LowQuality	Drain output ((mean))	Postop 3 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	Mean Difference	2.2 (-0.22, 4.62)	NS
Virani, S. R. 2016	LowQuality	Drain output (Total)	Postop 3 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	Mean Difference	-14 (-37.96, 9.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Virani, S. R. 2016	LowQuality	Blood loss ((ml))	Postop 1 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	Author Reported - p>.05	N/A	NS
Virani, S. R. 2016	LowQuality	Blood transfusion	Postop 3 days	Tranexamic acid: Intramuscular (vastus lateralis) and subfascialinfiltration of 2g tranexamic acid in the proximal lateral thigh beforeclosure	Control group	RR	0.87(0.40,1.88)	NS
Watts C. 2017	High	Allogenic blood transfusions (Total number)	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RR	0.63(0.32,1.24)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Total blood product consumption	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	Author Reported - (1.2 upRBC/patient, range 1–2u) vs. (1.8 u pRBC/patient,range 1–4 u)	N/A	NS
Watts C. 2017	High	Mortality (Death)	30 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RD	0.00(0.00,0.00)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Watts C. 2017	High	Mortality (Death)	90 days	In the TXA group, patients received 2 doses of 15 mg/kg intravenousTXA dissolved in 100 mL of saline, each administered over 10 minutes;1 dose just before incision, and the second at wound closure.	In the placebo group, 100 mL of saline solution was administered in asimilar fashion. Perioperative care was otherwise standardizedincluding conservative transfusion criteria.	RR	0.89(0.41,1.94)	NS
Xie, J. 2019	LowQuality	Transfusion (Transfusion, n (%))	Postop 3 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RR	0.36(0.24,0.55)	TXA (intravenously)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Hb level (Hb on POD 1, g/l)	Postop 1 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Mean Difference	4.41 (1.46, 7.36)	TXA (intravenously)
Xie, J. 2019	LowQuality	Hb level (Hb on POD 3, g/l)	Postop 3 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Mean Difference	3.94 (1.35, 6.53)	TXA (intravenously)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Hb level (Hb drop on POD 1, g/l)	Postop 1 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Mean Difference	-2.18 (-2.67, -1.69)	No TXA
Xie, J. 2019	LowQuality	Hb level (Hb drop on POD 3, g/l)	Postop 3 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Mean Difference	-13.96 (-14.52, -13.40)	No TXA

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Blood loss (Total blood loss, ml)	Periop 3 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Mean Difference	-100.59 (-154.12, -47.06)	TXA (intravenously)
Xie, J. 2019	LowQuality	Blood loss (Intra blood loss, ml)	Periop 0 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Mean Difference	-24.39 (-48.04, -0.74)	TXA (intravenously)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Drainage (Drain, n (%))	Postop 3 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RR	1.04(0.95,1.14)	NS
Xie, J. 2019	LowQuality	Drainage (Drainage, ml)	Postop 3 days	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Xie, J. 2019	LowQuality	Ambulation time (Ambulation time, n ? 24 h)	Postop 24 hrs	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	RR	1.41(1.11,1.79)	No TXA
Xie, J. 2019	LowQuality	Hospital stay (Length of stay, d)	Postop 3 wks	TXA (intravenously): 15 mg/kg TXA prior to surgery, TXA was injectedintraven-ously (15 mg/kg) 10 min prior to incision if deemed neces-sary by the surgeon, based on standard practices at the participatinghospitals	No TXA	Author Reported - p<.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Surgery duration (Operative time (min, mean [SD]))	Intraop 0 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	-4.35 (-13.46, 4.76)	NS
Zhou, X. D. 2019	Moderate	Hospital stay (Hospital stay (min, mean [SD]))	Postop 2 wks	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	-0.34 (-1.44, 0.76)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Blood loss (Intraoperative blood loss (mL, mean [SD]))	Intraop 0 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	-90.2 (-132.74, -47.66)	TXA (1 g - intravenously)
Zhou, X. D. 2019	Moderate	Drainage (Postoperative day 2 drainage (mL, mean [SD]))	Postop 2 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	2.8 (-8.69, 14.29)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Hemoglobin (Hemoglobin postop. Day 1 (g/L, mean [SD]))	Postop 1 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	12.7 (3.51, 21.89)	TXA (1 g - intravenously)
Zhou, X. D. 2019	Moderate	Hemoglobin (Hemoglobin postop. Day 3 (g/L, mean [SD]))	Postop 3 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	6.31 (-6.06, 18.68)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Hematocrit (Hematocrit postop. Day 1 (%, mean [SD]))	Postop 1 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	4.35 (2.13, 6.57)	TXA (1 g - intravenously)
Zhou, X. D. 2019	Moderate	Hematocrit (Hematocrit postop. Day 3 (%, mean [SD]))	Postop 3 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	1.79 (-0.65, 4.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Transfusion rate (Transfusion rate (n, %))	3 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	RR	0.19(0.08,0.44)	TXA (1 g - intravenously)
Zhou, X. D. 2019	Moderate	Transfusion units (Transfusion units (U, mean [SD]))	3 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	0.03 (-0.31, 0.37)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zhou, X. D. 2019	Moderate	Blood loss (total) (Estimated total blood loss day 3 (mL, mean [SD]))	Postop 3 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	-255.88 (-349.50, -162.26)	TXA (1 g - intravenously)
Zhou, X. D. 2019	Moderate	Blood loss (hidden) (Estimated hidden blood loss day 3 (mL, mean[SD]))	Postop 3 days	TXA (1 g - intravenously): Infused intravenously 15 minutes prior tosurgery with TXA (1 g/100 mL); All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after surgery.	Placebo: Received no infusion; All patients received standardthrombo prophylaxis with low-molecular-weight heparin from the secondday after admission to 24 h prior to surgery, and for 12 h after sur- gery.	Mean Difference	-160.77 (-238.85, -82.69)	TXA (1 g - intravenously)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Zufferey P. J. 2010	High	Death	6 wks	TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	RD	0.02(-0.02,0.05)	NS
Zufferey P. J. 2010	High	Rate of erythrocyte transfusion ((%))		TXA: Tranexamic acid 15 mg kg21 given at skin incision and 3 h later	No TXA: Saline . two doses of i.v. placebo	Author Reported - p>.05	N/A	NS

Table 116: INTERDISCIPLINARY CARE- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Delirium	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.04 (0.03, 0.05)	Control
Crotty, M. 2019	Moderate	Delirium	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Author Reported - p>.05	.77(0.33,1.80)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Hospital readmission	1 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.89(0.36,2.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Hospital readmission	3 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	1.25(0.35,4.52)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Hospital readmission	6 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.45(0.16,1.26)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Hospital readmission	12 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	1.08(0.52,2.26)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Hospital readmission	18 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.69(0.31,1.55)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Hospital readmission	24 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.71(0.23,2.17)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Emergency department visits	1 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.73(0.31,1.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Emergency department visits	3 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.67(0.11,3.90)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Emergency department visits	6 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.40(0.13,1.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Emergency department visits	12 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	1.00(0.41,2.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Emergency department visits	18 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.33(0.11,1.00)	Interdisciplinary care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Emergency department visits	24 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabili-tation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.29(0.06,1.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Olsson, L. E.2007	Moderate	Complications (Days with anindwelling urinary catheter (Min))	30 days	Integrated care pathway (ICP)	Standard Care	RD	-0.06(-0.12,0.01)	NS
Olsson, L. E.2007	Moderate	Complications (Days with anindwelling urinary catheter(Median))	30 days	Integrated care pathway (ICP)	Standard Care	RR	0.38(0.08,1.87)	NS
Olsson, L. E.2007	Moderate	Complications (Days with an indwelling urinary catheter (Max))	30 days	Integrated care pathway (ICP)	Standard Care	RR	0.41(0.22,0.78)	Integrated care pathway (ICP) group
Huusko, T.M. 2000	Moderate	Mortality (Mortality - amongst patients with mini mental state examination score of 18-23)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	0.60(0.06,6.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Mortality (Mortality - amongst patients with mini mental state examination score of 18-23)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	1.09(0.31,3.82)	NS
Huusko, T.M. 2000	Moderate	Mortality (Mortality - amongst patients with mini mental state examination score of 24-30)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	1.20(0.08,18.50)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Mortality (Mortality - amongst patients with mini mental state examination score of 24-30)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	0.85(0.30,2.42)	NS
Naglie, G.2002	High	Mortality (Death)	3 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	0.82(0.36,1.83)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Naglie, G.2002	High	Mortality (Death)	6 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	0.79(0.44,1.44)	NS
Vidan, M.2005	Moderate	In-hospital mortality	30 days	Intervention Group: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services including physical therapy and social work. A geriatric team that included geriatrician, a rehabilitation specialist, and a specific social worker also treated patients enrolled in the intervention	Usual care: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services, including physical therapy and social work.	RR	0.11(0.01,0.82)	Intervention Group

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidan, M.2005	Moderate	Recovery (Partial recovery)	3 mos	Intervention Group: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services including physical therapy and social work. A geriatric team that included geriatrician, a rehabilitation specialist, and a specific social worker also treated patients enrolled in the intervention	Usual care: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services, including physical therapy and social work.	RR	1.29(1.04,1.61)	Intervention Group
Vidan, M.2005	Moderate	Recovery (Partial recovery)	6 mos	Intervention Group: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services including physical therapy and social work. A geriatric team that included geriatrician, a rehabilitation specialist, and a specific social worker also treated patients enrolled in the intervention	Usual care: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services, including physical therapy and social work.	RR	.(.,.)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidan, M.2005	Moderate	Recovery (Partial recovery)	12 mos	Intervention Group: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services including physical therapy and social work. A geriatric team that included geriatrician, a rehabilitation specialist, and a specific social worker also treated patients enrolled in the intervention	Usual care: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services, including physical therapy and social work.	RR	.(.,.)	NS

Table 117: INTERDISCIPLINARY CARE- Composite

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Barthel Index (ModifiedBarthel Index)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.9 (0.36, 1.44)	Intervention group
Crotty, M. 2019	Moderate	Cornell Scale for Depression in Dementia (Cornell Scale for Depressionin Dementia)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-0.1 (-0.23, 0.03)	NS
Crotty, M. 2019	Moderate	Barthel Index (ModifiedBarthel Index)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-4.9 (-5.76, -4.04)	Control

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Cornell Scale for Depression in Dementia (Cornell Scale for Depressionin Dementia)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.8 (0.60, 1.00)	Control
Prestmo, A. 2015	Moderate	Cognition (Mini Mental Status Examination)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	1.03 (0.93, 1.13)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Cognition (Clinical dementia rating scale)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-0.79 (-0.87, -0.71)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Cognition (Mini Mental Status Examination)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	1.09 (0.99, 1.19)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Cognition (Clinical dementia rating scale)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-0.59 (-0.67, -0.51)	Comprehensive geriatric care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Cognition (Mini Mental Status Examination)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	1.44 (1.33, 1.55)	Comprehensive geriatric care

Table 118: INTERDISCIPLINARY CARE- Function

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Functional recovery	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.2 (0.09, 0.31)	Intervention group
Crotty, M. 2019	Moderate	Functional recovery	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-0.9 (-1.07, -0.73)	Control
Prestmo, A. 2015	Moderate	Mobility (Short Performance Physical Battery)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.5 (0.46, 0.54)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Mobility (Timed Up and Go)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-1.48 (-1.87, -1.09)	Orthopaedic care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Mobility (Short Performance Physical Battery)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.74 (0.70, 0.78)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Mobility (Timed Up and Go)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-1.89 (-2.24, -1.54)	Orthopaedic care
Prestmo, A. 2015	Moderate	Mobility (Short Performance Physical Battery)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.69 (0.64, 0.74)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Mobility (Timed Up and Go)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-1.32 (-1.72, -0.92)	Orthopaedic care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical functioning	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	4.52 (-0.41, 9.45)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical functioning	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	5.87 (-2.03, 13.77)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical functioning	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	4.76 (-3.60, 13.12)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical functioning	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	8.59 (0.15, 17.03)	Comprehensi ve care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to physical health problems	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	11.67 (4.91, 18.43)	Usual care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to physical health problems	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	11.2 (1.13, 21.27)	Usual care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to physical health problems	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	19.22 (7.59, 30.85)	Usual care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to physical health problems	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	22.67 (10.32, 35.02)	Usual care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical component summary score	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	1.5 (-0.25, 3.25)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical component summary score	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	1.7 (-0.87, 4.27)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical component summary score	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	1.77 (-1.03, 4.57)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Physical component summary score	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'sconditio n. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patient s are encouraged to ambulate with protected weight bearing for3 months.	Mean Differe nce	3.64 (0.52, 6.76)	Comprehensi ve care model

Table 119: INTERDISCIPLINARY CARE- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Nursing Home Life-Space Diameter (NHLSD)) (NHLSD)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	1.9 (1.77, 2.03)	SIG
Crotty, M. 2019	Moderate	Nursing Home Life-Space Diameter (NHLSD)) (NHLSD)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.4 (0.18, 0.62)	None
Crotty, M. 2019	Moderate	Nutritional assessment (Mini-Nutritional Assessment)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.7 (0.64, 0.76)	Intervention group

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Nutritional assessment (Mini-Nutritional Assessment)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.8 (0.70, 0.90)	Intervention group
Crotty, M. 2019	Moderate	Cost - Mean per participant	12 mos	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Author Reported - p>.05	N/A	NS
Crotty, M. 2019	Moderate	Cost-Incremental cost effectiveness ratios (ICERs) (Australian dollarsper unit increase in the NHLSD $)	12 mos	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Author Reported	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Cost-Incremental cost effectiveness ratios (ICERs) (per QALY gained$)	12 mos	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Author Reported	N/A	NS
Heltne, M. 2017	Moderate	Drugs started at discharge (Sum)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Number of drugs used regularlyper patient, mean (SD))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Mean Difference	0.9 (0.31, 1.49)	Orthopaedic ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Number of drugs used asneeded per patient, mean (SD))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Mean Difference	-0.24 (-0.47, -0.01)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Number of patients using ?5drugs)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.19(1.07,1.33)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Alimentary tract andmetabolism (ATC class A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.29(1.13,1.47)	Orthopaedic ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Constipation (A06A, A03FA,A03AX))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.43(1.14,1.78)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Vitamins and mineralsupplements (A11, A12))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.88(1.45,2.45)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Calcium and calcium incombination with vitamin D (A12AA, A12AX))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	5.42(3.25,9.04)	Orthopaedic ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Blood and blood-forming organs(ATC class B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.96(0.90,1.02)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Cardiovascular system (ATCclass C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.00(0.85,1.17)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Diuretics (C03))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.77(0.51,1.16)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Beta blockers (C07))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.33(1.01,1.74)	Orthopaedic ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Calcium antagonists (C08))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.45(0.23,0.89)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Renin-angiotensin acting agents(C09))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.00(0.69,1.45)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Genito-urinary system and sexhormones (ATC class G))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.90(0.42,1.93)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Systemic hormonal preparations, excl. sex hormones, insulins (ATC class H))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.68(0.45,1.04)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Anti-infectives for systemic use(ATC class J))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.39(0.94,2.07)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Antineoplastic andimmune-modulating agents (ATC class L))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.31(0.46,3.69)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Musculoskeletal system (ATCclass M))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	4.31(2.23,8.30)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Bisphosphonates (M05BA, M05BB))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	6.69(2.91,15.38)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Nervous system (ATC class N),all drugs)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.20(1.10,1.30)	Orthopaedic ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Nervous system (ATC class N),analgesics excluded)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.57(0.41,0.80)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Opioids (ATC class N02A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.86(1.45,2.37)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Paracetamol (ATC classN02BE))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	1.66(1.44,1.92)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Antipsychotics (N05A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.49(0.17,1.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Antidepressants (N06A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.91(0.55,1.49)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Anxiolytics (N05B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RD	-0.05(-0.09,-0.02)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Hypnotics and sedatives(N05C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.40(0.22,0.73)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Respiratory system (ATC classR))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.83(0.45,1.54)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Sensory organs (ATC class S))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.76(0.42,1.38)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Alimentary tract andmetabolism (ATC class A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	2.25(1.54,3.29)	Orthopaedic ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Constipation (A06A, A03FA,A03AX))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	2.65(1.74,4.05)	Orthopaedic ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Cardiovascular system (ATCclass C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.65(0.32,1.32)	NS
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Nervous system)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.55(0.43,0.72)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Opioids (ATC class N02A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.20(0.12,0.35)	Orthogeriatric ward
Heltne, M. 2017	Moderate	Drugs used at discharge from hospital (Paracetamol (ATC classN02BE))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	RR	0.29(0.17,0.51)	Orthogeriatric ward

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Gastrointestinal system and diabetes(ATC group A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Constipation (A06A, A03FA, A03AX))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Vitamins (A11, A12))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Calcium and calcium/vitamin Dcombination)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Blood and blood-building organs (ATCgroup B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Cardiovascular system (ATC group C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Diuretics (C03))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Beta blockers (C07))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Calcium antagonists (C08))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Agents acting on the renin-angiotensinsystem (C09))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Systemic infections (ATC group J))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Musculoskeletal system (ATC group M))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Bisphosphonates (M05BA, M05BB))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Nervous system (ATC group N))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Opioids (N02A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Non-opioids (N02B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Antipsychotics (N05A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Anxiolytics (N05B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Antidepressants (N06A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Hypnotics and sedatives (N05C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Others (ATC groups G, H, L P and R))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs withdrawn at discharge (Sum)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs started at discharge (Gastrointestinal system and diabetes (ATCgroup A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Constipation (A06A, A03FA, A03AX))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Vitamins (A11, A12))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Calcium and calcium/vitamin Dcombination)	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs started at discharge (Blood and blood-building organs (ATCgroup B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs started at discharge (Cardiovascular system (ATC group C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Diuretics (C03))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs started at discharge (Beta blockers (C07))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Calcium antagonists (C08))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs started at discharge (Agents acting on the renin-angiotensinsystem (C09))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Systemic infections (ATC group J))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Musculoskeletal system (ATC group M))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Bisphosphonates (M05BA, M05BB))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs started at discharge (Nervous system (ATC group N))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Opioids (N02A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Non-opioids (N02B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Antipsychotics (N05A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs started at discharge (Anxiolytics (N05B))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p<.05	N/A	Treatment 1 (intervention)
Heltne, M. 2017	Moderate	Drugs started at discharge (Antidepressants (N06A))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Heltne, M. 2017	Moderate	Drugs started at discharge (Hypnotics and sedatives (N05C))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Heltne, M. 2017	Moderate	Drugs started at discharge (Others (ATC groups G, H, L P and R))	12 days	Orthogeriatric ward: Comprehensive geriatric care (CGC) in a geriatricward.	Orthopaedic ward: Traditional orthopaedic care (OC).	Author Reported - p>.05	N/A	NS
Prestmo, A. 2015	Moderate	Cost (QALY 0–12 months)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.07 (0.07, 0.07)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Length of stay	12 days	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	1.6 (1.50, 1.70)	Orthopaedic care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Discharge status (Discharged directly home)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	2.36(1.45,3.84)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Number of patients living at home (1 month after treatment)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	1.07(0.98,1.16)	NS
Prestmo, A. 2015	Moderate	Number of patients living at home (4 months after treatment)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	1.10(0.98,1.23)	NS
Prestmo, A. 2015	Moderate	Number of patients living at home (12 months after treatment)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	1.15(1.00,1.33)	Comprehensive geriatric care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Patients admitted to hospital (0–4 months after treatment)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.95(0.70,1.30)	NS
Prestmo, A. 2015	Moderate	Patients admitted to hospital (4–12 months after treatment)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.82(0.61,1.11)	NS
Prestmo, A. 2015	Moderate	Rehabilitation (0–4 months after treatment)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.90(0.78,1.04)	NS
Prestmo, A. 2015	Moderate	Rehabilitation (4–12 months after treatment)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.69(0.35,1.35)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Short-term stay in a nursing home (0–4 months after treatment)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.87(0.61,1.23)	NS
Prestmo, A. 2015	Moderate	Short-term stay in a nursing home (4–12 months after treatment)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.57(0.32,1.00)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Permanent stay in a nursing home (0–4 months after treatment)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.88(0.55,1.40)	NS
Prestmo, A. 2015	Moderate	Permanent stay in a nursing home (4–12 months after treatment)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	RR	0.80(0.54,1.19)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General health perceptions	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	0.96 (-6.15, 8.07)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General health perceptions	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	7.66 (0.83, 14.49)	Comprehensive care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General health perceptions	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	3.94 (-2.88, 10.76)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General health perceptions	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	8 (0.61, 15.39)	Comprehensive care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Vitality (energy/fatigue)	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-1.59 (-7.81, 4.63)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Vitality (energy/fatigue)	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-0.4 (-5.85, 5.05)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Vitality (energy/fatigue)	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	1.7 (-4.33, 7.73)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Vitality (energy/fatigue)	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	2.3 (-4.00, 8.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General mental health	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	0.9 (-5.34, 7.14)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General mental health	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	0.69 (-4.96, 6.34)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General mental health	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	0.7 (-5.45, 6.85)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	General mental health	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	6.97 (0.78, 13.16)	Comprehensive care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Mental component summary score	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-1.35 (-4.26, 1.56)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Mental component summary score	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-0.36 (-2.85, 2.13)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Mental component summary score	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-0.55 (-3.28, 2.18)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Mental component summary score	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	1.08 (-1.76, 3.92)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Mortality	6 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	5.13(0.61,42.91)	NS
Shyu, Y. I. 2013	Moderate	Mortality	12 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	2.56(0.84,7.84)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Mortality	18 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	2.49(1.09,5.68)	Control group (usual care)
Shyu, Y. I. 2013	Moderate	Mortality	24 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	2.51(1.23,5.10)	Control group (usual care)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Dropped out	6 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	1.89(1.04,3.45)	Control group (usual care)
Shyu, Y. I. 2013	Moderate	Dropped out	12 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	1.98(1.15,3.40)	Control group (usual care)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Dropped out	18 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	2.12(1.24,3.61)	Control group (usual care)
Shyu, Y. I. 2013	Moderate	Dropped out	24 mos	Intervention group: Geriatric consultation services, a continuousrehabilitation program, and discharge-planning services and lasted until3 months after discharge The discharge-planning component wasdelivered by geriatric nurses of the interdisciplinary team to maintaincontinuity of care and to make appropriate referrals. The geriatricnurses also assessed the home environment, made suggestionsregarding environmental modifications, and monitored clinical follow-upadherence	Control group (usual care): The control group received usual care thatdoes not include geriatric assessment, in-home rehabilitation, andindividualized discharge planning with discharge telephone follow-upand home environment assessment.	RR	2.39(1.42,4.02)	Control group (usual care)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of ADL performance (CBI score)	1 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	3.73 (-1.13, 8.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of ADL performance (CBI score)	3 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	3.78 (-0.34, 7.90)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of ADL performance (CBI score)	6 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	3.75 (-0.69, 8.19)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of ADL performance (CBI score)	12 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	1.07 (-3.98, 6.12)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of ADL performance (CBI score)	18 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	4.24 (-0.79, 9.27)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of ADL performance (CBI score)	24 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	3.18 (-1.70, 8.06)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of IADL performance (IADL score)	1 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	0.32 (-0.10, 0.74)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of IADL performance (IADL score)	3 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	0.6 (0.01, 1.19)	Interdisciplinary care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of IADL performance (IADL score)	6 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	0.55 (-0.11, 1.21)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of IADL performance (IADL score)	12 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	0.57 (-0.16, 1.30)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of IADL performance (IADL score)	18 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	0.67 (-0.06, 1.40)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Recovery of IADL performance (IADL score)	24 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	Mean Difference	0.5 (-0.25, 1.25)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Mortality	1 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.50(0.05,5.43)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Mortality	3 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	1.00(0.14,6.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Mortality	6 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	1.00(0.14,6.96)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Mortality	12 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.60(0.15,2.44)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Mortality	18 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.60(0.23,1.59)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2016	Moderate	Mortality	24 mos	Interdisciplinary care: Geriatric consultation, hospital and in-homerehabilitation, and discharge planning. Geriatric consultations weredelivered by a geriatrician and a geriatric nurse to detect potentialproblems, to prevent delays in surgery. Rehabilitation started on thefirst day after surgery, and it included in-hospital sessions and in-homerehabilitation for 4 months after discharge. After hospitalisation, ageriatric nurse visited the patient weekly during the first month, andbiweekly during months 2–4. At the same time, a physical therapistvisited the patient during the first week, third week, and 12th week afterdischarge. Discharge planning was administered by geriatric nursesand comprised a structured assessment of home environment,referrals, and reminders for clinical follow-up.	Usual care: Geriatric consultation was not provided, althoughconsultations with internal medicine were occasionally made dependingon the patient's condition. On average hospital stays lasted for 7 days,with physical therapy starting on the second or third day followingsurgery. Patients did not receive post-discharge rehabilitation andtheir home environment was not assessed. Usually, patients wereasked to return to the clinic 1 and 3 months after discharge to checkbone healing, and at 6 and 12 months to check their overall condition.Among our control group that received only usual care, more thanone-third (36.36%) did not return for the 6-month clinical follow-up andaround half (49.49%) did not return for the 1-year follow-up	RR	0.58(0.24,1.42)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Naglie, G.2002	High	Ambulation (Decline in ambulation)	3 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	0.99(0.79,1.24)	NS
Naglie, G.2002	High	Ambulation (Decline in ambulation)	6 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	1.03(0.78,1.36)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Naglie, G.2002	High	Transfers (Decline in transfers)	3 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	1.16(0.86,1.57)	NS
Naglie, G.2002	High	Transfers (Decline in transfers)	6 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	1.00(0.71,1.41)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Naglie, G.2002	High	Residence Outcome (Change in residence)	3 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	0.95(0.61,1.46)	NS
Naglie, G.2002	High	Residence Outcome (Change in residence)	6 mos	Interdisciplinary care: protocols and standardized orders to try to prevent problems common in elderly patients with hip fracture early mobilization, early participation in self-care and individualized discharge planning	Usual care: On the usual care ward, patients had access to allied health care professionals if a consultation was requested, but they had limited access to an occupational therapist or a clinical nurse specialist. Those in the usual care group received routine postoperative surgical care only, which could include a geriatric consultation.	RR	0.94(0.55,1.60)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Length of hospital stay (Length of hospital stay according to mini mental state examination score of18-23 (median))	8 wks	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	Author Reported - p<.05	N/A	Intervention Group favored
Huusko, T.M. 2000	Moderate	Length of hospital stay (Length of hospital stay according to mini mental state examination score of24-30 (median))	8 wks	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	Author Reported - p>.05	N/A	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Place of residence (Independent living - amongst patients with mini mental state examination score of18-23)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	1.37(1.08,1.74)	Intervention group
Huusko, T.M. 2000	Moderate	Place of residence (Independent living - amongst patients with mini mental state examination score of18-23)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	1.15(0.84,1.58)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Independent living - amongst patients with mini mental state examination score of24-30)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	-0.12(.,.)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Place of residence (Independent living - amongst patients with mini mental state examination score of24-30)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	0.99(0.83,1.18)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Nursing home- amongst patients with mini mental state examination score of18-23)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RD	-0.05(-0.11,0.02)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Nursing home- amongst patients with mini mental state examination score of18-23)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	0.91(0.16,5.20)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Place of residence (Nursing home- amongst patients with mini mental state examination score of24-30)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RD	-0.02(-0.07,0.02)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Nursing home- amongst patients with mini mental state examination score of24-30)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	1.37(0.09,21.20)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Hospital - amongst patients with mini mental state examination score of 18-23)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	0.24(0.06,1.02)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Huusko, T.M. 2000	Moderate	Place of residence (Hospital - amongst patients with mini mental state examination score of 18-23)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	1.37(0.20,9.30)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Hospital - amongst patients with mini mental state examination score of 24-30)	3 mos	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RR	0.86(0.30,2.47)	NS
Huusko, T.M. 2000	Moderate	Place of residence (Hospital - amongst patients with mini mental state examination score of 24-30)	1 yrs	Intervention group: a geriatrician internist, a specially trained general practitioner, nurses with training in the care of older patients, a social worker, a neuro psychologist, an occupational therapist, and physiotherapists made up geriatric team. A consultant specialist in physical medicine, a neurologist, and a psychiatrist work with the team for up to four days each week.	Control group: Patients released to local hospital without geriatric intervention	RD	0.05(-0.02,0.11)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Olsson, L. E.2007	Moderate	Discharge planning (Number of days from admission until a notice was sent to the community assistance worker)	30 days	Integrated care pathway (ICP)	Standard Care	Mean Difference	-10 (-10.00, -10.00)	Integrated care pathway(ICP) group
Olsson, L. E.2007	Moderate	Discharge planning (Number of days from when a notice was sent until the meeting for discharge planning took place)	30 days	Integrated care pathway (ICP)	Standard Care	Mean Difference	-5 (-5.00, -5.00)	Integrated care pathway(ICP) group

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Vidan, M.2005	Moderate	Time to surgery (Time to surgery,hours)	1 wks	Intervention Group: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services including physical therapy and social work. A geriatric team that included geriatrician, a rehabilitation specialist, and a specific social worker also treated patients enrolled in the intervention	Usual care: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services, including physical therapy and social work.	Mean Difference	-2.7 (-13.31, 7.91)	NS
Vidan, M.2005	Moderate	Length of stay (Median)	30 days	Intervention Group: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services including physical therapy and social work. A geriatric team that included geriatrician, a rehabilitation specialist, and a specific social worker also treated patients enrolled in the intervention	Usual care: The intervention and control groups shared the same orthopedic wards and used same hospital-wide support services, including physical therapy and social work.	Mean Difference	-2 (-2.00, -2.00)	NS

Table 120: INTERDISCIPLINARY CARE- Pain

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	PAINAD (PAINAD - the Pain Assessment In Advanced Dementia scale:PAINAD)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.02 (-0.01, 0.05)	NS
Crotty, M. 2019	Moderate	PAINAD (PAINAD - the Pain Assessment In Advanced Dementia scale:PAINAD)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-0.01 (-0.06, 0.04)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Bodily pain	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-7.09 (-13.55, -0.63)	Comprehensive care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Bodily pain	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-9.28 (-15.53, -3.03)	Comprehensive care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Bodily pain	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-11.64 (-18.43, -4.85)	Comprehensive care model

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Bodily pain	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-4.71 (-10.71, 1.29)	NS

Table 121: INTERDISCIPLINARY CARE- QOL

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Quality of life (DEMQOL sum score)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	2.7 (2.03, 3.37)	None
Crotty, M. 2019	Moderate	Quality of life (DEMQOL index)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.06 (0.04, 0.08)	None
Crotty, M. 2019	Moderate	Quality of life (DEMQOL-proxy sum score)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.5 (0.21, 0.79)	None

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Quality of life (DEMQOL-proxy index)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.06 (0.05, 0.07)	None
Crotty, M. 2019	Moderate	EuroQol five dimension–five level questionnaire (EQ5D5L index)	4 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	0.05 (0.04, 0.06)	None
Crotty, M. 2019	Moderate	Quality of life (DEMQOL sum score)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	7.4 (6.52, 8.28)	SIG

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	Quality of life (DEMQOL index)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-0.06 (-0.07, -0.05)	None
Crotty, M. 2019	Moderate	Quality of life (DEMQOL-proxy sum score)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-3.2 (-3.67, -2.73)	None
Crotty, M. 2019	Moderate	Quality of life (DEMQOL-proxy index)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-0.06 (-0.07, -0.05)	None

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Crotty, M. 2019	Moderate	EuroQol five dimension–five level questionnaire (EQ5D5L index)	12 wks	Intervention group: Visits from a hospital outreach team who provided aComprehensive Geriatrics Assessment, physiotherapy and nutritionalassessment and care plan. The intervention was low intensity andinvolved 13 h of input.	Control	Mean Difference	-0.06 (-0.07, -0.05)	None
Prestmo, A. 2015	Moderate	Activities of daily living (Barthel Index)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.32 (0.26, 0.38)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Activities of daily living (Nottingham Extended ADL Scale)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	2.18 (1.91, 2.45)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Depressive symptoms (Geriatric Depression Scale)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-0.03 (-0.09, 0.03)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Fear of falling (Falls Efficacy Scale International-short form)	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-1.24 (-1.32, -1.16)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	EQ–5D–3L	1 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.06 (0.00, 0.12)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Activities of daily living (Barthel Index)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	1.01 (0.95, 1.07)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Activities of daily living (Nottingham Extended ADL Scale)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	6.17 (5.89, 6.45)	Comprehensive geriatric care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Depressive symptoms (Geriatric Depression Scale)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-0.43 (-0.49, -0.37)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Fear of falling (Falls Efficacy Scale International-short form)	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-1.26 (-1.34, -1.18)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	EQ–5D–3L	4 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.08 (0.03, 0.13)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Activities of daily living (Barthel Index)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	1.13 (1.06, 1.20)	Comprehensive geriatric care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Prestmo, A. 2015	Moderate	Activities of daily living (Nottingham Extended ADL Scale)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	6.39 (6.08, 6.70)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Depressive symptoms (Geriatric Depression Scale)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-0.72 (-0.78, -0.66)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	Fear of falling (Falls Efficacy Scale International-short form)	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	-1.22 (-1.31, -1.13)	Comprehensive geriatric care
Prestmo, A. 2015	Moderate	EQ–5D–3L	12 mos	Comprehensive geriatric care: Geriatric ward: Team membersconsisted of: Geriatricians Registered nurses, licensed practical nursesPhysiotherapist) Occupational therapists Orthopaedic surgeons	Orthopaedic care: Orthopaedic trauma ward - Orthopaedic care in theemergency department -	Mean Difference	0.07 (0.02, 0.12)	Comprehensive geriatric care

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Social functioning	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-3.03 (-11.75, 5.69)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Social functioning	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	1.3 (-6.84, 9.44)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Social functioning	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	1.6 (-5.75, 8.95)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Social functioning	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	4.39 (-2.64, 11.42)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to emotional problems	1 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	0.47 (-10.84, 11.78)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to emotional problems	3 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-1.15 (-10.53, 8.23)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to emotional problems	6 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	-0.09 (-8.82, 8.64)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Shyu, Y. I. 2013	Moderate	Role disability due to emotional problems	12 mos	Comprehensive care model: Comprehensive geriatric assessment andmedical super-vision were provided to detect potential clinical problemsand decrease delays before surgery. Geriatric nurse assessmentbefore surgery to obtain medical and fall histories, current medicalconditions, and comorbidities. At the same time, the geriatric nurseconducted a physical examination, physical and cognitive functionalassessment, and nutritional status assessment. The geriatric nursethen sent a referral sheet and called the geriatrician. The geriatricianexamined high-risk patients who were _x0003_80 years old, at highoperative risk, had poor nutritional status, had cognitive impairment ordisorienta-tion, or had unstable comorbid conditions. Based on thisassessment, the geriatrician then suggested various strate-gies to theprimary surgeon	Usual care: Patients are usually sent directly to the hospital emergencyroom and are cared for by orthopaedists. Consultations for internalmedicine care are occasionally made depending on the patient'scondition. Physical therapy usually starts on the second or third daywithout any in-home rehabilitation provided or telephone followups.Patients are encouraged to ambulate with protected weight bearing for3 months.	Mean Difference	1.24 (-6.27, 8.75)	NS

Table 122: INTERDISCIPLINARY CARE- Additional Outcomes

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Berggren et al 2008	Berg's Balance Scale	4 months	Control	Intervention	189	Mean difference	-3.60	0.12	N/A	NS
Berggren et al 2008	Berg's Balance Scale	12 months	Control	Intervention	160	Mean difference	-4.90	0.07	N/A	NS
Berggren et al 2008	Geriatric Depression Scale	Hospitalization	Control	Intervention	199	Mean difference	-0.70	0.17	N/A	NS
Berggren et al 2008	Geriatric Depression Scale	4 months	Control	Intervention	175	Mean difference	-1.00	0.03	N/A	Control
Berggren et al 2008	Geriatric Depression Scale	12 months	Control	Intervention	160	Mean difference	-1.60	0.00	N/A	Control
Berggren et al 2008	Mini Mental State Exam	Hospitalization	Control	Intervention	199	Mean difference	-1.70	0.17	N/A	NS
Berggren et al 2008	Mini Mental State Exam	4 months	Control	Intervention	175	Mean difference	0.00	1.00	N/A	NS
Berggren et al 2008	Mini Mental State Exam	12 months	Control	Intervention	160	Mean difference	-1.60	0.26	N/A	NS
Berggren et al 2008	Manage Chair Stand Test with Arms	4 months	Intervention Group	Control Group	175	Risk ratio	1.09	0.43	N/A	NS
Berggren et al 2008	Manage Chair Stand Test with Arms	12 months	Intervention Group	Control Group	160	Risk ratio	1.10	0.60	N/A	NS
Duncan, D. et al 2006	Length of Stay (days)	4 months	Diatetic assistant support	Routine nursing care	267	Mean difference	2.00	0.74	N/A	NS
Duncan, D. et al 2006	Trauma ward complications	4 months	Diatetic assistant support	Routine nursing care	255	Mean difference	-5.00	0.53	N/A	NS
Duncan, D. et al 2006	Mortality	In trauma unit	Diatetic assistant support	Routine nursing care	302	Risk ratio	0.41	0.05	N/A	NS
Duncan, D. et al 2006	Mortality	In hospital	Diatetic assistant support	Routine nursing care	302	Risk ratio	0.56	0.09	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Duncan, D. et al 2006	Mortality	4 months	Diatetic assistant support	Routine nursing care	302	Risk ratio	0.57	0.03	N/A	Diatetic assistant support
Huusko et al 2002	Median difference in activities of daily living score (higher is better)	3 months	Intensive geriatric rehabilitation ward	Standard postoperative rehabilitation	220	N/A	-	-	0.5	NS
Huusko et al 2002	Median difference in instrumental activities of daily living score (higher is better)	3 months	Intensive geriatric rehabilitation ward	Standard postoperative rehabilitation	220	N/A	-	-	0.05	Intensive geriatric rehabilitation ward
Huusko et al 2002	Median difference in activities of daily living score (higher is better)	1 year	Intensive geriatric rehabilitation ward	Standard postoperative rehabilitation	193	N/A	-	-	0.5	NS
Huusko et al 2002	Median difference in instrumental activities of daily living score (higher is better)	1 year	Intensive geriatric rehabilitation ward	Standard postoperative rehabilitation	193	N/A	-	-	0.6	NS
Huusko et al 2002	hospital stay (days)	in hospital	Intensive geriatric rehabilitation ward	Standard postoperative rehabilitation	220	Mean difference	-8.00	0.06	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Majumdar et al 2007	Osteoporosis Therapy received within 6 months of fracture	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	2.33	0.00	N/A	Favors Intervention
Majumdar et al 2007	BMD testing received within 6 months of fracture	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	2.75	0.001	N/A	Favors Intervention
Majumdar et al 2007	Guideline-concordant appropriate care received within 6 months of fracture	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	2.85	0.001	N/A	Favors Intervention
Majumdar et al 2007	Additional Fractures	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	1.00	1.00	N/A	NS
Majumdar et al 2007	Admission to Hospital	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	1.36	0.41	N/A	NS
Majumdar et al 2007	Death	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	1.50	0.65	N/A	NS
Majumdar et al 2007	General health status: physical component	6 months	Osteoporosis Case Manager	Usual Care	220	Mean difference	1.00	0.45	N/A	NS
Majumdar et al 2007	General health status: mental component	6 months	Osteoporosis Case Manager	Usual Care	220	Mean difference	-0.80	0.58	N/A	NS
Majumdar et al 2007	Independent ambulation	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	0.84	0.33	N/A	NS
Majumdar et al 2007	No hip pain	6 months	Osteoporosis Case Manager	Usual Care	220	Risk ratio	1.09	0.39	N/A	NS
Marcantonio, E. et al 2001	Hospital days of delirium per episode (Mean ± SD)	in hospital	proactive geriatric care	usual care	126	Mean difference	-0.20	0.60	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Marcantonio, E. et al 2001	Hospital length of stay (median _ IOR)	in hospital	proactive geriatric care	usual care	126	Mean difference	0.00	1.00	N/A	NS
Marcantonio, E. et al 2001	Delirium: cumulative incidence during acute hospitalization	in hospital	proactive geriatric care	usual care	126	Risk ratio	0.65	0.05	N/A	proactive geriatric care
Marcantonio, E. et al 2001	Severe delirium: cumulative incidence during acute hospitalization	in hospital	proactive geriatric care	usual care	126	Risk ratio	0.40	0.03	N/A	proactive geriatric care
Marcantonio, E. et al 2001	Discharged to institutional setting (nursing home, rehab hospital)	on discharge	proactive geriatric care	usual care	126	Risk ratio	1.05	0.41	N/A	NS
Marcantonio, E. et al 2001	Delirium at hospital discharge	in hospital	proactive geriatric care	usual care	126	Risk ratio	0.69	0.37	N/A	NS
Shyu, Y. et al 2008	Self-care ability	1 month	Interdisciplinary intervention program	usual care	162	Mean difference	8.32	0.00	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Self-care ability	3 months	Interdisciplinary intervention program	usual care	162	Mean difference	8.89	0.00	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Self-care ability	6 months	Interdisciplinary intervention program	usual care	162	Mean difference	7.76	0.00	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Self-care ability	12 months	Interdisciplinary intervention program	usual care	162	Mean difference	6.17	0.07	N/A	NS
Shyu, Y. et al 2008	depressive symptoms	1 month	Interdisciplinary intervention program	usual care	162	Mean difference	-1.12	0.06	N/A	NS
Shyu, Y. et al 2008	depressive symptoms	3 months	Interdisciplinary intervention program	usual care	162	Mean difference	-1.36	0.01	N/A	Interdisciplinary intervention program

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Shyu, Y. et al 2008	depressive symptoms	6 months	Interdisciplinary intervention program	usual care	162	Mean difference	-1.25	0.03	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	depressive symptoms	12 months	Interdisciplinary intervention program	usual care	162	Mean difference	-1.45	0.02	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Hospital Readmission	1 month	Interdisciplinary intervention program	usual care	162	Risk ratio	0.82	0.76	N/A	NS
Shyu, Y. et al 2008	Hospital Readmission	3 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.82	0.66	N/A	NS
Shyu, Y. et al 2008	Hospital Readmission	6 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.17	0.63	N/A	NS
Shyu, Y. et al 2008	Hospital Readmission	12 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.19	0.44	N/A	NS
Shyu, Y. et al 2008	Emergency Room Visit	1 month	Interdisciplinary intervention program	usual care	162	Risk ratio	0.38	0.15	N/A	NS
Shyu, Y. et al 2008	Emergency Room Visit	3 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.28	0.01	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Emergency Room Visit	6 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.48	0.01	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Emergency Room Visit	12 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.54	0.01	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Institutionalization	1 month	Interdisciplinary intervention program	usual care	162	Risk ratio	2.05	0.40	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Shyu, Y. et al 2008	Institutionalization	3 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.71	0.45	N/A	NS
Shyu, Y. et al 2008	Institutionalization	6 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.79	0.34	N/A	NS
Shyu, Y. et al 2008	Institutionalization	12 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.64	0.37	N/A	NS
Shyu, Y. et al 2008	Recovery of Walking ability	1 month	Interdisciplinary intervention program	usual care	162	Risk ratio	1.57	0.01	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Recovery of Walking ability	3 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.54	0.00	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Recovery of Walking ability	6 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.44	0.00	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Recovery of Walking ability	12 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.28	0.03	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Mortality	1 month	Interdisciplinary intervention program	usual care	162	% risk difference	0.00	1.00	N/A	NS
Shyu, Y. et al 2008	Mortality	3 months	Interdisciplinary intervention program	usual care	162	Risk ratio	1.03	0.98	N/A	NS
Shyu, Y. et al 2008	Mortality	6 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.77	0.61	N/A	NS
Shyu, Y. et al 2008	Mortality	12 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.89	0.73	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Shyu, Y. et al 2008	Occurrence of Falls	1 month	Interdisciplinary intervention program	usual care	162	Risk ratio	0.56	0.23	N/A	NS
Shyu, Y. et al 2008	Occurrence of Falls	3 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.62	0.09	N/A	NS
Shyu, Y. et al 2008	Occurrence of Falls	6 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.58	0.01	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2008	Occurrence of Falls	12 months	Interdisciplinary intervention program	usual care	162	Risk ratio	0.66	0.00	N/A	Interdisciplinary intervention program
Shyu, Y. et al 2010	Geriatric Depression Scale	12 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Mean difference	-1.50	0.01	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services
Shyu, Y. et al 2010	Geriatric Depression Scale	18 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Mean difference	-1.20	0.02	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services
Shyu, Y. et al 2010	Geriatric Depression Scale	24 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Mean difference	-1.20	0.03	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Shyu, Y. et al 2010	recovery to prefracture walking ability	12 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Risk ratio	1.16	0.26	N/A	NS
Shyu, Y. et al 2010	recovery to prefracture walking ability	18 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Risk ratio	1.78	0.00	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services
Shyu, Y. et al 2010	recovery to prefracture walking ability	24 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Risk ratio	1.54	0.02	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services
Shyu, Y. et al 2010	walking independently	12 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Risk ratio	1.26	0.12	N/A	NS
Shyu, Y. et al 2010	walking independently	18 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Risk ratio	1.84	0.00	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Shyu, Y. et al 2010	walking independently	24 months	geriatric consultation services, a continuous rehab program, discharge-planning services	usual care	162	Risk ratio	1.71	0.01	N/A	geriatric consultation services, a continuous rehab program, discharge-planning services
Shyu, Y. et al 2013	Chinese Barthel Index: Self Care Ability	12 months	comprehensive care	usual care	58	N/A	-	-	<.01	comprehensive care
Shyu, Y. et al 2013	Risk of Depression	12 months	comprehensive care	usual care	0	N/A	-	-	<.01	comprehensive care
Shyu, Y. et al 2013	Malnutrition	12 months	comprehensive care	usual care	0	N/A	-	-	>.05	NS
Shyu, Y. et al 2013	Risk of Depression	12 months	comprehensive care	Interdisciplinary Care	0	N/A	-	-	<.05	comprehensive care
Shyu, Y. et al 2013	Malnutrition	12 months	comprehensive care	Interdisciplinary Care	0	N/A	-	-	<.05	comprehensive care
Shyu, Y. et al 2013	Self-Care Ability	12 months	comprehensive care	usual care	198	Risk ratio	1.29	0.07	N/A	NS
Shyu, Y. et al 2013	Risk of Depression	12 months	comprehensive care	usual care	198	Risk ratio	0.04	0.00	N/A	comprehensive care
Shyu, Y. et al 2013	Malnutrition	12 months	comprehensive care	usual care	198	Risk ratio	0.74	0.25	N/A	NS
Shyu, Y. et al 2013	Risk of Depression	12 months	comprehensive care	Interdisciplinary Care	200	Risk ratio	0.04	0.00	N/A	comprehensive care
Stenvall et al 2007a	fall incidence rate ratio	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	0.006	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007a	fall incident rate ratio among people with dementia	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	64	N/A	-	-	0.006	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	post-op delirium	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	0.003	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	number of delirious days	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	<.001	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	urinary tract infections	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	<.01	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007a	sleep disturbances	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	<.01	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	nutritional problems	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	0.038	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	decubitus ulcers	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	N/A	-	-	0.01	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	Katz Activities of Daily Living-regained independence in ADL	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	195	N/A	-	-	0.036	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	Katz Activities of Daily Living-regained independence in ADL	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	184	N/A	-	-	0.078	NS
Stenvall et al 2007b	Katz Activities of Daily Living-regained independence in ADL	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	160	N/A	-	-	0.004	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	hospital stay (days)	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Mean difference			0.028	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	Number of fallers	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	0.44	0.01	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007a	Number of fallers with injuries due to falls	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	0.19	0.01	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	Number of fallers with fractures due to falls	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	% risk difference	-4.12	0.03	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007a	Number of fallers among people with dementia (n=28/36)	in hospital	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	64	Risk ratio	0.12	0.03	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	Living independently	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.14	0.36	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	Living independently	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.12	0.44	N/A	NS
Stenvall et al 2007b	Living independently	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.24	0.20	N/A	NS
Stenvall et al 2007b	independent walking ability	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.08	0.61	N/A	NS
Stenvall et al 2007b	independent walking ability	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.08	0.55	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent walking ability	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.16	0.29	N/A	NS
Stenvall et al 2007b	independent walking without walking aid indoors	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	% risk difference	3.92	0.03	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	independent walking without walking aid indoors	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.55	0.08	N/A	NS
Stenvall et al 2007b	independent walking without walking aid indoors	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.51	0.07	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent in personal and primary activities of daily life	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.43	0.16	N/A	NS
Stenvall et al 2007b	independent in personal and primary activities of daily life	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.45	0.10	N/A	NS
Stenvall et al 2007b	independent in personal and primary activities of daily life	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.85	0.02	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	independent in bathing	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.60	0.09	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent in bathing	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.65	0.05	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	independent in bathing	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.85	0.02	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	independent in dressing	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.41	0.11	N/A	NS
Stenvall et al 2007b	independent in dressing	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.08	0.67	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent in dressing	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.20	0.31	N/A	NS
Stenvall et al 2007b	independent in toiletnig	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	0.99	0.94	N/A	NS
Stenvall et al 2007b	independent in toiletnig	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.15	0.30	N/A	NS
Stenvall et al 2007b	independent in toiletnig	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.23	0.14	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent in transfer	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.02	0.85	N/A	NS
Stenvall et al 2007b	independent in transfer	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.12	0.38	N/A	NS
Stenvall et al 2007b	independent in transfer	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.22	0.14	N/A	NS
Stenvall et al 2007b	independent in continence	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.13	0.37	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent in continence	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.10	0.46	N/A	NS
Stenvall et al 2007b	independent in continence	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.37	0.03	N/A	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors
Stenvall et al 2007b	independent in feeding	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.08	0.31	N/A	NS

Study	Outcome	Duration	Group 1	Group 2	N	Statistic	Result	p	Study reported p-value	Favors
Stenvall et al 2007b	independent in feeding	4 months	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.09	0.31	N/A	NS
Stenvall et al 2007b	independent in feeding	1 year	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199	Risk ratio	1.19	0.08	N/A	NS
Stenvall et al 2007b	Length of in-hospital stay	discharge	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors	Conventional care in orthopaedic ward	199				0.028	post-op geriatric assessment and rehabilitation, including prevention, detection, and treatment of fall risk factors

Table 123: WEIGHT BEARING- Adverse Events

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Atzmon, R. 2021	Low	Complication (Cerebrovascular accident)	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	17.21(6.52,45.47)	Non-weight bearing
Atzmon, R. 2021	Low	Complication (Pulmonary embolism)	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	0.69(0.21,2.31)	NS
Atzmon, R. 2021	Low	Complication (Deep vein thrombosis)	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	1.49(0.47,4.75)	NS
Atzmon, R. 2021	Low	Complication (Deep vein thrombosis)	Postop 3 yrs	Partial weight bearing: Place some of body weight, including to-touching, on affected leg using crutches or walker by 4-6 weeks; and<50% amount of weight, determined by physician	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	4.39(1.21,15.91)	Non-weight bearing
Ottesen, T. D. 2018	Low	Any adverse event (AAE)	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.74(0.64,0.85)	Weight-bearing as tolerated

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ottesen, T. D. 2018	Low	Severe adverse event (SAE)	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.73(0.62,0.87)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Deep infection	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.64(0.48,0.86)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Sepsis	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.61(0.38,1.00)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Failure to wean	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.55(0.25,1.20)	NS
Ottesen, T. D. 2018	Low	Reintubation	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.55(0.25,1.20)	NS
Ottesen, T. D. 2018	Low	Renal failure	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.51(0.14,1.81)	NS
Ottesen, T. D. 2018	Low	Thromboembolic events	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	1.05(0.67,1.66)	NS
Ottesen, T. D. 2018	Low	Cardiac arrest	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.31(0.12,0.75)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Myocardial infarction	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.78(0.49,1.26)	NS
Ottesen, T. D. 2018	Low	Stroke	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.66(0.34,1.28)	NS
Ottesen, T. D. 2018	Low	Minor adverse event (MAE)	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.79(0.63,0.98)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Superficial infection	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.75(0.26,2.15)	NS

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Ottesen, T. D. 2018	Low	Pneumonia	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.66(0.48,0.90)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Urinary tract infection	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.89(0.64,1.24)	NS
Ottesen, T. D. 2018	Low	Post-renal insufficiency	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.61(0.21,1.83)	NS
Ottesen, T. D. 2018	Low	Postoperative delirium	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.63(0.54,0.73)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Postoperative infection	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.74(0.60,0.90)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Transfusion	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.71(0.64,0.78)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Length of stay ? 75th percentile (7 days or more)	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.68(0.61,0.75)	Weight-bearing as tolerated
Ottesen, T. D. 2018	Low	Return to the operating theatre within 30 days	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	1.00(0.65,1.54)	NS
Ottesen, T. D. 2018	Low	Readmission within 30 days	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.85(0.70,1.03)	NS
Ottesen, T. D. 2018	Low	Mortality within 30 days	Postop 30days	Weight-bearing as tolerated	Restricted weightbearing	RR	0.58(0.43,0.77)	Weight-bearing as tolerated

Table 124: WEIGHT BEARING- Other

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Atzmon, R. 2021	Low	Hospital stay (Number of days in hospital, average)	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	Author Reported - p<.05	N/A	Treatment 2 (no weight bearing)
Atzmon, R. 2021	Low	Rehabilitation (Rehabilitation (Y/N))	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	1.99(1.45,2.73)	Full-weight bearing
Atzmon, R. 2021	Low	Mortality (Mortality rate)	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	0.60(0.53,0.68)	Full-weight bearing
Atzmon, R. 2021	Low	Hospital stay (Number of days in hospital, average)	Postop 3 yrs	Partial weight bearing: Place some of body weight, including to-touching, on affected leg using crutches or walker by 4-6 weeks; and<50% amount of weight, determined by physician	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	Author Reported - p<.05	N/A	Treatment 2 (no weight bearing)

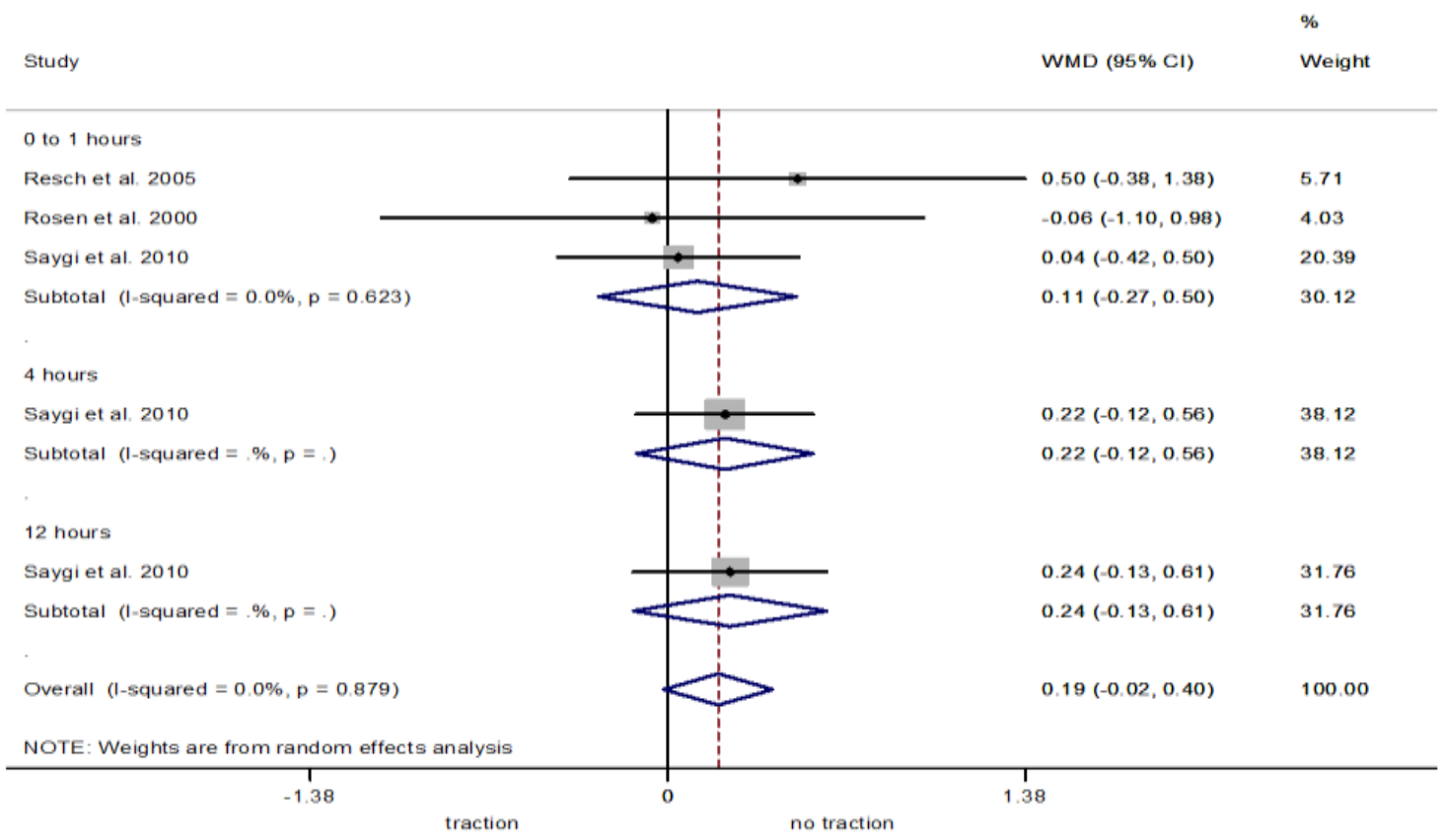
Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Atzmon, R. 2021	Low	Rehabilitation (Rehabilitation (Y/N))	Postop 3 yrs	Partial weight bearing: Place some of body weight, including to-touching, on affected leg using crutches or walker by 4-6 weeks; and<50% amount of weight, determined by physician	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	2.75(1.93,3.93)	Partial weight bearing
Atzmon, R. 2021	Low	Mortality (Mortality rate)	Postop 3 yrs	Partial weight bearing: Place some of body weight, including to-touching, on affected leg using crutches or walker by 4-6 weeks; and<50% amount of weight, determined by physician	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	RR	0.81(0.66,0.98)	Partial weight bearing

Table 125: WEIGHT BEARING- Pain

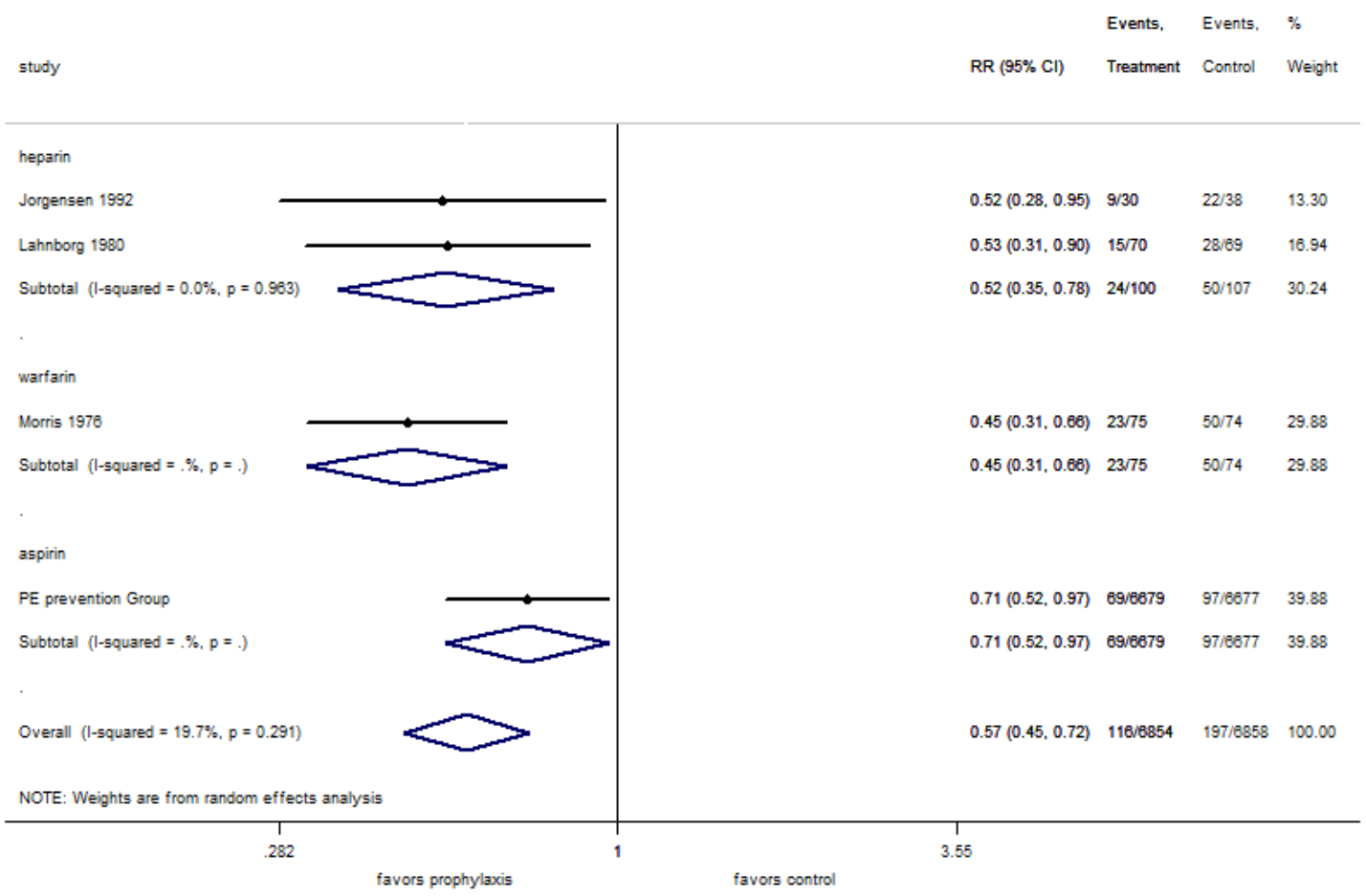
Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Treatment 2 (Details)	Effect Measure	Result (95% CI)	Favored Treatment
Atzmon, R. 2021	Low	Pain (Pain levels)	Postop 3 yrs	Full-weight bearing: Place full body weight on affected leg	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	Author Reported - p>.05	N/A	NS
Atzmon, R. 2021	Low	Pain (Pain levels)	Postop 3 yrs	Partial weight bearing: Place some of body weight, including to-touching, on affected leg using crutches or walker by 4-6 weeks; and<50% amount of weight, determined by physician	Non-weight bearing: Place no weight on affected leg, and Hold affected leg off floor when walk	Author Reported - p>.05	N/A	NS

Meta-Analysis

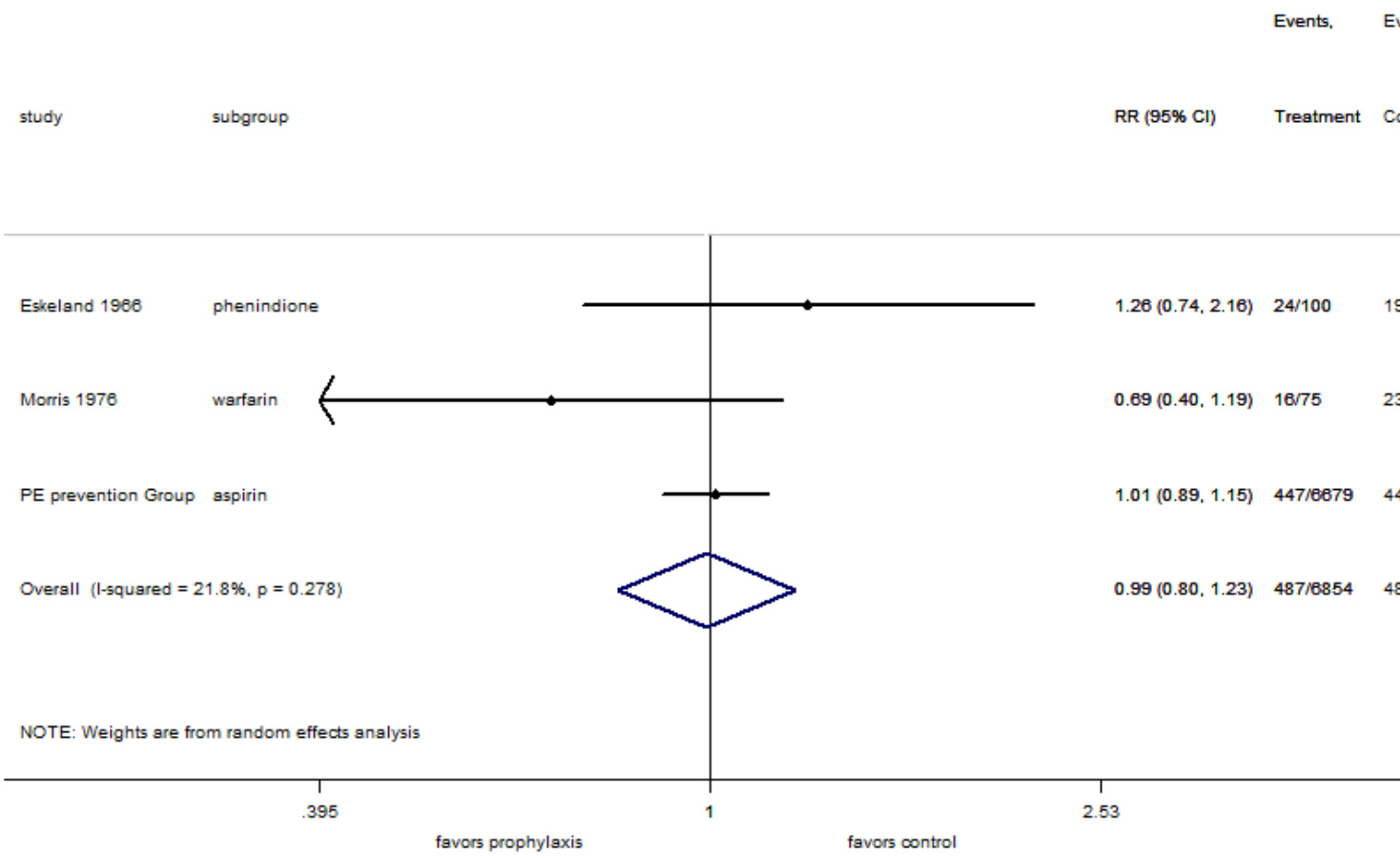
Traction Versus No Traction: VAS Pain



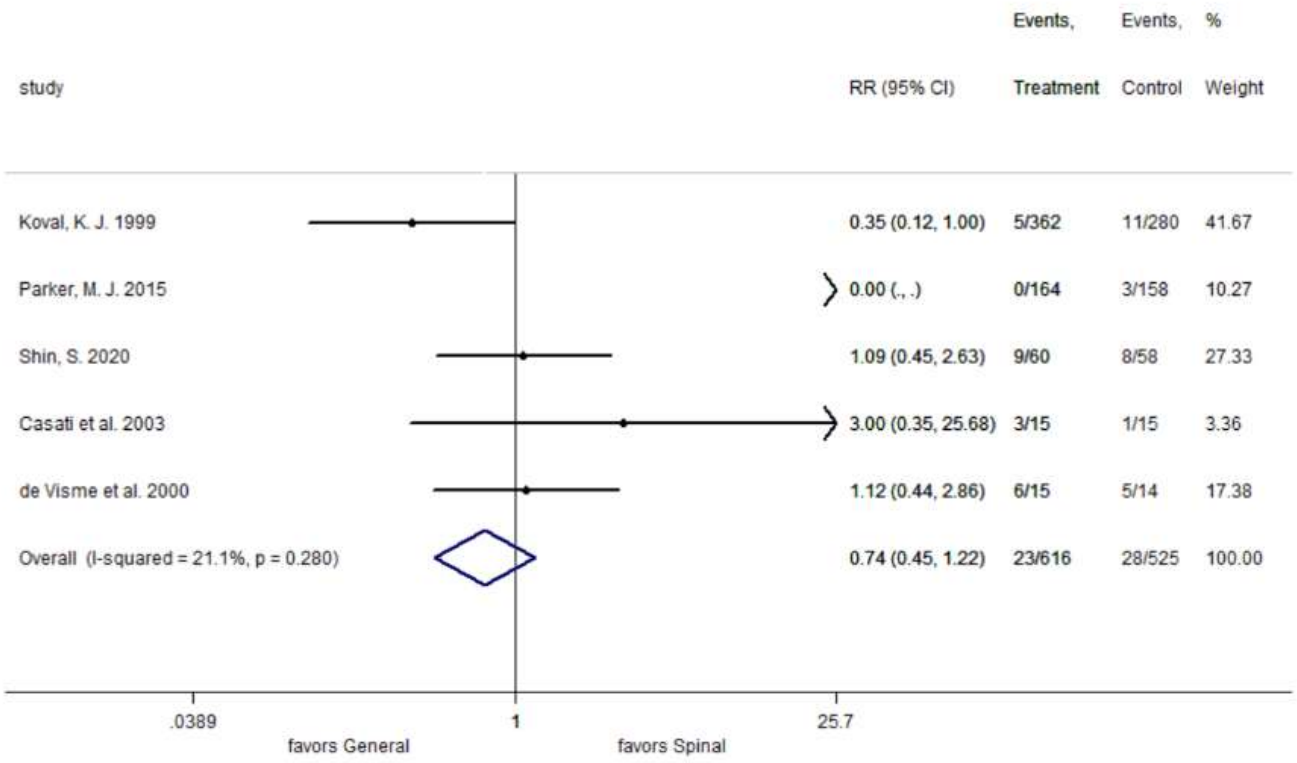
Pharm VTE Prophylaxis vs Control Group – DVT



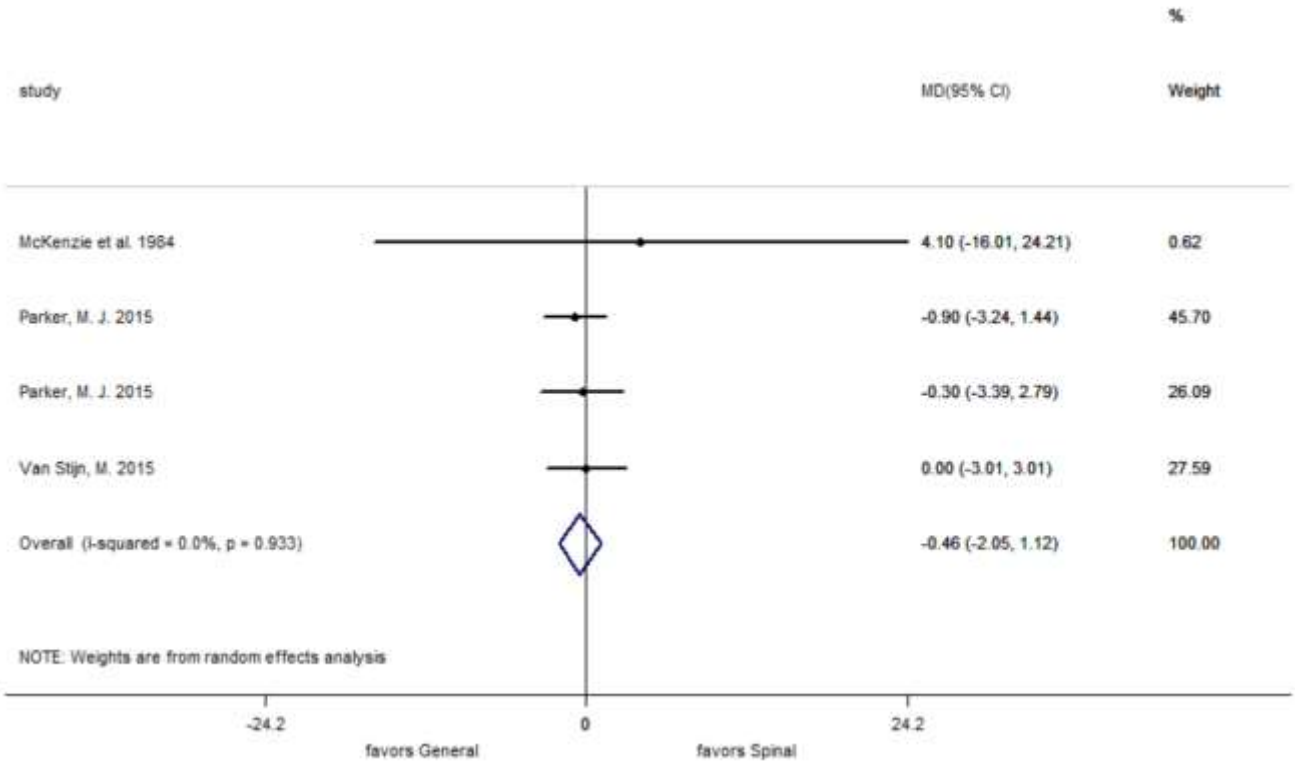
Pharm VTE Prophylaxis vs Control Group – Overall mortality



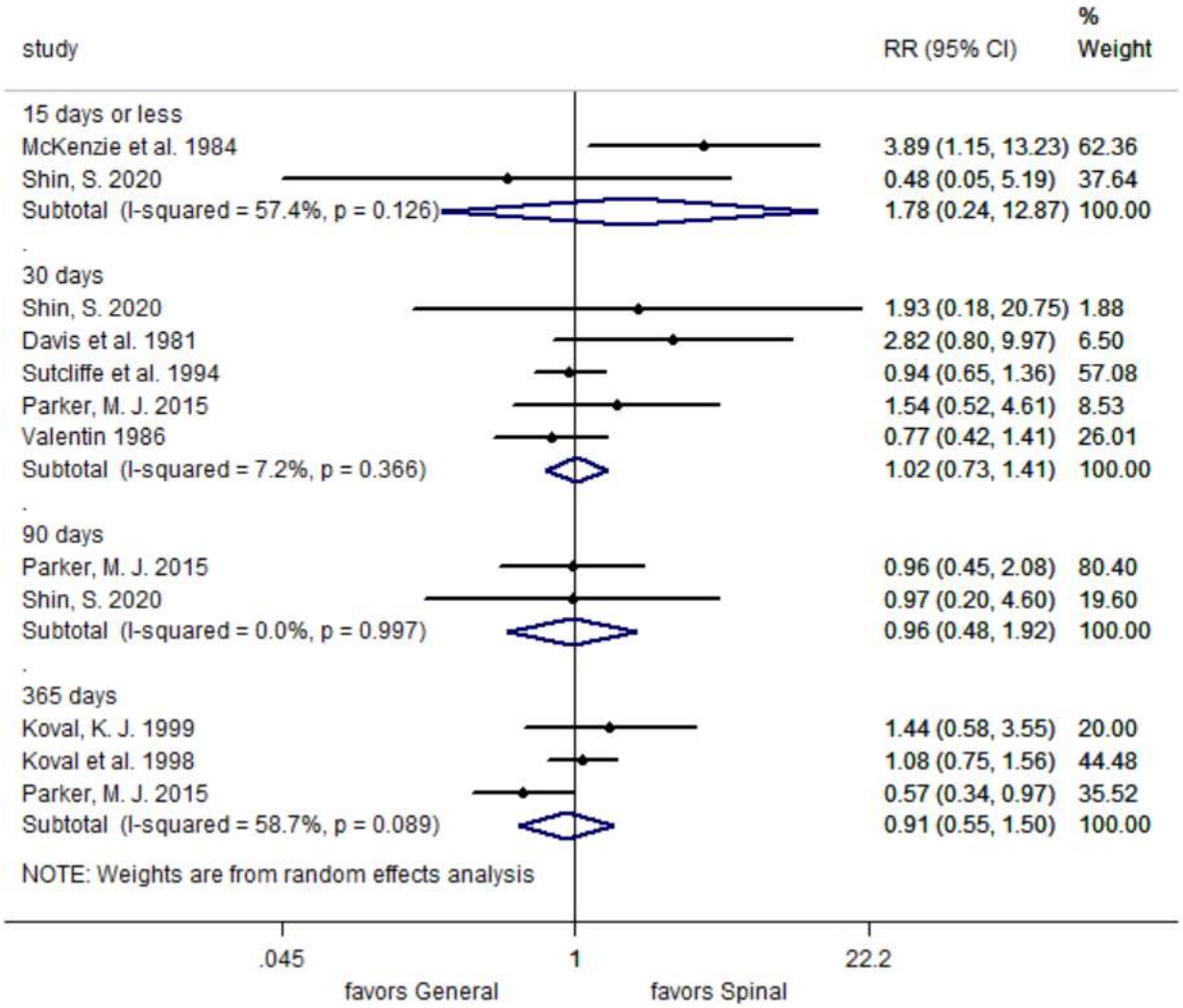
General vs Spinal Anesthesia – Delirium or Cognitive Disfunction



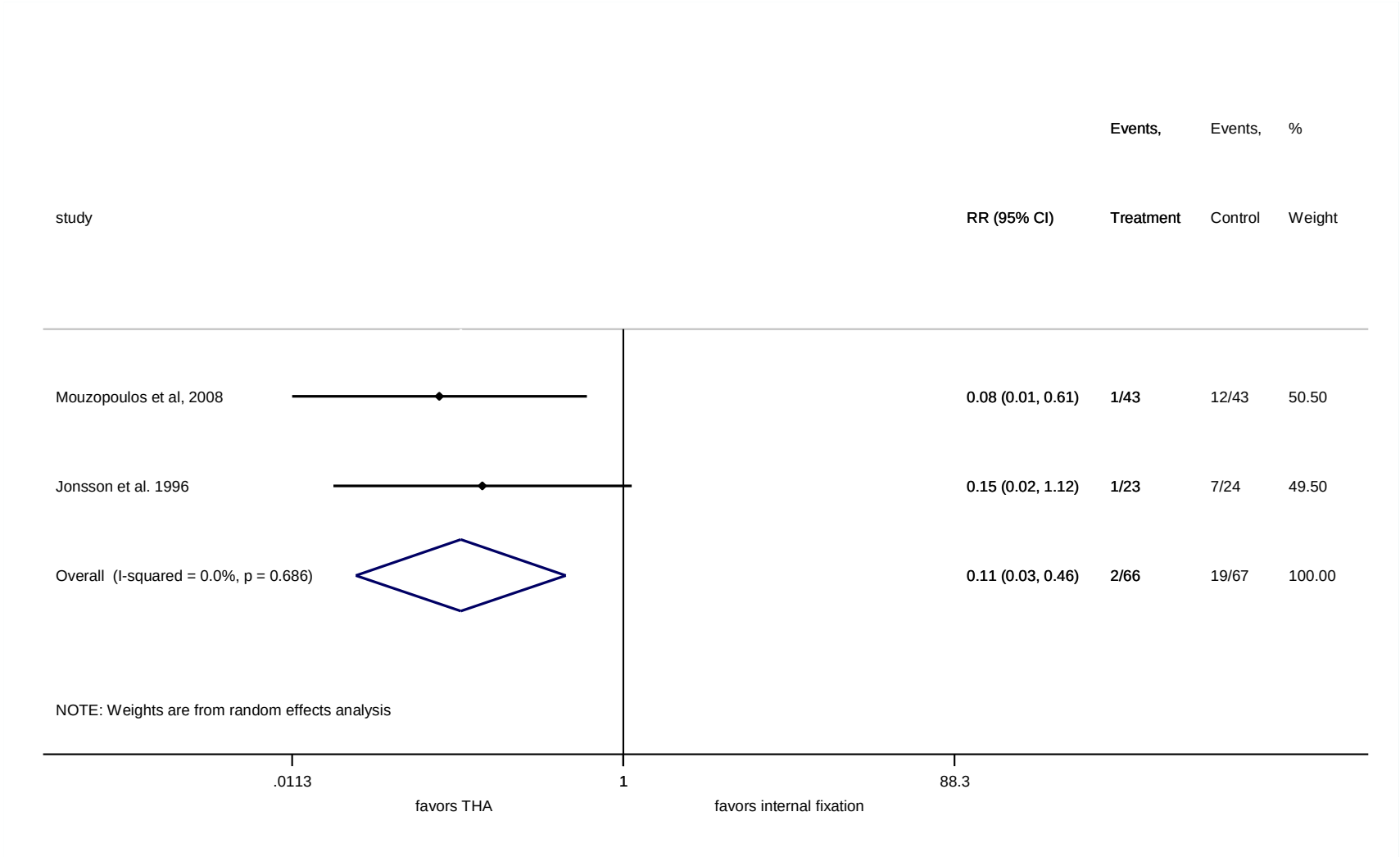
General vs Spinal Anesthesia – Length of Stay (Days)



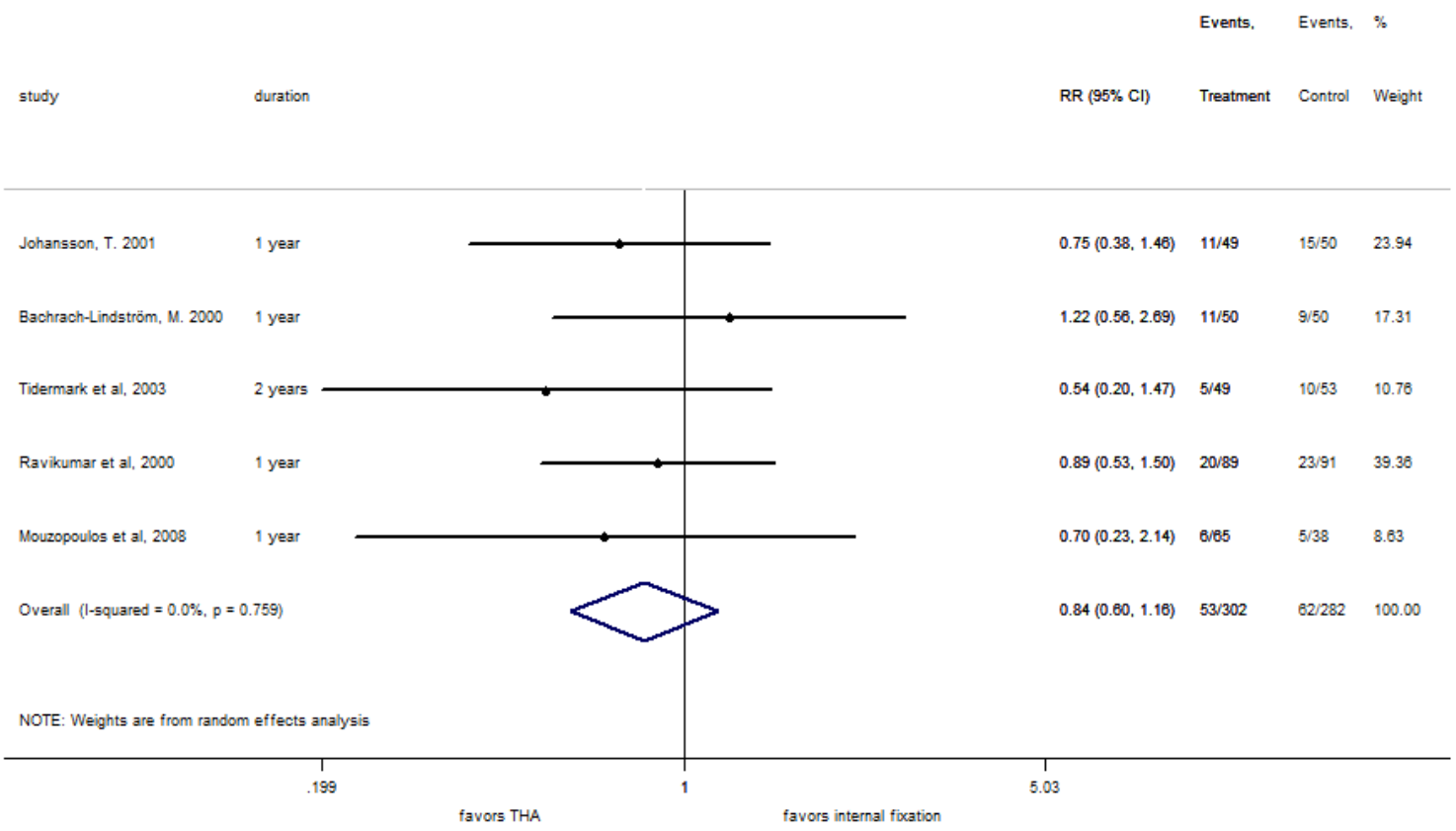
General vs Spinal Anesthesia – Mortality by Duration



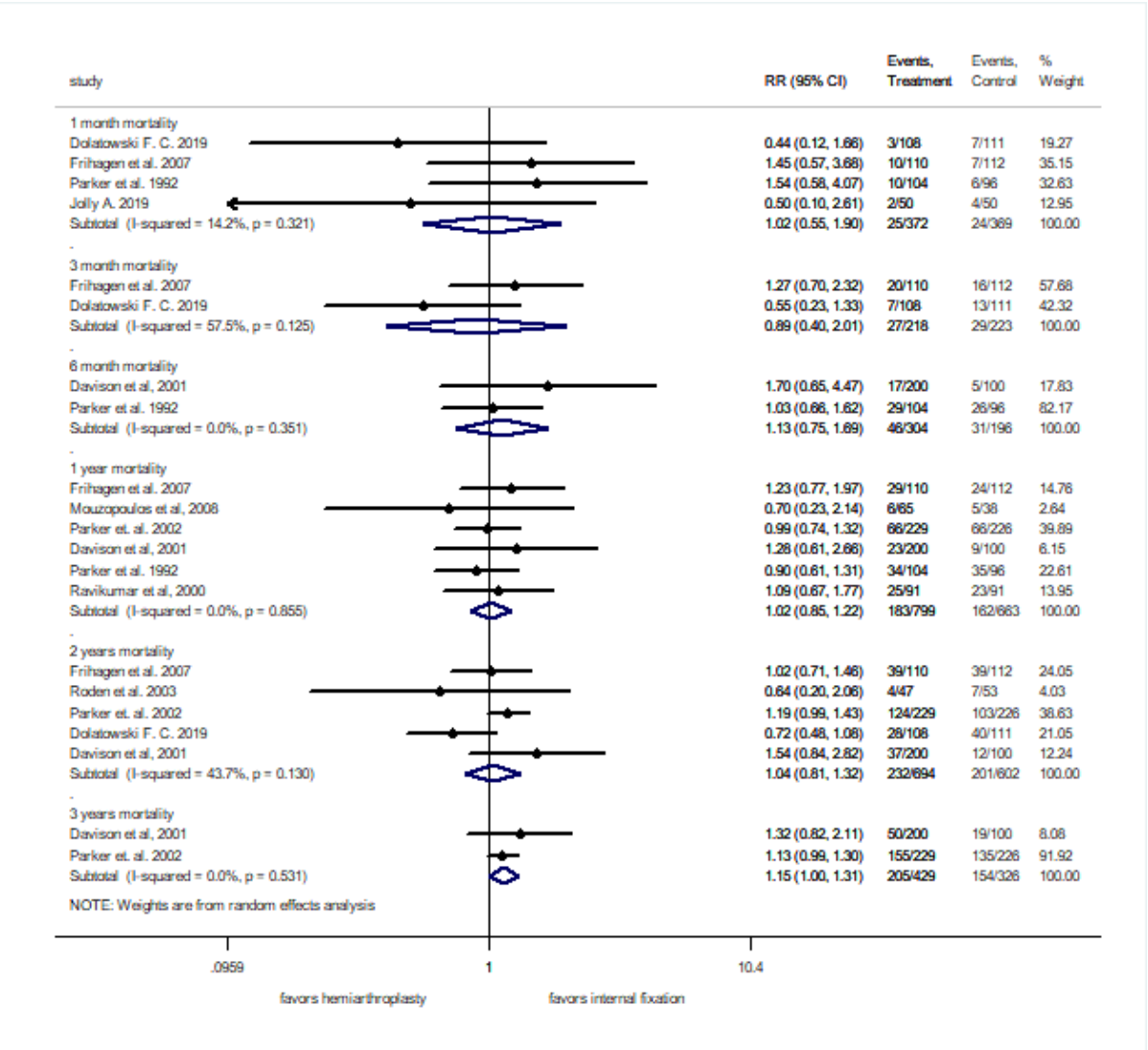
Internal Fixation versus Total Arthroplasty in Unstable Fracture – Revision



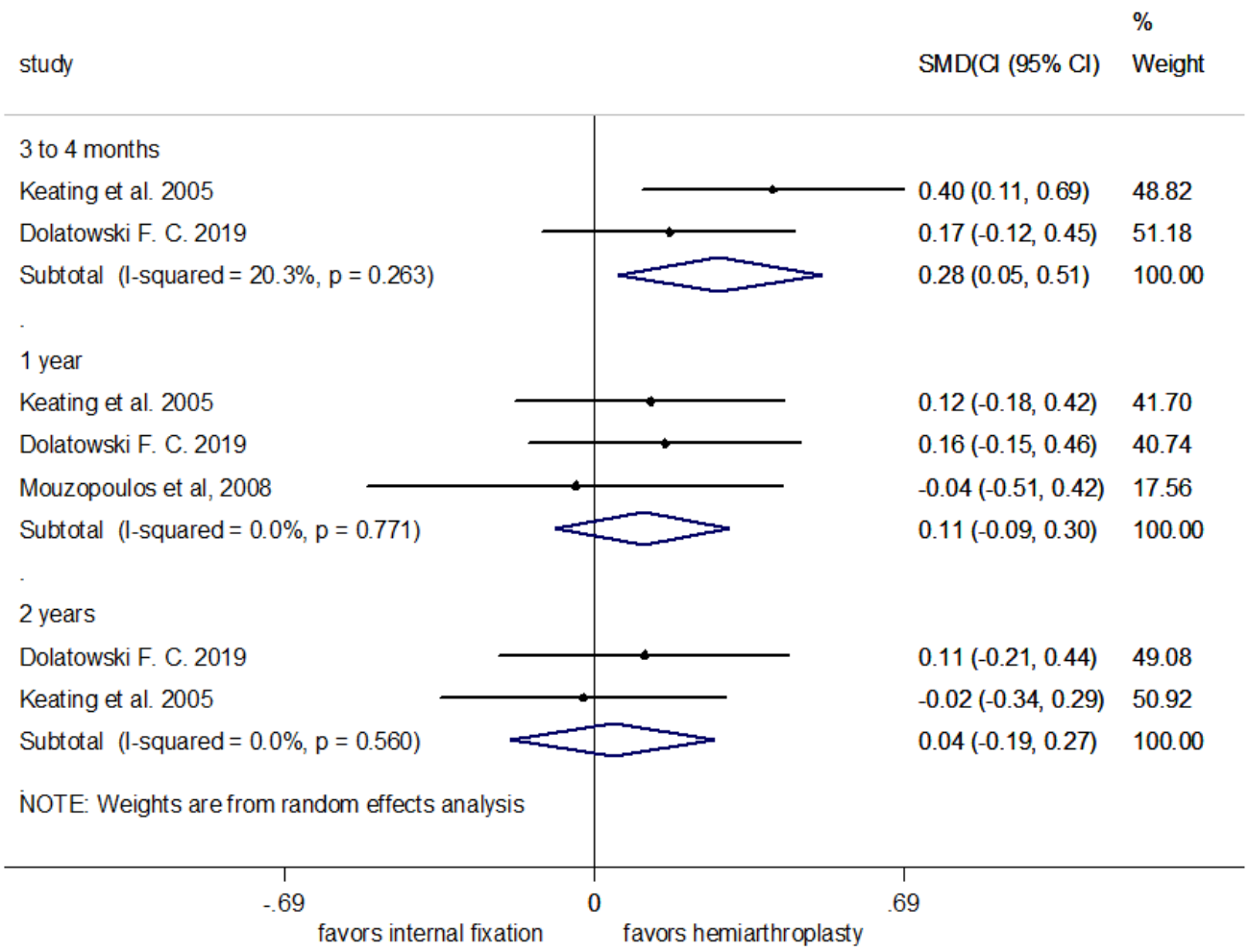
Internal Fixation Versus Total Arthroplasty in Unstable Fracture - Mortality



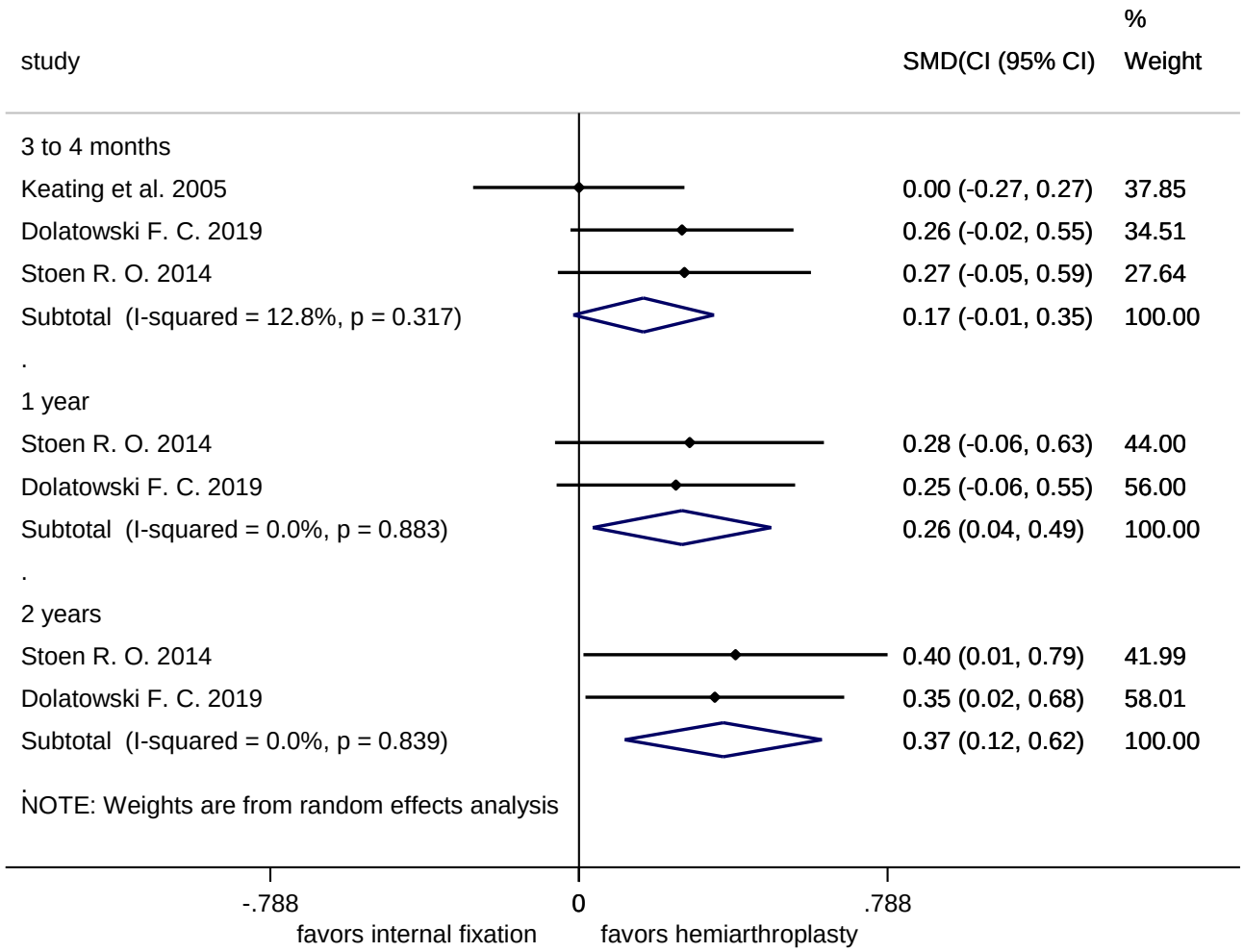
Internal Fixation Versus Hemi-Arthroplasty in Unstable Fractures: Mortality



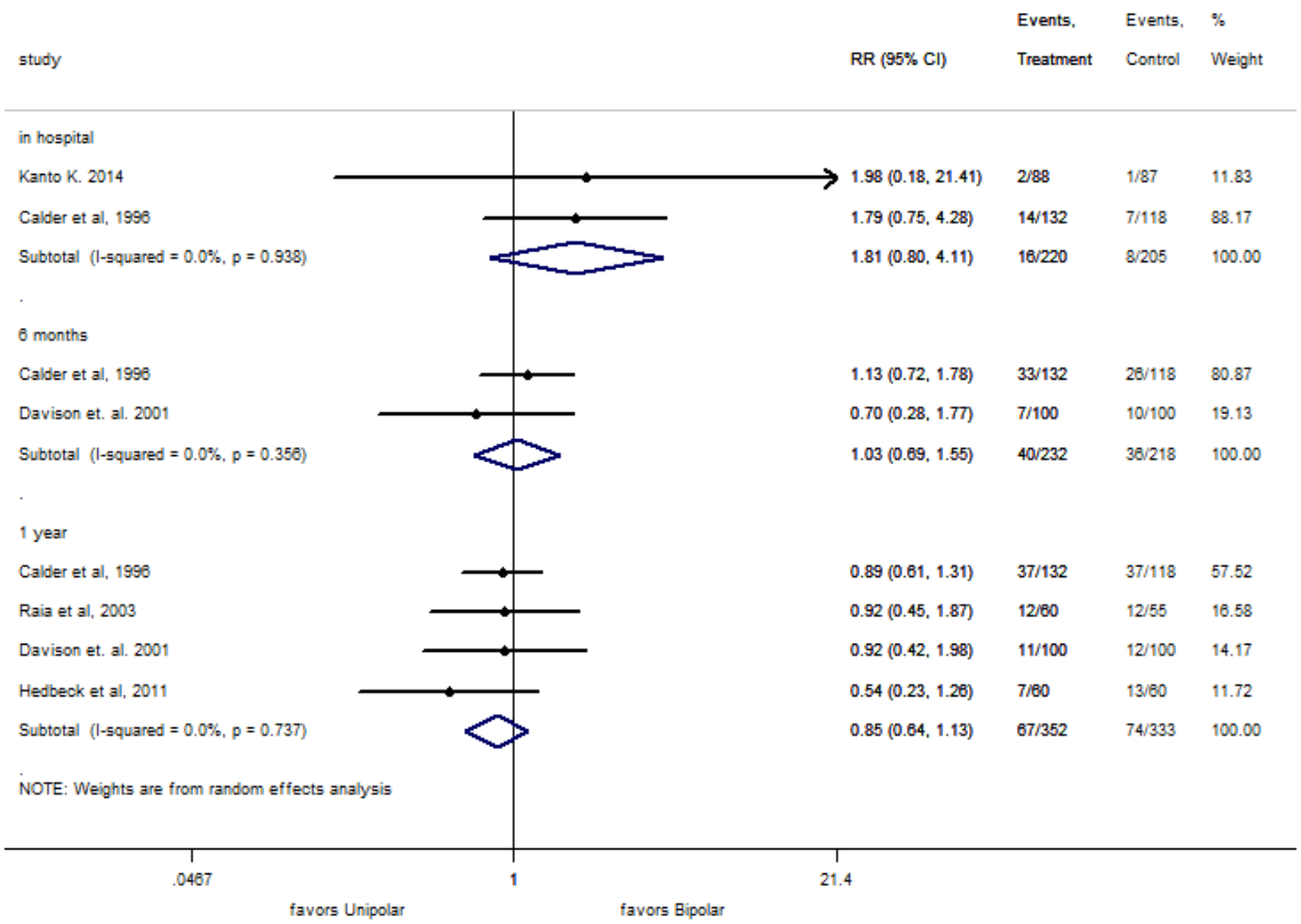
Hemiarthroplasty vs Internal Fixation in Unstable Fractures - Function



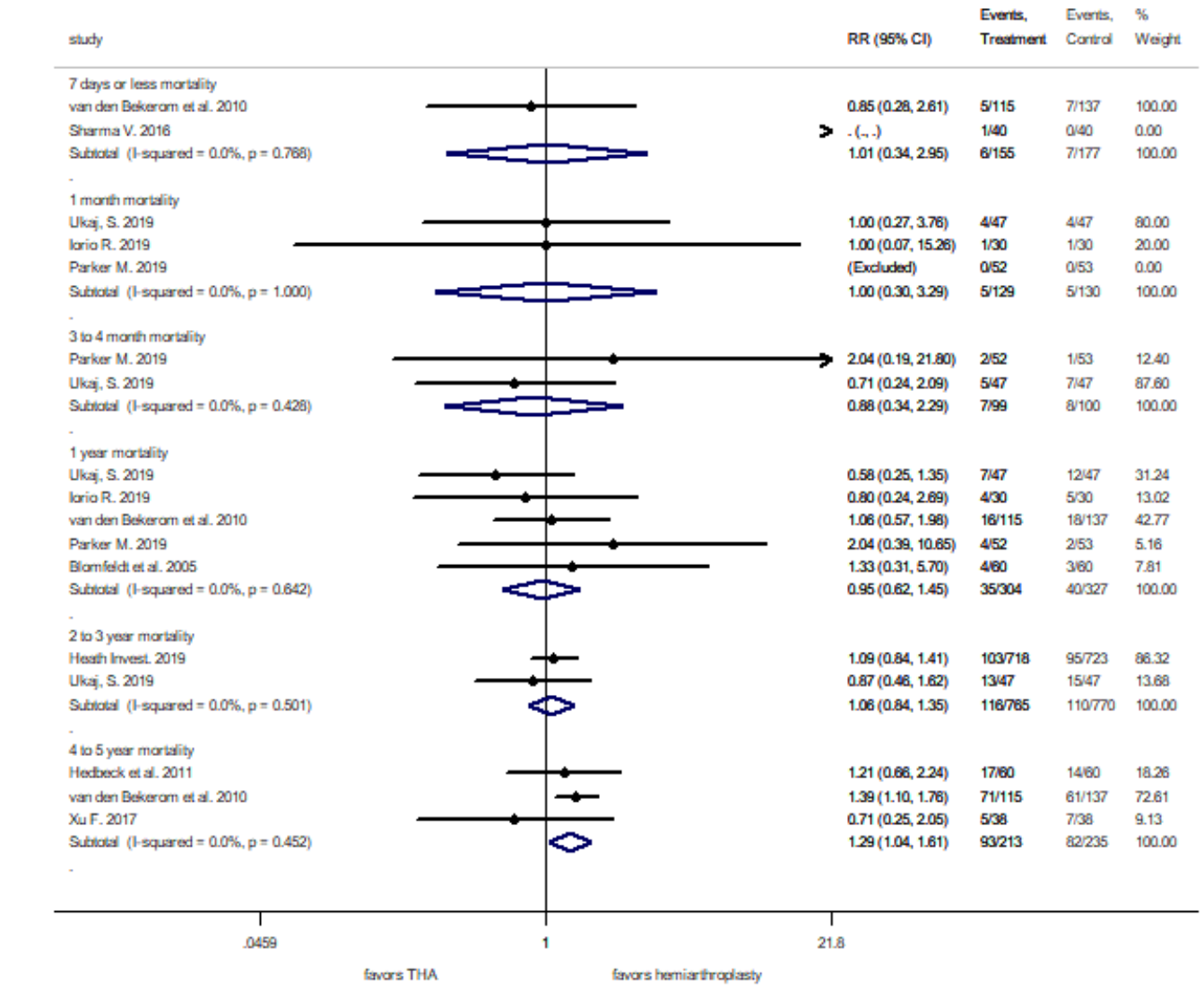
Hemiarthroplasty vs Internal Fixation in Unstable Fractures - Quality of Life



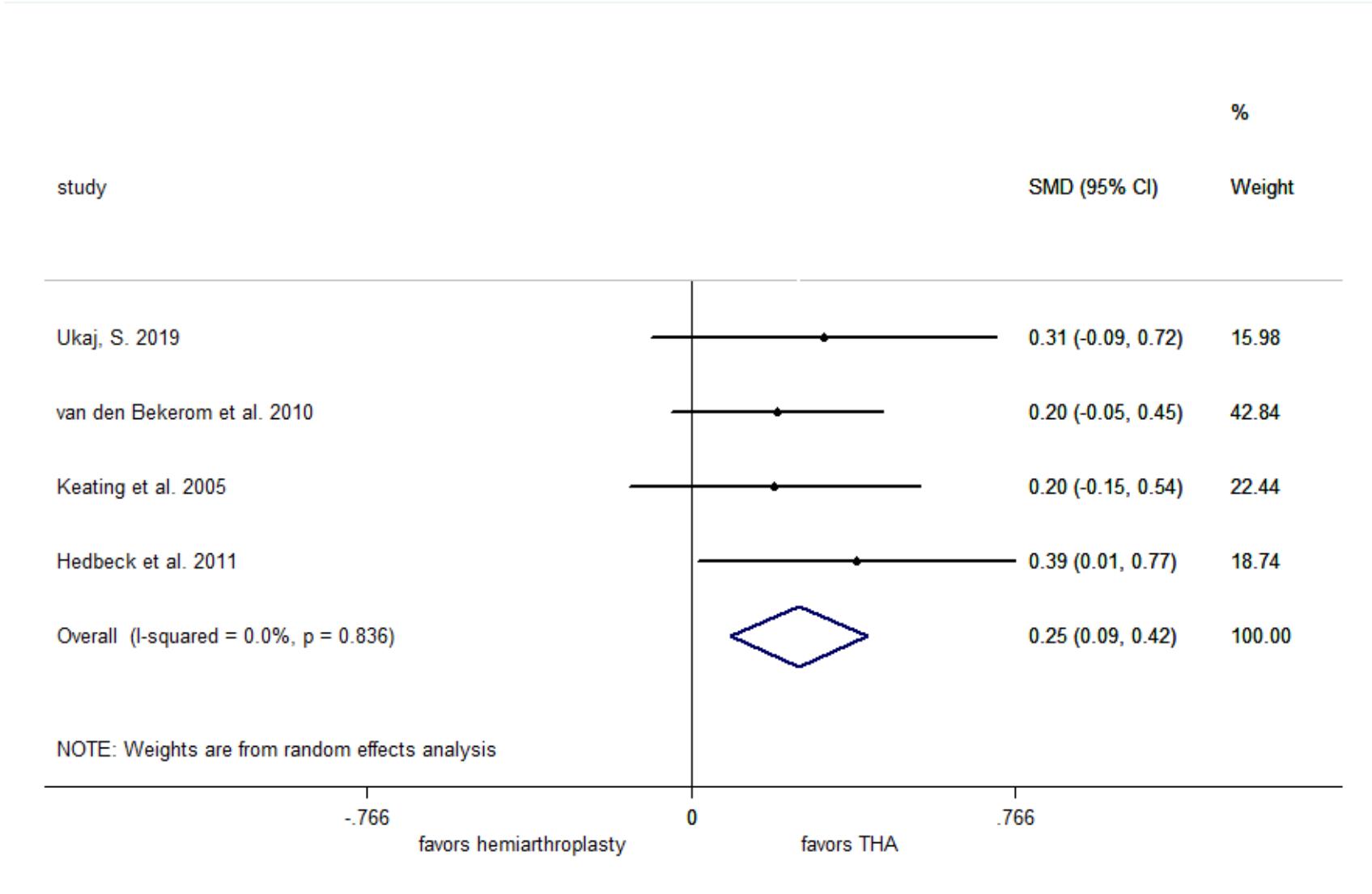
Unipolar Versus Bipolar Hemi Arthroplasty in Unstable Femoral neck Fractures - Mortality



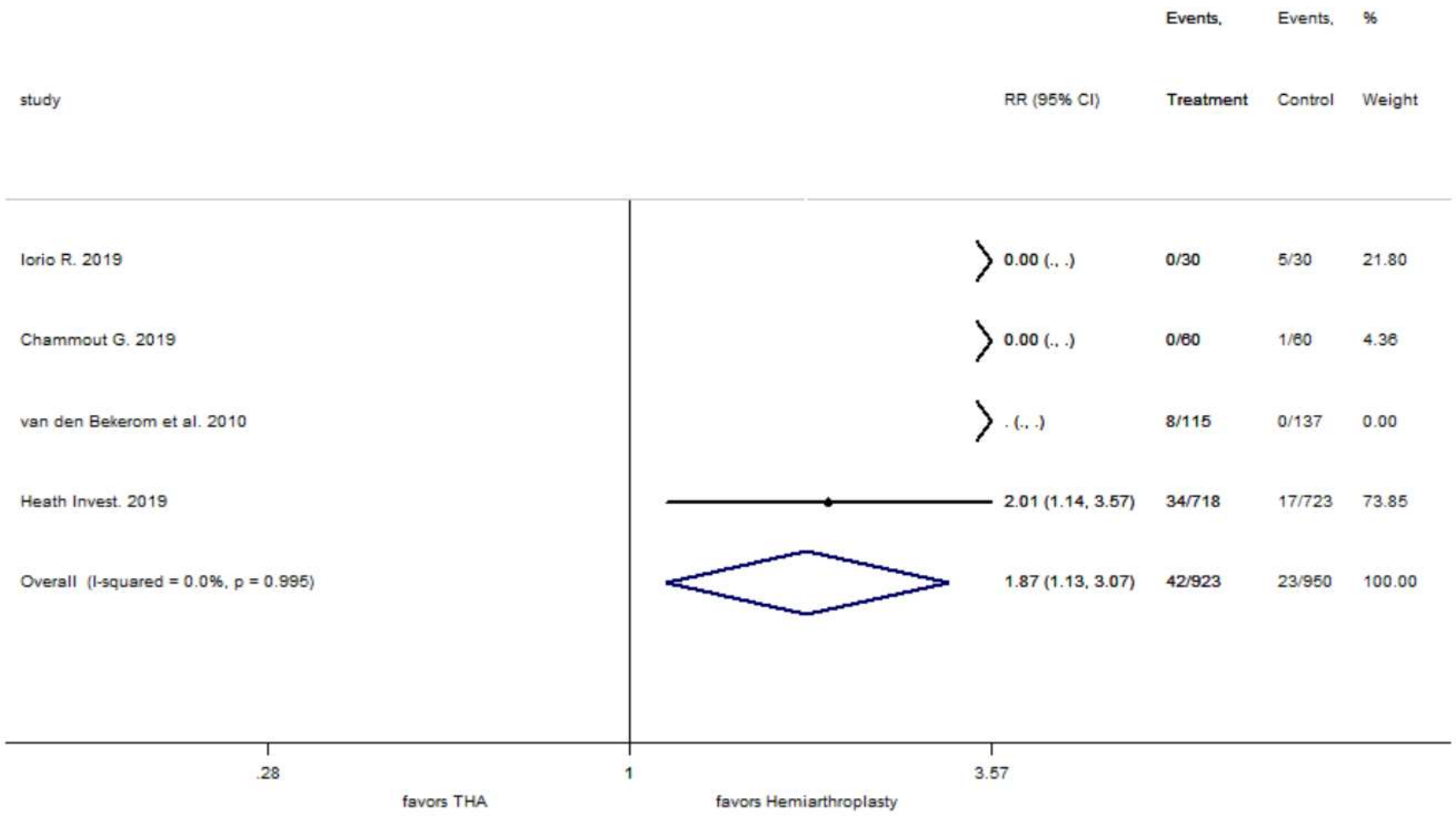
Hemiarthroplasty versus Total Arthroplasty - Mortality



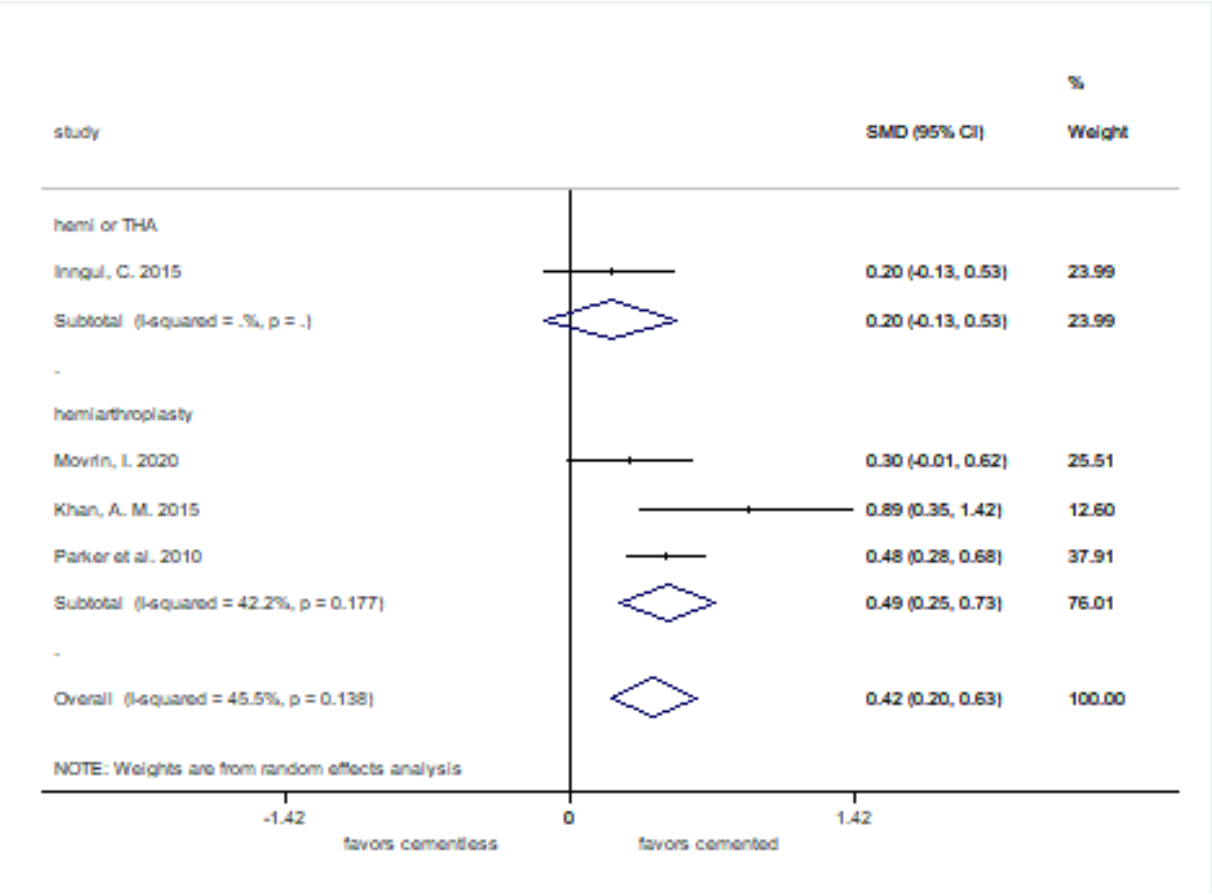
Hemiarthroplasty versus Total Arthroplasty - Function Scores



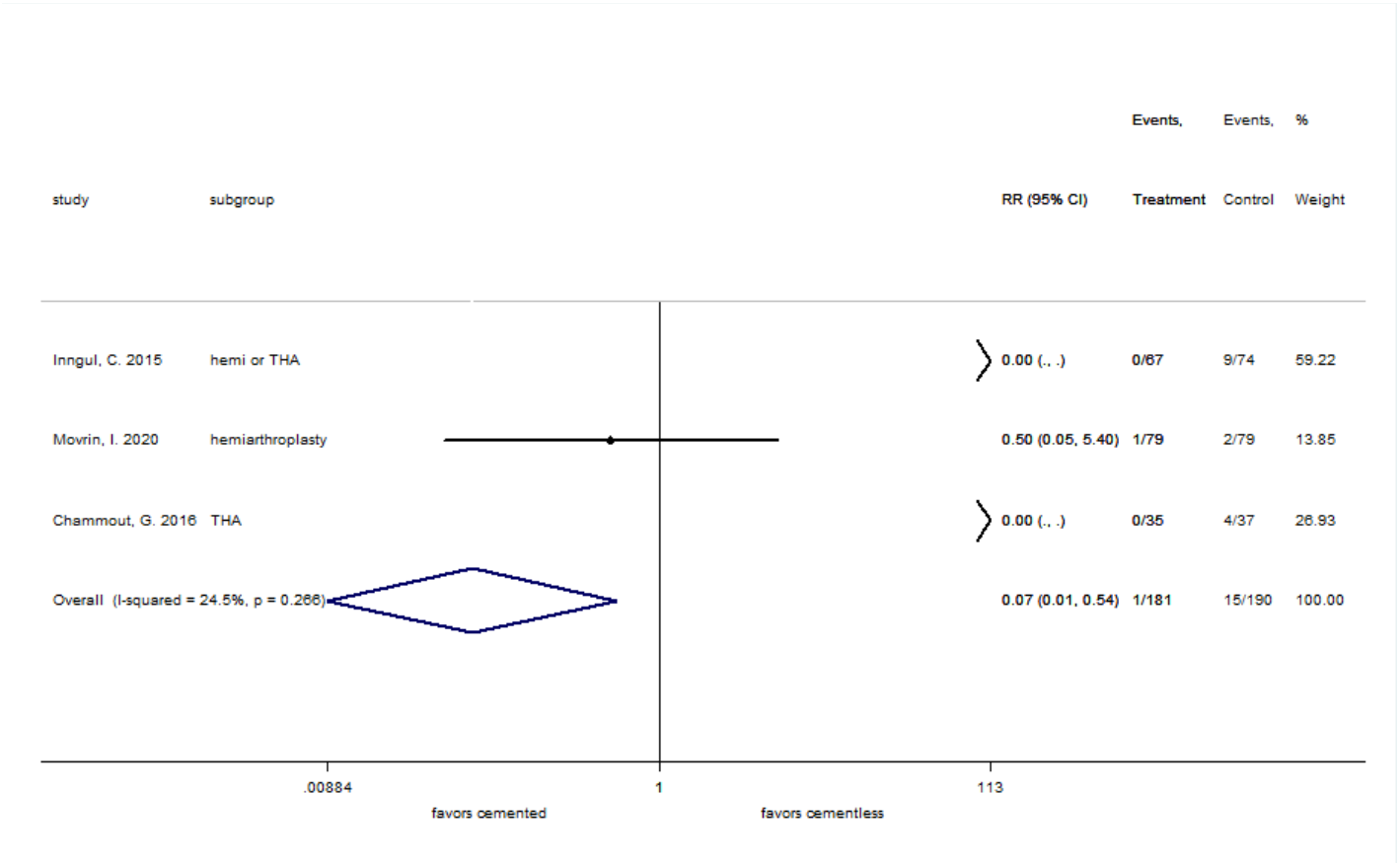
Hemiarthroplasty Versus Total Arthroplasty -Instability or Dislocation



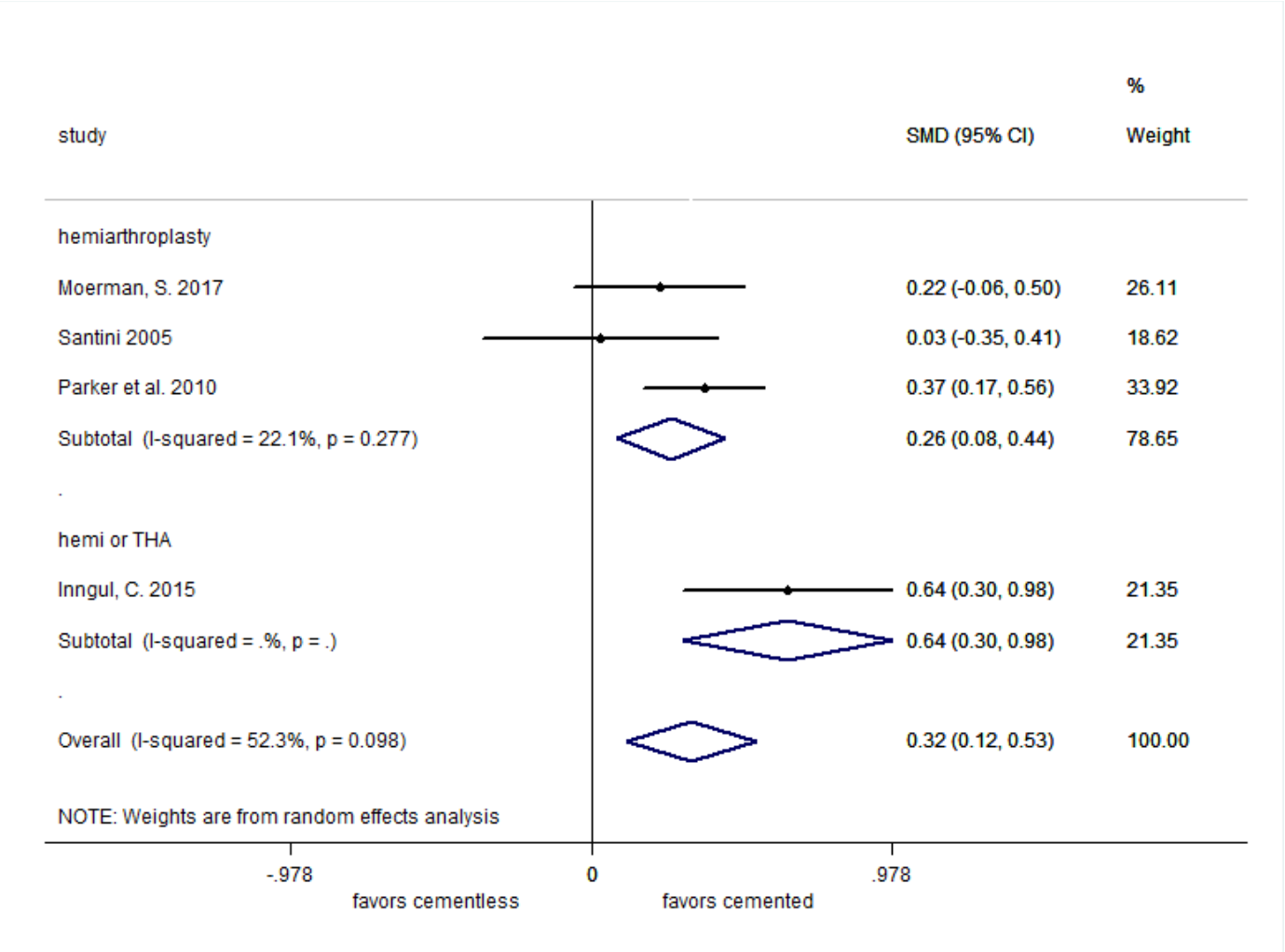
Cemented Versus Uncemented Arthroplasty: Pain



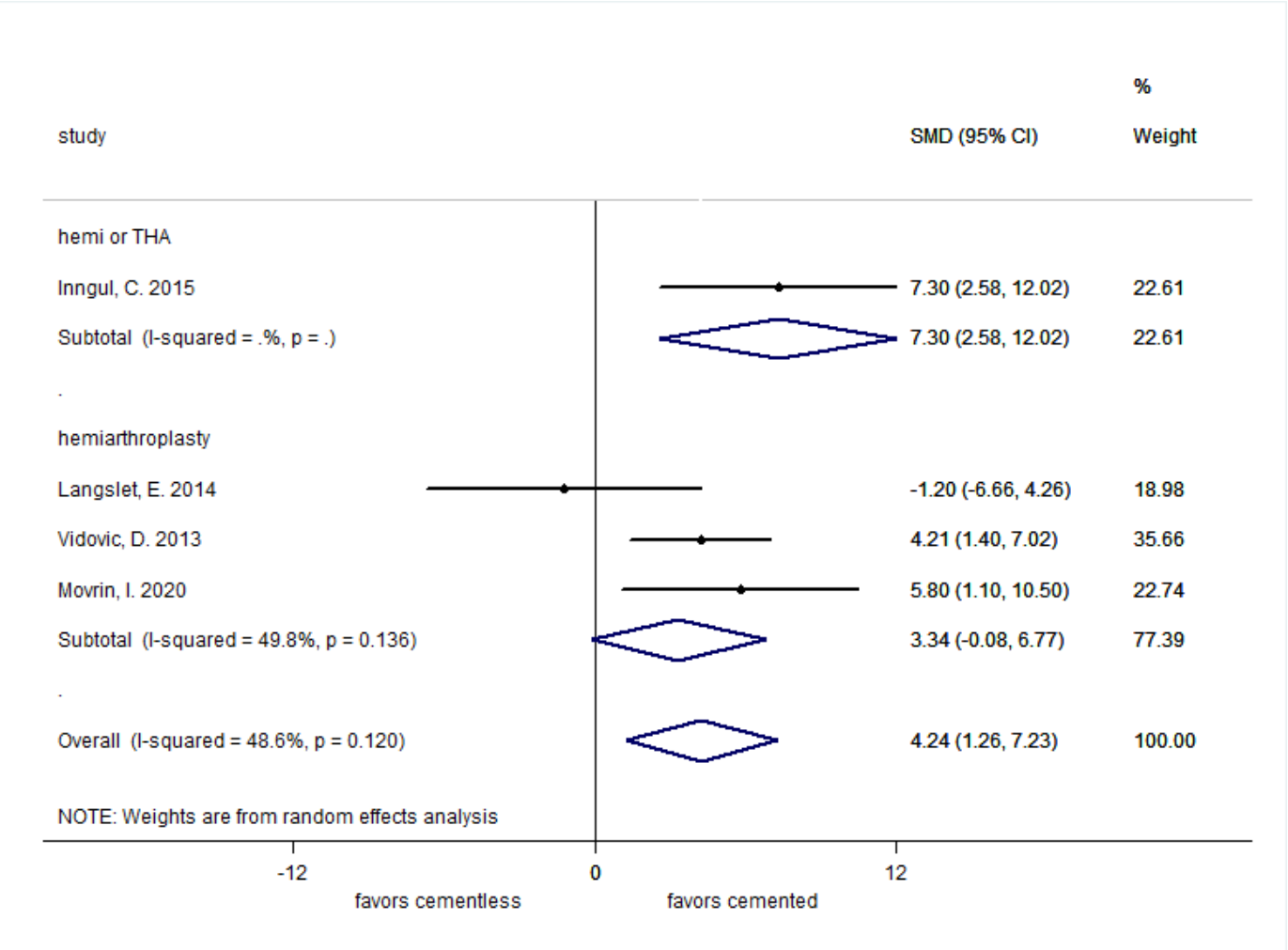
Cemented Versus Uncemented Arthroplasty: Periprosthetic Fracture



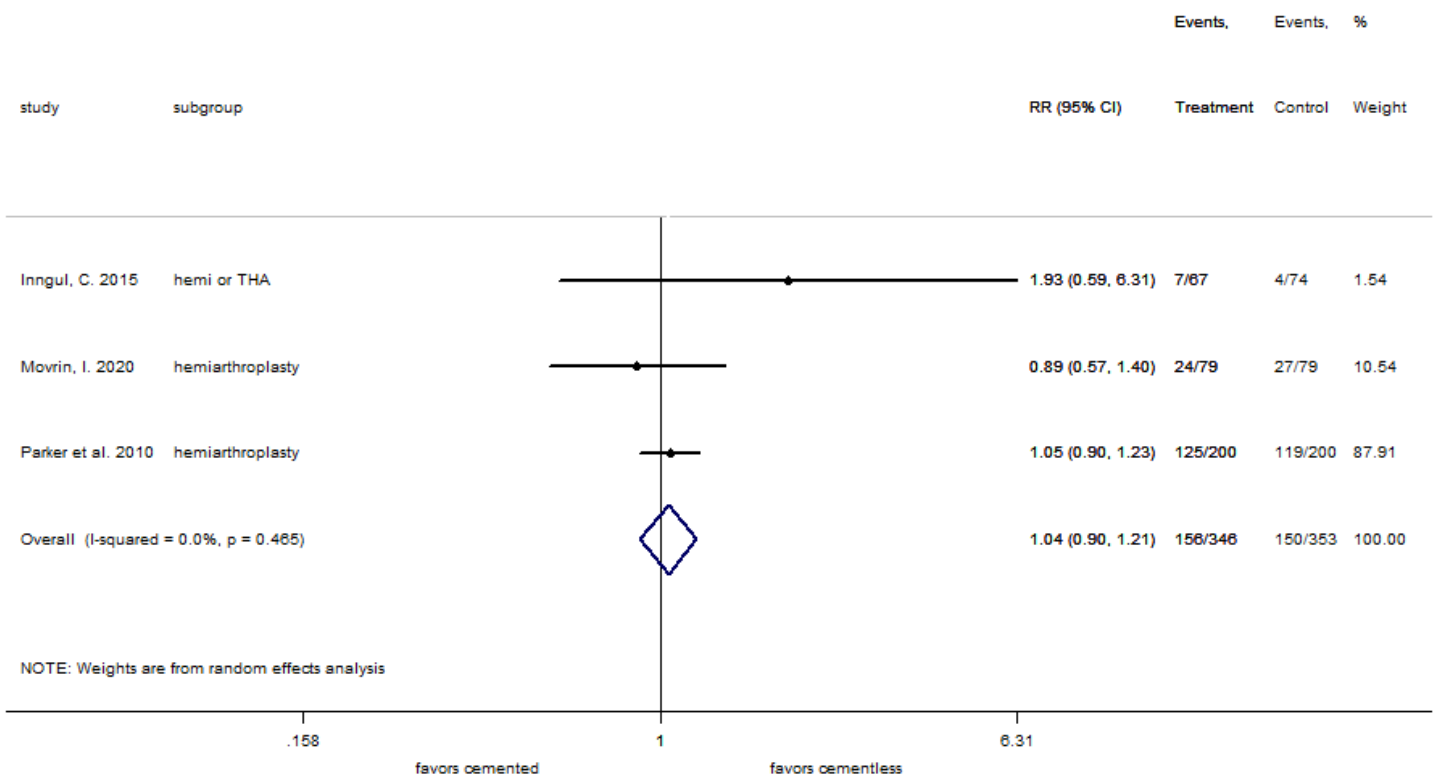
Cemented Versus Uncemented Arthroplasty: Functional Scores



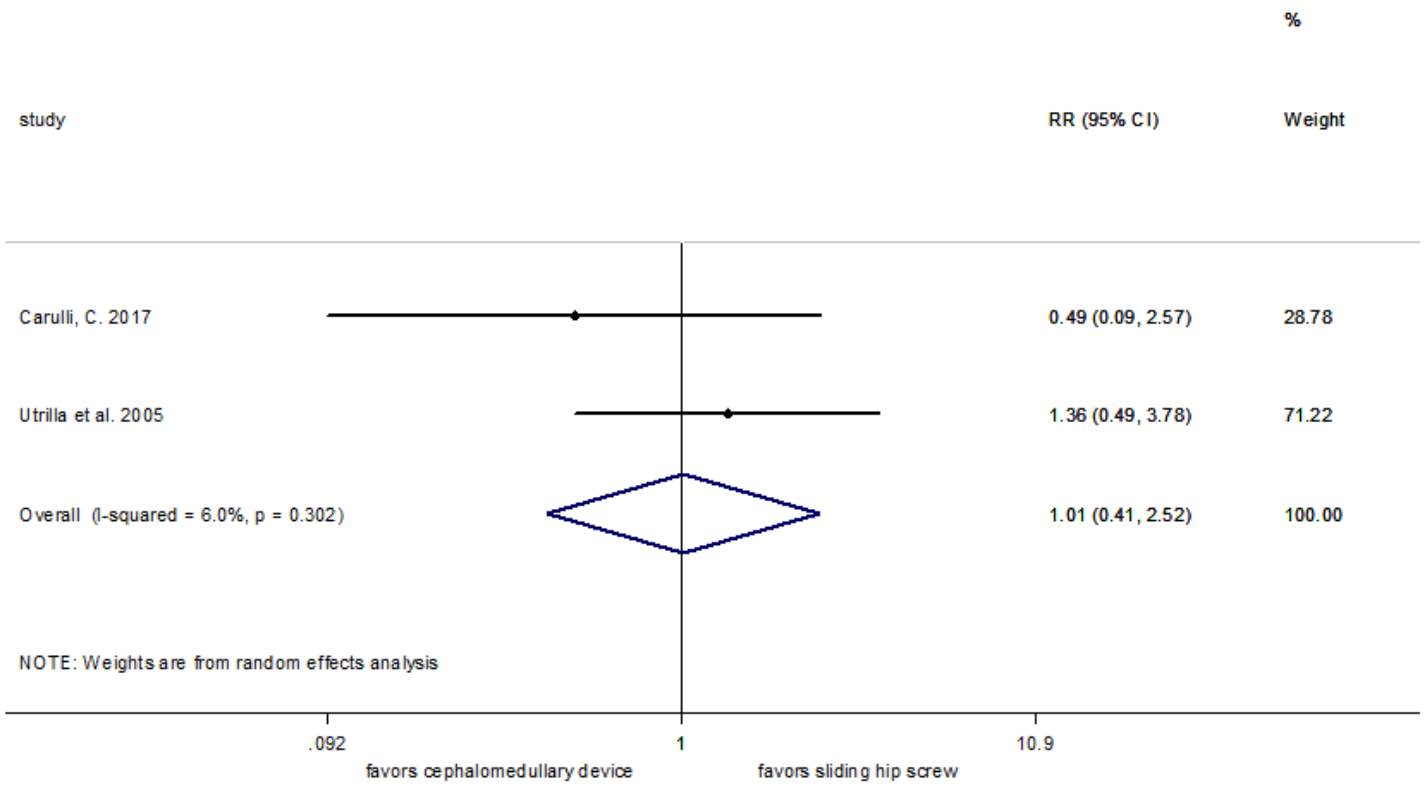
Cemented Versus Uncemented Arthroplasty: Harris Hip Scores



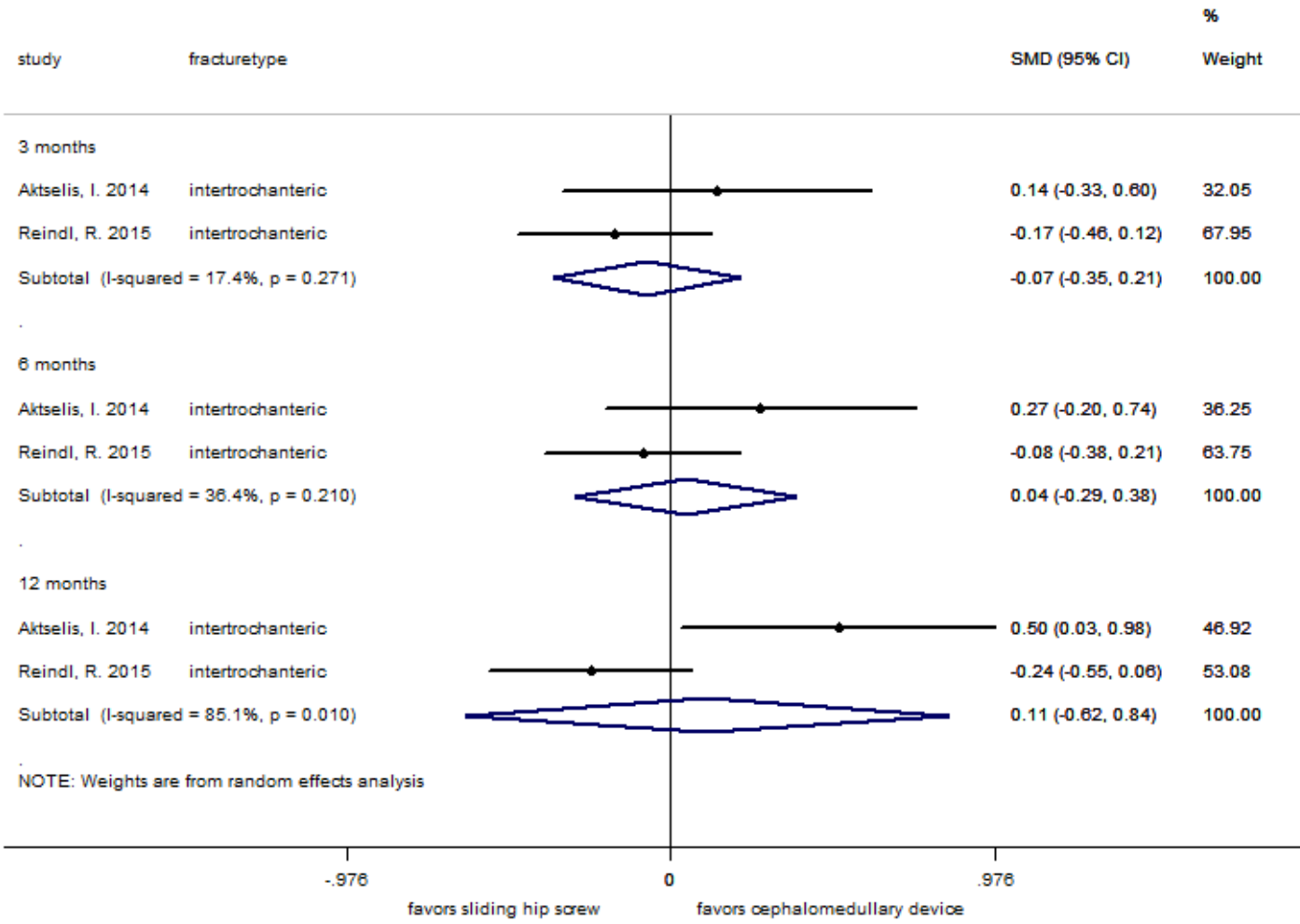
Cemented Versus Uncemented Arthroplasty: Mortality



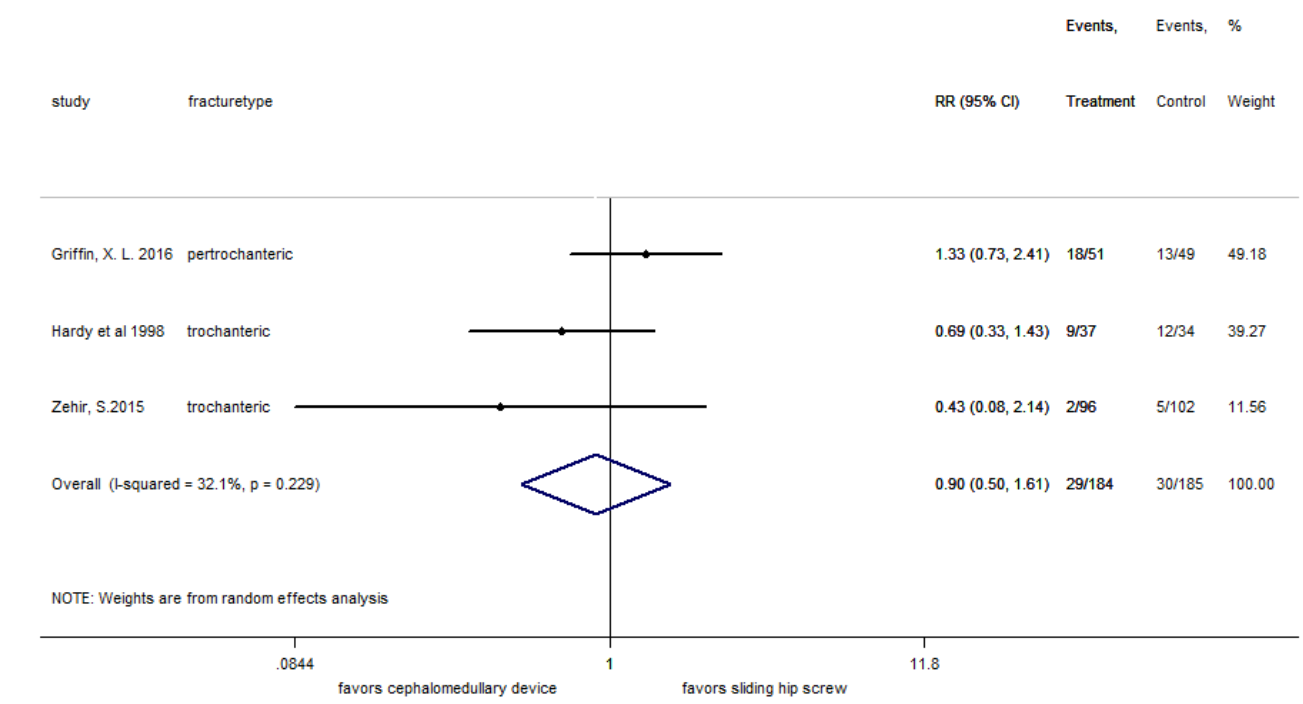
Cephalomedullary Device versus Sliding Hip Screw in Stable Fractures – Mortality



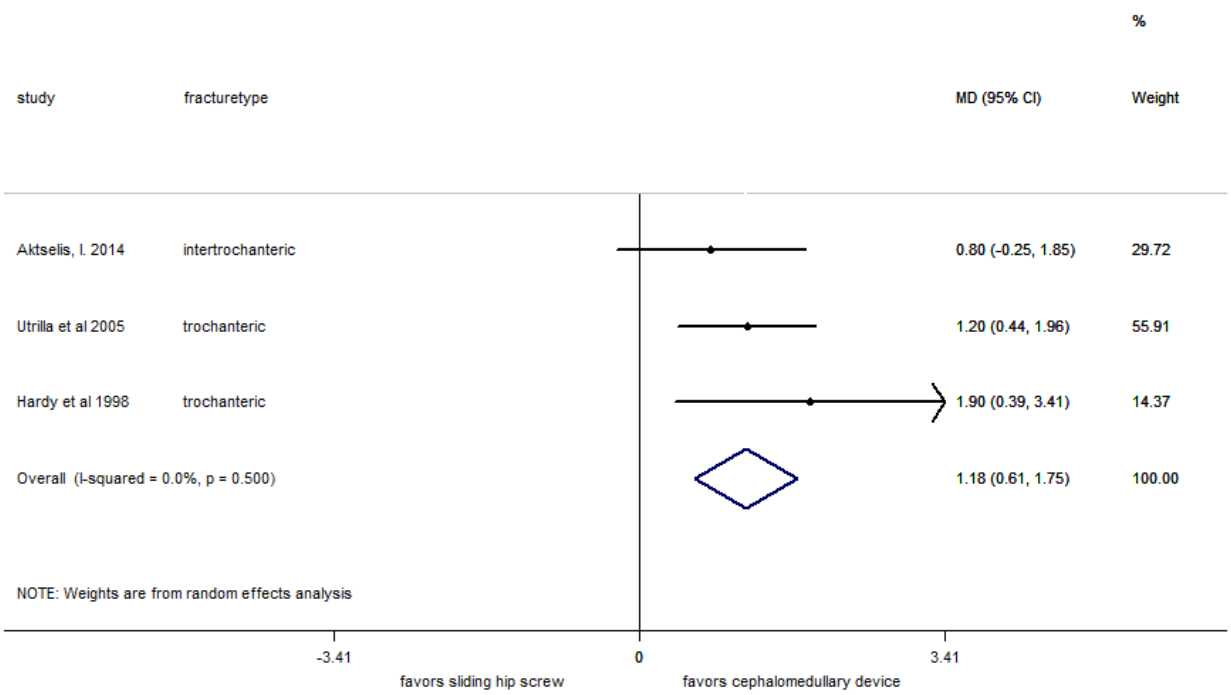
Cephalomedullary Device vs Sliding hip Screw – Functional Status Scores by Duration in Unstable Fractures



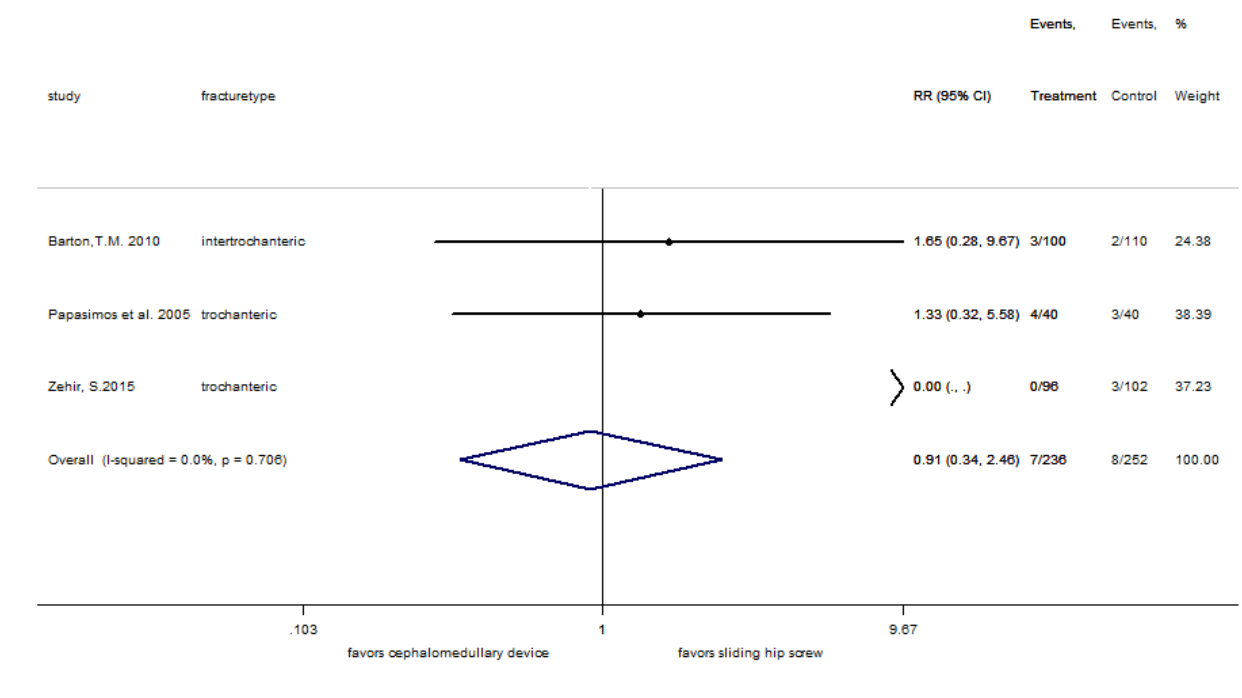
Cephalomedullary Device vs Sliding hip Screw – Mortality in Unstable Fractures



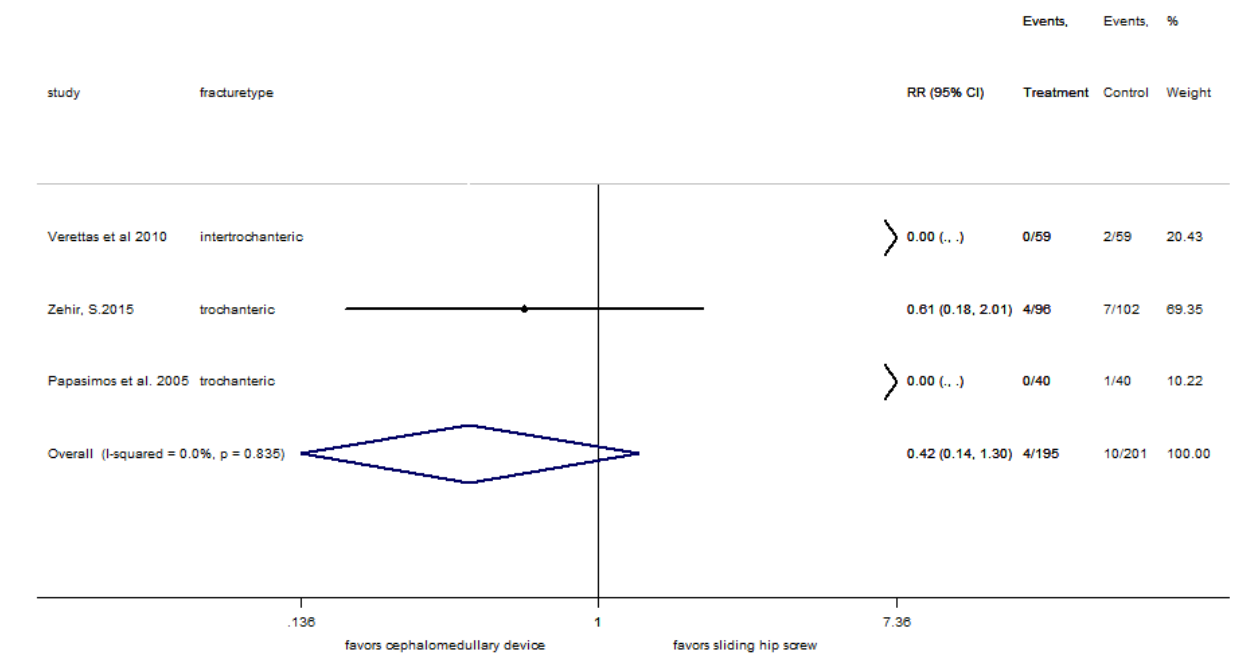
Cephalomedullary Device vs Sliding hip Screw – Parker Mortality Score in Unstable Fractures



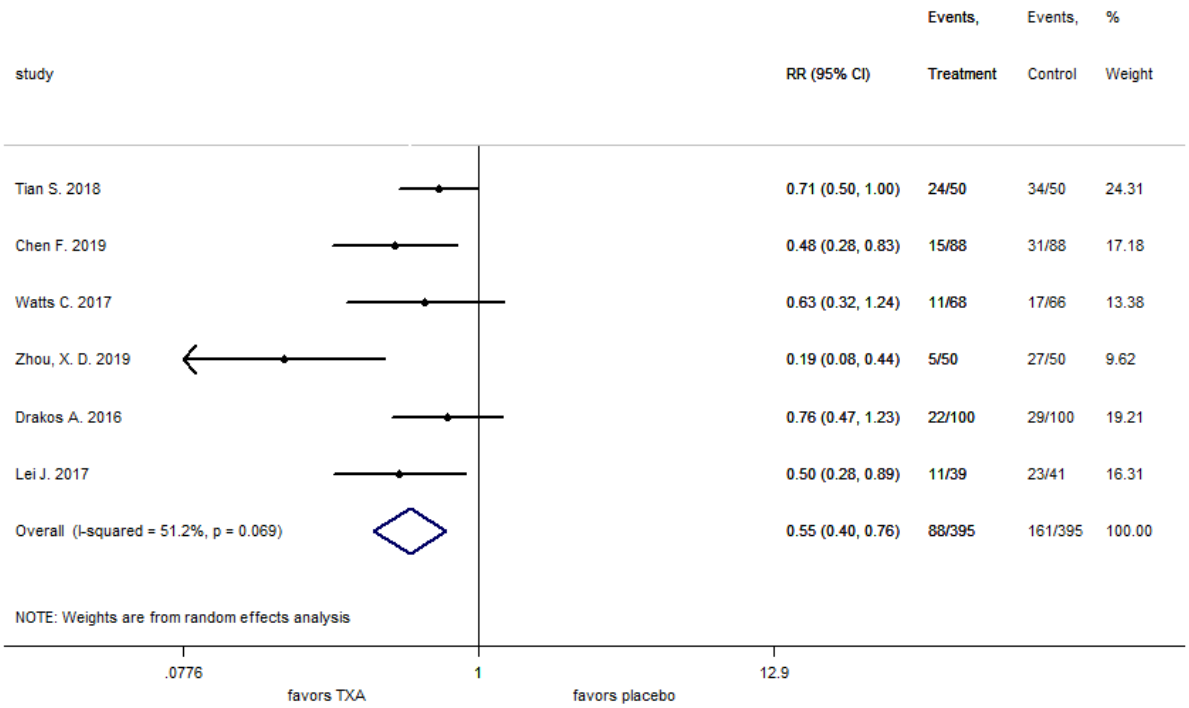
Cephalomedullary Device vs Sliding hip Screw – Reoperation in Unstable Fractures



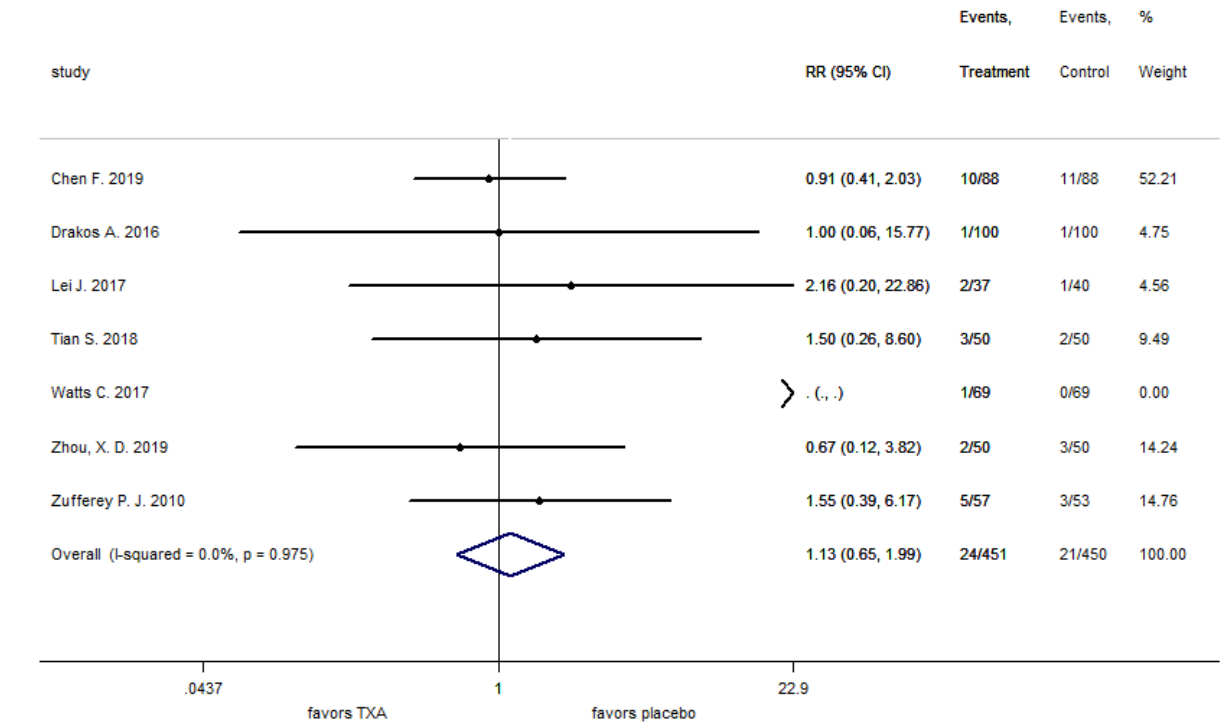
Cephalomedullary Device vs Sliding hip Screw – Superficial Infection in Unstable Fractures



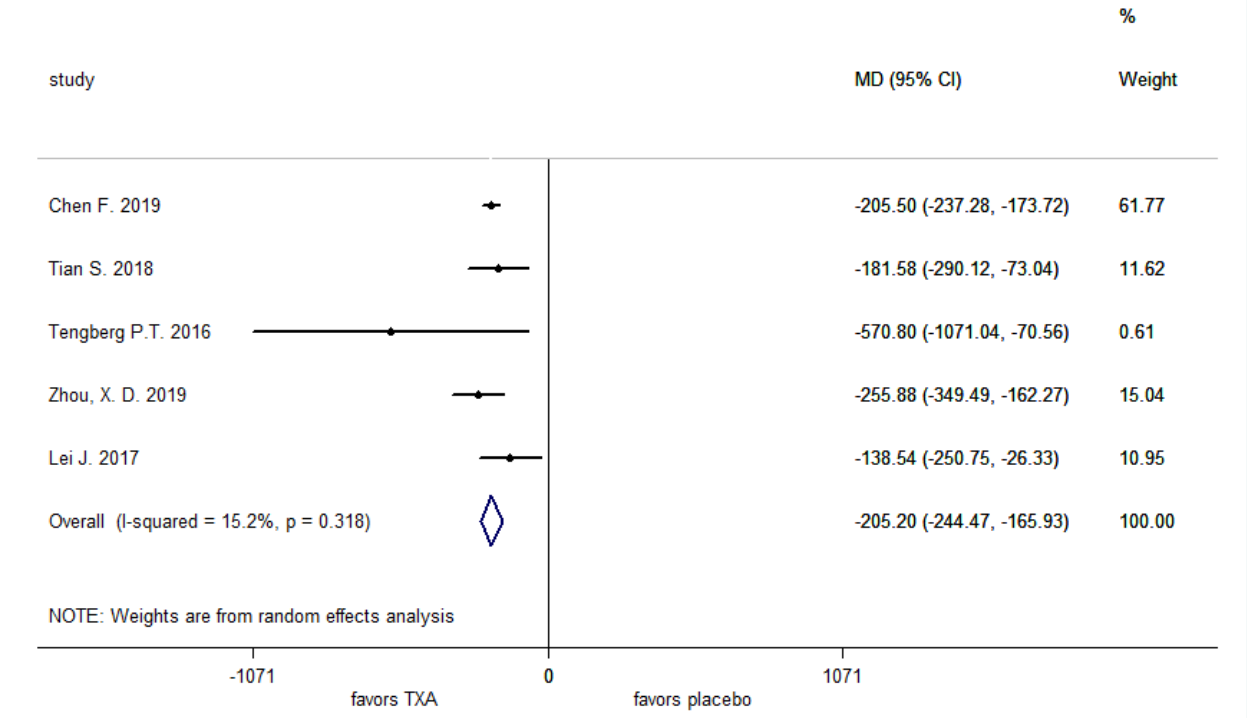
TXA vs Control – Blood Transfusion



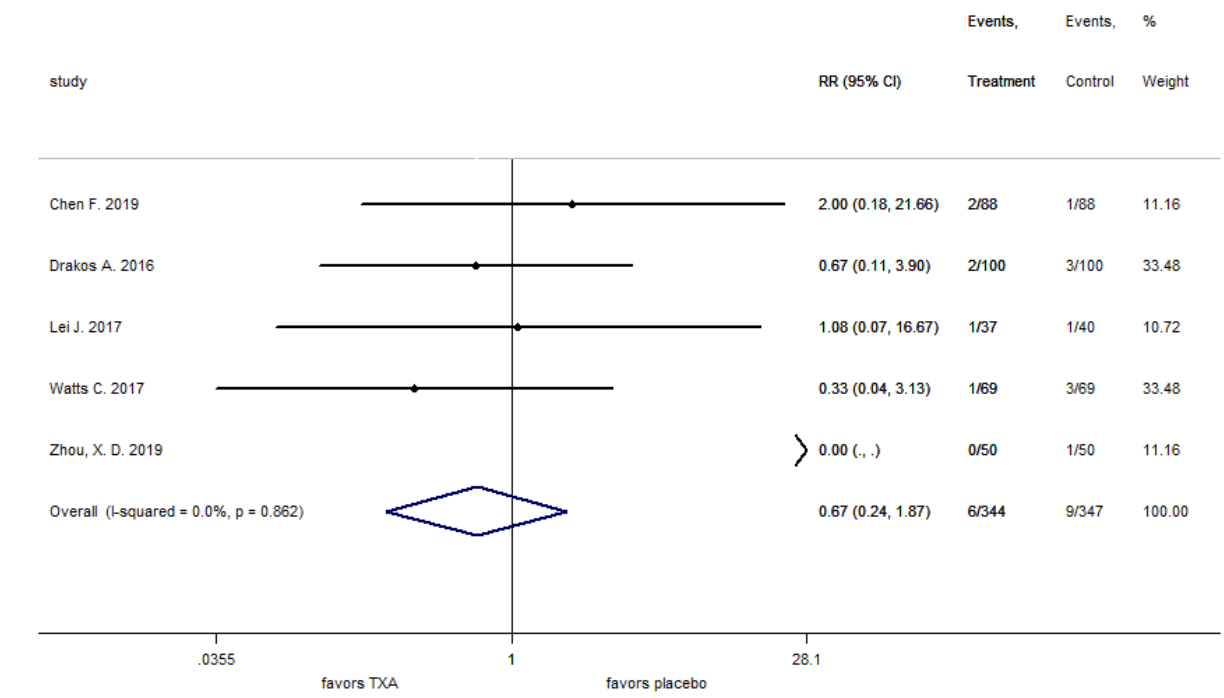
TXA vs Control - DVT



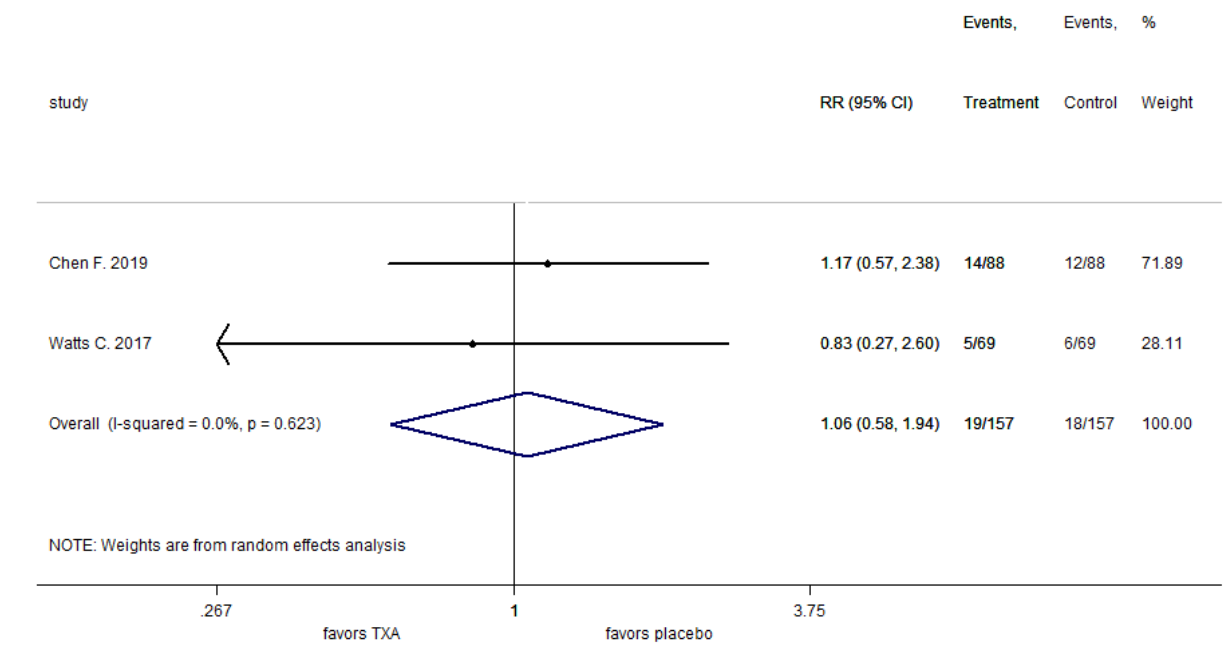
TXA vs Control - Overall Blood Loss (mL)



TXA vs Control – Pulmonary Embolism



TXA vs Control – Thromboembolic Events



Excluded Articles

Authors	Article Title	Year	Reason for Exclusion
Abdulameer, A. H.; Sulaiman, S. A. B. S.; Kader, M. B. S. A.	An assessment of osteoporotic conditions among users and non-users of Warfarin: A case-control study	2017	Incorrect patient population (includes age<50 yrs)
Abdulhamid, A. K.	Evaluation of the use of anti-platelet therapy throughout the peri-operative period in patients with femoral neck fracture surgery. A retrospective cohort study	2020	Does not meet inclusion criteria (non-post-operative for VTE)
Abram, S. G.; Murray, J. B.	Outcomes of 807 Thompson hip hemiarthroplasty procedures and the effect of surgical approach on dislocation rates	2015	Descriptive study - results not stratified by intervention
Acar, N.; Harb, A.; Albaya, A.; Kaskin, H.	The clinical results of a novel method for minimal invasive dynamic hip screw fixation of intertrochanteric fractures compared to the conventional one	2017	Does not meet inclusion criteria (non-RCT for sliding hip screw device PICO)
Acharya, R.; Sriramka, B.; Panigrahi, S.	Comparison of 4 mg dexamethasone versus 8 mg dexamethasone as an adjuvant to levobupivacaine in fascia iliaca block-a prospective study	2018	Incorrect pt population (age range 18-70 yrs)
Acosta-Olivo, C.; Garza-Borjon, A.; Simental-Mendia, M.; Vilchez-Cavazos, F.; Tamez-Mata, Y.; PeÃ±a-Martinez, V.	Delayed union of humeral shaft fractures: comparison of autograft with and without platelet-rich plasma treatment: a randomized, single blinded clinical trial	2017	Incorrect patient population (includes age<50 yrs)
Acurcio, F. A.; Moura, C. S.; Bernatsky, S.; Bessette, L.; Rahme, E.	Opioid Use and Risk of Nonvertebral Fractures in Adults With Rheumatoid Arthritis: A Nested Case-Control Study Using Administrative Databases	2016	Incorrect patient population (includes age<50 yrs)
Adeel, K.; Nadeem, R. D.; Akhtar, M.; Sah, R. K.; Mohy-Ud-Din, I.	Comparison of proximal femoral nail (PFN) and dynamic hip screw (DHS) for the treatment of AO type A2 and A3 pertrochanteric fractures of femur	2020	Incorrect patient population (includes age<50 yrs)
Adib Hajbaghery, M.; Abbasinia, M.	Quality of life of the elderly after hip fracture surgery: a case-control study	2013	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Aedo-Martin, D.; Crego-Vita, D.; Garcia-Canas, R.; Espigares-Correa, A.; Sanchez-Perez, C.; Areta-Jimenez, F. J.	Periprosthetic infection in elderly patients treated with hemiarthroplasty of the hip following intracapsular fracture. Should we use antibiotic-loaded bone cement?	2020	Does not address question of interest
Agar, A.; Sahin, A.; Gunes, O.; Gulabi, D.; Erturk, C.	Comparison of Cementless Calcar-Replacement Hemiarthroplasty With Proximal Femoral Nail for the Treatment of Unstable Intertrochanteric Fractures at Older Age Group	2021	Does not meet inclusion criteria (not RCT for arthroplasty PICO)
Agarwal, S. K.; Khan, A. A.; Solan, M.; Lemon, M.	Hip fracture surgery in mixed-use emergency theatres: is the infection risk increased? A retrospective matched cohort study	2017	Imperfect comparison
Agarwalla, A.; Liu, J. N.; Gowd, A. K.; Amin, N. H.; Werner, B. C.	Differential Use of Narcotics in Total Hip Arthroplasty: A Comparative Matched Analysis Between Osteoarthritis and Femoral Neck Fracture	2020	Incorrect patient population (includes age<50 yrs)
Agrawal, P.; Gaba, S.; Das, S.; Singh, R.; Kumar, A.; Yadav, G.	Dynamic hip screw versus proximal femur locking compression plate in intertrochanteric femur fractures (AO 31A1 and 31A2): A prospective randomized study	2017	Incorrect patient population (includes age<50 yrs)
Agudo Quiles, M.; Sanz-Reig, J.; Alcala-Santaella Oria de Rueca, R.	Anti-platelet drugs in patients with femoral neck fractures undergoing cemented hip hemiarthroplasty surgery. A study of complications and mortality	2015	Does not address question of interest (preoperative anti-platelet agents)
Ahamed, Z. A.; Sreejit, M. S.	Lumbar Plexus Block as an Effective Alternative to Subarachnoid Block for Intertrochanteric Hip Fracture Surgeries in the Elderly	2019	Incorrect patient population (<30 patients/group)
Ahmad, T.; Muhammad, Z. A.; Habib, A.	Injury specific trauma registry: Outcomes of a prospective cohort with proximal femur fractures	2019	Incorrect patient population (includes age<50 yrs)
Ahmed, I.; Khan, M. A.; Allgar, V.	Influence of Anaesthesia on Mobilisation Following Hip Fracture Surgery: An Observational Study	2017	not best available evidence
Ahmed, I.; Khan, M. A.; Allgar, V.; Mohsen, A.	The effectiveness and safety of two prophylactic antibiotic regimes in hip-fracture surgery	2016	Does not address question of interest - antibiotics

Authors	Article Title	Year	Reason for Exclusion
Ahmed, I.; Khan, M. A.; Nayak, V.; Mohsen, A.	An evidence-based warfarin management protocol reduces surgical delay in hip fracture patients	2014	Incorrect patient population (<30 patients/group)
Ahn, E. J.; Kim, H. J.; Kim, K. W.; Choi, H. R.; Kang, H.; Bang, S. R.	Comparison of general anaesthesia and regional anaesthesia in terms of mortality and complications in elderly patients with hip fracture: a nationwide population-based study	2019	not best available evidence
Ahrengart, L.; Törnkvist, H.; Fornander, P.; Thorngren, K. G.; Pasanen, L.; Wahlström, P.; Honkonen, S.; Lindgren, U.	A randomized study of the compression hip screw and Gamma nail in 426 fractures	2002	Age of included subjects ranged from 32 - 98 years (>50yrs)
Akdogan, M.; Atilla, H. A.	The effect of blood transfusion and tranexamic acid on length of hospital stay and mortality after hip fracture surgery in elderly patients	2020	Incorrect patient population (includes age<50 yrs)
Al Khudairy, A.; Al-Hadeedi, O.; Sayana, M. K.; Galvin, R.; Quinlan, J. F.	Withholding clopidogrel for 3 to 6 versus 7 days or more before surgery in hip fracture patients	2013	Incorrect patient population (includes age<50 yrs)
Alamiri, M. A.; Albsoul-Younes, A. M.; Al-Ajlouni, J. M. S.	Comparison between aspirin 325Â mg and enoxaparin 40Â mg as extended thromboprophylactic agents following major orthopedic surgery in Jordan University Hospital	2019	Incorrect patient population (includes age<50 yrs)
Albareda-Albareda, J.; Redondo-Trasobares, B.; Calvo-Tapies, J.; Blanco-Baiges, E.; Torres-Campos, A.; Gomez-Vallejo, J.; Blanco Rubio, N.	Salvage of cephalomedullary nail cutout with the variable angle proximal femoral plate	2021	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Allegrante, J. P.; Peterson, M. G.; Cornell, C. N.; MacKenzie, C. R.; Robbins, L.; Horton, R.; Ganz, S. B.; Ruchlin, H. S.; Russo, P. W.; Paget, S. A.; Charlson, M. E.	Methodological challenges of multiple-component intervention: lessons learned from a randomized controlled trial of functional recovery after hip fracture	2007	<30 per group
Allen, S. J.; Wareham, K.; Wang, D.; Bradley, C.; Sewell, B.; Hutchings, H.; Harris, W.; Dhar, A.; Brown, H.; Foden, A.; Gravenor, M. B.; Mack, D.; Phillips, C. J.	A high-dose preparation of lactobacilli and bifidobacteria in the prevention of antibiotic-associated and clostridium difficile diarrhoea in older people admitted to hospital: A multicentre, randomised, double-blind, placebo-controlled, parallel arm trial (PLACIDE)	2013	Does not address question of interest
Alm, C. E.; Frihagen, F.; Dybvik, E.; Matre, K.; Madsen, J. E.; Gjertsen, J. E.	Implants for trochanteric fractures in Norway: the role of the trochanteric stabilizing plate-a study on 20,902 fractures from the Norwegian hip fracture register 2011-2017	2021	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Al-Shaar, L.; Nabulsi, M.; Maalouf, J.; El-Rassi, R.; Vieth, R.; Beck, T. J.; El-Hajj Fuleihan, G.	Effect of vitamin D replacement on hip structural geometry in adolescents: a randomized controlled trial	2013	Incorrect patient population (includes age<50 yrs)
Alshameeri, Z.; Elbashir, M.; Parker, M. J.	The outcome of intracapsular hip fracture fixation using the Targon Femoral Neck (TFN) locking plate system or cannulated cancellous screws: A comparative study involving 2004 patients	2017	Insufficient data - age range not provided
Altermatt, F. R.; EchevarrÃa, G. C.; de la Fuente, R. F.; Baeza, R.; Ferrada, M.; de la Cuadra, J. C.; Corvetto, M. A.	Perioperative lumbar plexus block and cardiac ischemia in patients with hip fracture: randomized clinical trial	2018	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Alvi, H. M.; Thompson, R. M.; Krishnan, V.; Kwasny, M. J.; Beal, M. D.; Manning, D. W.	Time-to-Surgery for Definitive Fixation of Hip Fractures: A Look at Outcomes Based Upon Delay	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Amiche, M. A.; Abtahi, S.; Driessen, J. H. M.; Vestergaard, P.; de Vries, F.; Cadarette, S. M.; Burden, A. M.	Impact of cumulative exposure to high-dose oral glucocorticoids on fracture risk in Denmark: a population-based case-control study	2018	Incorrect patient population (includes age<50 yrs)
Amrayev, S.; AbuJazar, U.; Stucinskas, J.; Smailys, A.; Tarasevicius, S.	Outcomes and mortality after hip fractures treated in Kazakhstan	2018	not best available evidence
Andalib, A.; Etemadifar, M.; Yavari, P.	Clinical outcomes of intramedullary and extramedullary fixation in unstable intertrochanteric fractures: A randomized clinical trial	2020	Insufficient data - age range not provided (-SD below 50 yrs)
Anderson, G. H.; Harper, W. M.; Connolly, C. D.; Badham, J.; Goodrich, N.; Gregg, P. J.	Preoperative skin traction for fractures of the proximal femur. A randomised prospective trial	1993	Age of included subjects ranged from 38 - 96 years (>50yrs)
Anderson, M. E.; McDevitt, K.; Cumbler, E.; Bennett, H.; Robison, Z.; Gomez, B.; Stoneback, J. W.	Geriatric Hip Fracture Care: Fixing a Fragmented System	2017	not best available evidence
Andreani, L.; Bonicoli, E.; Piolanti, N.; Parchi, P.; Niccolai, F.; Carmignani, A.; Lisanti, M.	Prospective Randomized Controlled Trial of Two Different Intramedullary Nails for Pertrochanteric Fractures of the Femur	2015	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Anighoro, K.; Bridges, C.; Graf, A.; Nielsen, A.; Court, T.;	From ER to OR: Results After Implementation of Multidisciplinary Pathway for Fragility Hip Fractures at a Level I Trauma Center	2020	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
McKeon, J.; Schwab, J. M.			
Anthony, C. A.; Duchman, K. R.; Bedard, N. A.; Gholson, J. J.; Gao, Y.; Pugely, A. J.; Callaghan, J. J.	Hip Fractures: Appropriate Timing to Operative Intervention	2017	Does not meet inclusion criteria (non-RCT for timing PICO)
Aquilani, R.; Zuccarelli, G. C.; Condino, A. M.; Catani, M.; Rutili, C.; Del Vecchio, C.; Pisano, P.; Verri, M.; Iadarola, P.; Viglio, S.; Boschi, F.	Despite Inflammation, Supplemented Essential Amino Acids May Improve Circulating Levels of Albumin and Haemoglobin in Patients after Hip Fractures	2017	Does not address question of interest
Araujo, T. P.; Guimaraes, T. M.; Andrade-Silva, F. B.; Kojima, K. E.; Silva Jdos, S.	Influence of time to surgery on the incidence of complications in femoral neck fracture treated with cannulated screws	2014	Incorrect pt population (<30 pts/group)
Arirachakaran, A.; Amphansap, T.; Thanindratarn, P.; Piyapittayanun, P.; Srisawat, P.; Kongtharvonskul, J.	Comparative outcome of PFNA, Gamma nails, PCCP, Medoff plate, LISS and dynamic hip screws for fixation in elderly trochanteric fractures: a systematic review and network meta-analysis of randomized controlled trials	2017	Systematic review
Ariza-Vega, P.; Jimenez-Moleon, J. J.; Kristensen, M. T.	Non-weight-bearing status compromises the functional level up to 1 yr after hip fracture surgery	2014	Does not address question of interest - prognostic endpoints
Arslan, A.; Utkan, A.; Koca, T. T.	Results of a compression pin alongwith trochanteric external fixation in management of high risk elderly intertrochanteric fractures	2016	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Arsoy, D.; Huddleston, J. I., 3rd; Amanatullah, D. F.; Giori, N. J.; Maloney, W. J.; Goodman, S. B.	Femoral Nerve Catheters Improve Home Disposition and Pain in Hip Fracture Patients Treated With Total Hip Arthroplasty	2017	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Asmidawati, A.; Hamid, T. A.; Hussain, R. M.; Hill, K. D.	Home based exercise to improve turning and mobility performance among community dwelling older adults: protocol for a randomized controlled trial	2014	Protocol
Aspenberg, P.; Malouf, J.; Tarantino, U.; Garcia-Hernandez, P. A.; Corradini, C.; Overgaard, S.; Stepan, J. J.; Borris, L.; Lespessailles, E.; Frihagen, F.; Papavasiliou, K.; Petto, H.; Caeiro, J. R.; Marin, F.	Effects of Teriparatide Compared with Risedronate on Recovery After Pertrochanteric Hip Fracture: Results of a Randomized, Active-Controlled, Double-Blind Clinical Trial at 26 Weeks	2016	Does not address question of interest (not among specified interventions)
Asplin, G.; Carlsson, G.; Ziden, L.; Kjellby-Wendt, G.	Early coordinated rehabilitation in acute phase after hip fracture - a model for increased patient participation	2017	not best available evidence
Assaf, G. R., Sr.; Yared, F.; Abou Boutros, C.; Maassarani, D.; Seblani, R.; Khalaf, C.; El Kaady, J.	The Efficacy of Opioid-Free General Anesthesia in the Management of Hip Surgeries in Elderly Patients	2020	not best available evidence
Atrey, A.; Ward, S. E.; Khoshbin, A.; Hussain, N.; Bogoch, E.; Schemitsch, E. H.; Waddell, J. P.	Ten-year follow-up study of three alternative bearing surfaces used in total hip arthroplasty in young patients: a prospective randomised controlled trial	2017	Incorrect patient population (includes age<50 yrs)
Auffarth, A.; Resch, H.; Lederer, S.; Karpik, S.; Hitzl, W.; Bogner, R.; Mayer, M.; Matis, N.	Does the choice of approach for hip hemiarthroplasty in geriatric patients significantly influence early postoperative outcomes? a randomized-controlled trial comparing the modified smith-petersen and hardinge approaches	2011	Incorrect patient population (<30 patients/group)
Avci, C. C.; Saglam, N.; Saka, G.; Kurtulmus, T.; Gulabi, D.; Bulut, G.	Is internal fixation of the intertrochanteric fractures reliable option in patients with cognitive dysfunction?	2016	Does not meet inclusion criteria (non-RCT for HA vs. fixation PICO)

Authors	Article Title	Year	Reason for Exclusion
Aydin, E.; Kurtulus, B.; Celik, B.; Okan, M.	Treatment of intertrochanteric fractures in ambulatory elderly; bipolar hemiarthroplasty or proximal femoral nail ?	2016	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Ayhan, E.; Kesmezacar, H.; Karaman, O.; Sahin, A.; Kir, N.	Bipolar or unipolar hemiarthroplasty after femoral neck fracture in the geriatric population	2013	*Limit to RCTs (orginially PICO 7) Does not meet inclusion criteria (non-RCT for unipolar vs bipolar PICO)
Baba, T.; Shitoto, K.; Kaneko, K.	Bipolar hemiarthroplasty for femoral neck fracture using the direct anterior approach	2013	not best available evidence
Babhulkar, S.	Unstable trochanteric fractures: Issues and avoiding pitfalls	2017	Incorrect patient population (includes age <50 yrs)
Baech, J.; Hansen, S. M.; Jakobsen, L. H.; Ovlisen, A. K.; Severinsen, M. T.; Brown, P. N.; Vestergaard, P.; Frederiksen, H.; Jorgensen, J.; Starklint, J.; Josefsson, P.; Hammer, T.; Clausen, M. R.; Torp-Pedersen, C.; Jensen, P.; El-Galaly, T. C.	Increased risk of osteoporosis following commonly used first-line treatments for lymphoma: a Danish Nationwide Cohort Study	2020	Does not address question of interest - prognostic endpoints
Baer, M.; Neuhaus, V.; Pape, H. C.; Ciritsis, B.	Influence of mobilization and weight bearing on in-hospital outcome in geriatric patients with hip fractures	2019	Insufficient data - data not stratified by WB vs. no WB
Baird, R. P.; O'Brien, P.; Cruickshank, D.	Comparison of stable and unstable pertrochanteric femur fractures managed with 2- and 4-hole side plates	2014	Does not address question of interest - comparison of stable/unstable fractures
Bajpai, J.; Maheshwari, R.; Bajpai, A.; Saini, S.	Treatment options for unstable trochanteric fractures: Screw or helical proxima femoral nail	2015	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths

Authors	Article Title	Year	Reason for Exclusion
Ban, I.; Palm, H.; Birkelund, L.; Eschen, J.; Kring, S.; Brix, M.; Troelsen, A.	Implementing, adapting, and validating an evidence-based algorithm for hip fracture surgery	2014	Does not address question of interest
Bandara, S.; Lynch, G.; Cooke, C.; Varghese, P.; Ward, N.	Using Care Bundles to Improve Surgical Outcomes and Reduce Variation in Care for Fragility Hip Fracture Patients	2017	not best available evidence
Bang, S.; Chung, J.; Jeong, J.; Bak, H.; Kim, D.	Efficacy of ultrasound-guided fascia iliaca compartment block after hip hemiarthroplasty: A prospective, randomized trial	2016	Incorrect pt population (<30 pts/group)
Bani Hani, D. A.; Aleshawi, A. J.; Al Shalakhti, M. H.; Alhowary, A.; Al-Jararahih, O.; Al-Mistarehi, A. H.; Yassin, A.	Spinal versus general anesthesia for patients with parkinsonâ??s disease	2020	Incorrect patient population (<30 pts/group)
Bano, G.; Dianin, M.; Biz, C.; Bedogni, M.; Alessi, A.; Bordignon, A.; Bizzotto, M.; Berizzi, A.; Ruggieri, P.; Manzato, E.; Sergi, G.	Efficacy of an interdisciplinary pathway in a first level trauma center orthopaedic unit: A prospective study of a cohort of elderly patients with hip fractures	2020	not best available evidence
Baratz, M. D.; Hu, Y. Y.; Zurakowski, D.; Appleton, P.; Rodriguez, E. K.	The primary determinants of radiation use during fixation of proximal femur fractures	2014	Does not address question of interest - prognostic endpoints
Bardakos, N. V.	CORR insightsÂ®: Is cemented or cementless femoral stem fixation more durable in patients older than 75 years of age? A comparison of the best-performing stems	2018	Background article
Barenius, B.; Inngul, C.; Alagic, Z.; Enocson, A.	A randomized controlled trial of cemented versus cementless arthroplasty in patients with a displaced femoral neck fracture: a four-year follow-up	2018	Incorrect patient population (<30 patients/group at timepoints)

Authors	Article Title	Year	Reason for Exclusion
Barinaga, G.; Wright, E.; Cagle, P. J., Jr.; Anoushiravani, A. A.; Sayeed, Z.; Chambers, M. C.; El-Othmani, M. M.; Saleh, K. J.	Effect of Time of Operation on Hip Fracture Outcomes: A Retrospective Analysis	2017	Does not address question of interest
Barishan, F. C.; Akesen, B.; Atici, T.; Durak, K.; Bilgen, M. S.	Comparison of hemiarthroplasty and total hip arthroplasty in elderly patients with displaced femoral neck fractures	2018	Incorrect patient population (<30 patients/group)
Barker, A. L.; McNeil, J. J.; Seeman, E.; Ward, S. A.; Sanders, K. M.; Khosla, S.; Cumming, R. G.; Pasco, J. A.; Bohensky, M. A.; Ebeling, P. R.; Woods, R. L.; Lockery, J. E.; Wolfe, R.; Talevski, J.	A randomised controlled trial of low-dose aspirin for the prevention of fractures in healthy older people: protocol for the ASPREE-Fracture substudy	2016	Protocol
Barone, A.; Giusti, A.; Pizzonia, M.; Razzano, M.; Oliveri, M.; Palummeri, E.; Pioli, G.	Factors associated with an immediate weight-bearing and early ambulation program for older adults after hip fracture repair	2009	Not comparison of interest
Baroni, M.; Serra, R.; Boccardi, V.; Ercolani, S.; Zengarini, E.; Casucci, P.; Valecchi, R.; Rinonapoli, G.; Caraffa, A.; Mecocci, P.; Ruggiero, C.	The orthogeriatric comanagement improves clinical outcomes of hip fracture in older adults	2019	not best available evidence
Barr, L. V.; Vindlacheruvu, M.; Gooding, C. R.	The effect of becoming a major trauma centre on outcomes for elderly hip fracture patients	2015	not best available evidence
Barrington, J. W.; Emerson, R. H., Jr.	The short and "shorter" of it: >1750 tapered titanium stems at 6- to 88-month follow-up	2013	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Bartels, S.; Gjertsen, J. E.; Frihagen, F.; Rogmark, C.; Utvag, S. E.	Low bone density and high morbidity in patients between 55 and 70 years with displaced femoral neck fractures: a case-control study of 50 patients vs 150 normal controls	2019	Does not address question of interest
Bartha, E.; Arfwedson, C.; Imnell, A.; Fernlund, M. E.; Andersson, L. E.; Kalman, S.	Randomized controlled trial of goal-directed haemodynamic treatment in patients with proximal femoral fracture	2013	Does not address question of interest (not among specified interventions)
Bartha, E.; Davidson, T.; Brodtkorb, T. H.; Carlsson, P.; Kalman, S.	Value of information: interim analysis of a randomized, controlled trial of goal-directed hemodynamic treatment for aged patients	2013	Secondary analysis
Baruah, R. K.; Borah, P. J.; Haque, R.	Use of tranexamic acid in dynamic hip screw plate fixation for trochanteric fractures	2016	Incorrect patient population (includes age<50 yrs)
Basques, B. A.; Bohl, D. D.; Golinvaux, N. S.; Samuel, A. M.; Grauer, J. G.	General versus spinal anaesthesia for patients aged 70 years and older with a fracture of the hip	2015	not best available evidence
Batailler, C.; Fary, C.; Batailler, P.; Servien, E.; Neyret, P.; Lustig, S.	Total hip arthroplasty using direct anterior approach and dual mobility cup: safe and efficient strategy against post-operative dislocation	2017	Incorrect patient population (includes age<50 yrs)
Batibay, S. G.; Soylemez, S.; Turkmen, I.; Bayram, Y.; Camur, S.	The effectiveness of preoperative colon cleansing on post-operative surgical site infection after hip hemiarthroplasty	2019	Does not address question of interest (not among specified interventions)
Batin, S.; Ozan, F.; Gurbuz, K.; Koyuncu, S.; Vatansever, F.; Uzun, E.	Evaluation of Risk Factors for Second Hip Fractures in Elderly Patients	2018	Incorrect patient population (<30 patients/group)
Beaudoin, F. L.; Haran, J. P.; Liebmann, O.	A comparison of ultrasound-guided three-in-one femoral nerve block versus parenteral opioids alone for analgesia in emergency department patients with hip fractures: a randomized controlled trial	2013	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Beaupre, L. A.; Carson, J. L.; Noveck, H.; Magaziner, J.	Recovery of Walking Ability and Return to Community Living within 60 Days of Hip Fracture Does Not Differ Between Male and Female Survivors	2015	Does not address question of interest - comparison of males/females
Beaupre, L. A.; Cinats, J. G.; Senthilselvan, A.; Scharfenberger, A.; Johnston, D. W.; Saunders, L. D.	Does standardized rehabilitation and discharge planning improve functional recovery in elderly patients with hip fracture?	2005	not best available evidence
Beaupre, L. A.; Khong, H.; Smith, C.; Kang, S.; Evens, L.; Jaiswal, P. K.; Powell, J. N.	The impact of time to surgery after hip fracture on mortality at 30- and 90-days: Does a single benchmark apply to all?	2019	Does not address question of interest - prognostic endpoints
Beaupre, L. A.; Lier, D.; Smith, C.; Evens, L.; Hanson, H. M.; Juby, A. G.; Kivi, P.; Majumdar, S. R.; S. TOP-Fracture Team	A 3i hip fracture liaison service with nurse and physician co-management is cost-effective when implemented as a standard clinical program	2020	not best available evidence
Beaupre, L. A.; Magaziner, J. S.; Jones, C. A.; Jhangri, G. S.; Johnston, D. W. C.; Wilson, D. M.; Majumdar, S. R.	Rehabilitation After Hip Fracture for Nursing Home Residents: A Controlled Feasibility Trial	2019	Incorrect patient population (<30 patients/group)
Beaupre, L. A.; Menon, M. R.; Almaazmi, K.; Kang, S. H.; Dieleman, S.; Tsui, B.	Preoperative nerve blocks for hip fracture patients: A pilot randomized trial	2020	Incorrect patient population (<30 patients/group)
Beaupre, L. A.; Wai, E. K.; Hoover, D. R.; Noveck, H.; Roffey, D. M.; Cook, D. R.; Magaziner, J. S.; Carson, J. L.	A comparison of outcomes between Canada and the United States in patients recovering from hip fracture repair: secondary analysis of the FOCUS trial	2018	Secondary analysis

Authors	Article Title	Year	Reason for Exclusion
Bech, R. D.; Lauritsen, J.; Ovesen, O.; Emmeluth, C.; Lindholm, P.; Overgaard, S.	Local anaesthetic wound infiltration after internal fixation of femoral neck fractures: a randomized, double-blind clinical trial in 33 patients	2011	Incorrect pt population (<30 pts/group)
Bech, R. D.; Ovesen, O.; Lauritsen, J.; Emmeluth, C.; Lindholm, P.; Overgaard, S.	Local Anesthetic Wound Infiltration after Osteosynthesis of Extracapsular Hip Fracture Does Not Reduce Pain or Opioid Requirements: A Randomized, Placebo-Controlled, Double-Blind Clinical Trial in 49 Patients	2018	Incorrect pt population (<30 pts/group)
Beckmann, M.; Bruun-Olsen, V.; Pripp, A. H.; Bergland, A.; Smith, T.; Heiberg, K. E.	Effect of an additional health-professional-led exercise programme on clinical health outcomes after hip fracture	2021	Doesn't address question of interest;
Beckmann, N. A.; Gotterbarm, T.; Innmann, M. M.; Merle, C.; Bruckner, T.; Kretzer, J. P.; Streit, M. R.	Long-term durability of alumina ceramic heads in THA	2015	Incorrect patient population (includes age<50 yrs)
Bel, J. C.; Carret, J. P.	Total hip arthroplasty with minimal invasive surgery in elderly patients with neck of femur fractures: our institutional experience	2015	Very low quality
Belfrage, B.; Koldestam, A.; SjÃ¶berg, C.; Wallerstedt, S. M.	Prevalence of suboptimal drug treatment in patients with and without multidose drug dispensing - A cross-sectional study	2014	Does not address question of interest - Cross-sectional study
Belfrage, B.; Koldestam, A.; SjÃ¶berg, C.; Wallerstedt, S. M.	Number of drugs in the medication list as an indicator of prescribing quality: A validation study of polypharmacy indicators in older hip fracture patients	2015	Does not address question of interest
Bell, J. J.; Bauer, J. D.; Capra, S.; Pulle, R. C.	Multidisciplinary, multi-modal nutritional care in acute hip fracture inpatients - results of a pragmatic intervention	2014	Doesn't address question of interest;
Bell, J. J.; Rossi, T.; Bauer, J. D.; Capra, S.	Developing and evaluating interventions that are applicable and relevant to inpatients and those who care for them; a multiphase, pragmatic action research approach	2014	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Bell, K. R.; Clement, N. D.; Jenkins, P. J.; Keating, J. F.	A comparison of the use of uncemented hydroxyapatite-coated bipolar and cemented femoral stems in the treatment of femoral neck fractures: a case-control study	2014	not best available evidence
Ben-Elyahu, R.; Khateeb, B.; Faour, A.; Segal, D.; Ohana, N.; Brin, Y.	Cemented vs. cementless hemiarthroplasty for displaced intra-capsular fractures of the hip: A retrospective comparison study	2020	not best available evidence
Bengtson, L. G. S.; Lutsey, P. L.; Chen, L. Y.; MacLehose, R. F.; Alonso, A.	Comparative effectiveness of dabigatran and rivaroxaban versus warfarin for the treatment of non-valvular atrial fibrillation	2017	Does not address question of interest
Bennett, A.; Li, H.; Patel, A.; Kang, K.; Gupta, P.; Choueka, J.; Feierman, D. E.	Retrospective Analysis of Geriatric Patients Undergoing Hip Fracture Surgery: Delaying Surgery Is Associated With Increased Morbidity, Mortality, and Length of Stay	2018	Optimal time to surgery - Non-RCT
Beraldi, R.; Masi, L.; Parri, S.; Partescano, R.; Brandi, M. L.	The role of the orthopaedic surgeon in the prevention of refracture in patients treated surgically for fragility hip and vertebral fracture	2014	Does not address question of interest
Berger-Groch, J.; Rupprecht, M.; Schoepper, S.; Schroeder, M.; Rueger, J. M.; Hoffmann, M.	Five-Year Outcome Analysis of Intertrochanteric Femur Fractures: A Prospective Randomized Trial Comparing a 2-Screw and a Single-Screw Cephalomedullary Nail	2016	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Berggren, M.; Karlsson, A.; Lindelof, N.; Englund, U.; Olofsson, B.; Nordstrom, P.; Gustafson, Y.; Stenvall, M.	Effects of geriatric interdisciplinary home rehabilitation on complications and readmissions after hip fracture: a randomized controlled trial	2019	Secondary analysis

Authors	Article Title	Year	Reason for Exclusion
Bernabeu-Wittel, M.; Romero, M.; Ollero-Baturone, M.; Aparicio, R.; Murcia-Zaragoza, J.; Rincon-Gomez, M.; Monte-Secades, R.; Melero-Bascones, M.; Rosso, C. M.; Ruiz-Cantero, A.; Pahfrac-Investigators	Ferric carboxymaltose with or without erythropoietin in anemic patients with hip fracture: a randomized clinical trial	2016	Does not address question of interest (not among specified interventions)
Bernaus, M.; Angles, F.; Escudero, B.; Veloso, M.; Matamala, A.; Font-Vizcarra, L.	Subcutaneous Radiographic Measurement: A Marker to Evaluate Surgical Site Infection Risk in Elderly Hip Fracture Patients	2019	Does not address question of interest
Bernstein, J.; Roberts, F. O.; Wiesel, B. B.; Ahn, J.	Preoperative Testing for Hip Fracture Patients Delays Surgery, Prolongs Hospital Stays, and Rarely Dictates Care	2016	Does not meet inclusion criteria (non-RCT for timing PICO)
Bhattacharyya, R.; Agrawal, Y.; Elphick, H.; Blundell, C.	A unique orthogeriatric model: a step forward in improving the quality of care for hip fracture patients	2013	not best available evidence
Bhimani, A. A.; Rizkalla, J. M.; Kitziger, K. J.; Peters, P. C.; Schubert, R. D.; Gladnick, B. P.	Surgical automation reduces operating time while maintaining accuracy for direct anterior total hip arthroplasty	2020	Incorrect patient population (includes age<50 yrs)
Biber, R.; Singler, K.; Curschmann-Horter, M.; Wicklein, S.; Sieber, C.; Bail, H. J.	Implementation of a co-managed Geriatric Fracture Center reduces hospital stay and time-to-operation in elderly femoral neck fracture patients	2013	not best available evidence
Bible, J. E.; Kadakia, R. J.; Wegner, A.; Richards, J. E.; Mir, H. R.	One-year mortality after isolated pelvic fractures with posterior ring involvement in elderly patients	2013	Incorrect patient population (<30 patients/group)
Bienkowski, P.; Reindl, R.; Berry, G. K.; Iakoub, E.; Harvey, E. J.	A new intramedullary nail device for the treatment of intertrochanteric hip fractures: Perioperative experience	2006	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Biermann, N.; Schirren, M.; Siebenburger, G.; Fleischhacker, E.; Helfen, T.; Bocker, W.; Ockert, B.	Glenohumeral joint lavage does not affect clinical outcomes in open reduction and internal fixation of displaced intracapsular proximal humeral fractures: a prospective, randomized, double-blinded trial	2020	Does not address question of interest (not among specified interventions)
Bigsby, E.; Acharya, M. R.; Ward, A. J.; Chesser, T. J.	The use of blood cell salvage in acetabular fracture internal fixation surgery	2013	Incorrect patient population (includes age<50 yrs)
Binder, E. F.; Brown, M.; Sinacore, D. R.; Steger-May, K.; Yarasheski, K. E.; Schechtman, K. B.	Effects of extended outpatient rehabilitation after hip fracture: a randomized controlled trial	2004	Excluded PICO
Bisaccia, M.; Caraffa, A.; Rinonapoli, G.; Mancini, G. B.; Rollo, G.; Carrato-Gomez, M.; Gomez-Garrido, D.; Ibanez-Vicente, C.; Trilleras-Berrio, J. W.; Pace, V.; Franzese, R.; Vastarella, M.; Pieretti, G.; Errico, G.; Meccariello, L.	Feasibility and value of non-locking retrograde nail vs. locking retrograde nail in fixation of distal third femoral shaft fractures: radiographic, bone densitometry and clinical outcome assessments	2020	Incorrect patient population (includes age<50 yrs)
Bisaccia, M.; Ceccarini, P.; Rinonapoli, G.; Di Giacomo, L. M.; Teodori, J.; Schiavone, A.; Ibanez Vicente, C.; De Trana, G.; Caraffa, A.	Dhs plus anti-rotational screw vs cannulated screws for femoral neck fractures: an analysis of clinical outcome and incidence regarding avn	2018	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Bischoff-Ferrari, H. A.; Dawson-Hughes, B.; Platz, A.; Orav, E. J.; Stähelin, H. B.; Willett, W. C.; Can, U.; Egli, A.; Mueller, N. J.; Looser, S.; Bretscher, B.; Minder, E.; Vergopoulos, A.; Theiler, R.	Effect of high-dosage cholecalciferol and extended physiotherapy on complications after hip fracture: a randomized controlled trial	2010	Excluded PICO
Bischoff-Ferrari, H. A.; de Godoi Rezende Costa Molino, C.; Rival, S.; Vellas, B.; Rizzoli, R.; Kressig, R. W.; Kanis, J. A.; Manson, J. E.; Dawson-Hughes, B.; Orav, E. J.; da Silva, J. A. P.; Blauth, M.; Felsenberg, D.; Ferrari, S. M.; Theiler, R.; Egli, A.	DO-HEALTH: Vitamin D3 - Omega-3 - Home exercise - Healthy aging and longevity trial - Design of a multinational clinical trial on healthy aging among European seniors	2021	Does not address question of interest (not among specified interventions)
Björkelund, K. B.; Hommel, A.; Thorngren, K. G.; Lundberg, D.; Larsson, S.	Factors at admission associated with 4 months outcome in elderly patients with hip fracture	2009	Excluded PICO
Black, D. M.; Reid, I. R.; Cauley, J. A.; Cosman, F.; Leung, P. C.; Lakatos, P.; Lippuner, K.; Cummings, S. R.; Hue, T. F.; Mukhopadhyay, A.; Tan, M.; Aftring, R. P.; Eastell, R.	The effect of 6 versus 9 years of zoledronic acid treatment in osteoporosis: a randomized second extension to the HORIZON-Pivotal Fracture Trial (PFT)	2015	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Blakeney, W. G.; Beaulieu, Y.; Puliero, B.; Lavigne, M.; Roy, A.; Masse, V.; Vendittoli, P. A.	Excellent results of large-diameter ceramic-on-ceramic bearings in total hip arthroplasty: Is Squeaking Related to Head Size	2018	Incorrect patient population (includes age<50 yrs)
Blandfort, S.; Gregersen, M.; Borris, L. C.; Damsgaard, E. M.	Blood transfusion strategy and risk of postoperative delirium in nursing homes residents with hip fracture. A post hoc analysis based on the TRIFE randomized controlled trial	2017	Secondary analysis
Blankstein, M.; Schemitsch, E. H.; Bzovsky, S.; Poolman, R. W.; Frihagen, F.; Axelrod, D.; Heels-Ansdell, D.; Bhandari, M.; Sprague, S.; Schottel, P. C.; Health Investigators	What Factors Increase Revision Surgery Risk When Treating Displaced Femoral Neck Fractures With Arthroplasty: A Secondary Analysis of the HEALTH Trial	2020	Does not address question of interest - prognostic endpoints
Blizzard, D. J.; Penrose, C. T.; Sheets, C. Z.; Seyler, T. M.; Bolognesi, M. P.; Brown, C. R.	Ankylosing Spondylitis Increases Perioperative and Postoperative Complications After Total Hip Arthroplasty	2017	Insufficient data - age range not provided
Blondon, M.; Rodabough, R. J.; Budrys, N.; Johnson, K. C.; Berger, J. S.; Shikany, J. M.; Raiesdana, A.; Heckbert, S. R.; Manson, J. E.; LaCroix, A. Z.; Siscovick, D.; Kestenbaum, B.; Smith, N. L.; de Boer, I. H.	The effect of calcium plus vitamin D supplementation on the risk of venous thromboembolism. From the Women's Health Initiative Randomized Controlled Trial	2015	Secondary analysis
Bodansky, D.; Oskrochi, Y.; Judah, G.; Lewis, M.; Fischer, B.; Narayan, B.	Change the habit to change the practice: Do audits really ever change anything?	2017	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Boddaert, J.; Cohen-Bittan, J.; Khiami, F.; Le Manach, Y.; Raux, M.; Beinis, J. Y.; Verny, M.; Riou, B.	Postoperative admission to a dedicated geriatric unit decreases mortality in elderly patients with hip fracture	2014	not best available evidence
Boese, C. K.; Buecking, B.; Bliemel, C.; Ruchholtz, S.; Frink, M.; Lechler, P.	The effect of osteoarthritis on functional outcome following hemiarthroplasty for femoral neck fracture: a prospective observational study	2015	Incorrect patient population (<30 patients/group)
Boesmueller, S.; Michel, M.; Hofbauer, M.; Platzer, P.	Primary cementless hip arthroplasty as a potential risk factor for non-union after long-stem revision arthroplasty in periprosthetic femoral fractures	2015	Incorrect patient population (<30 patients/group)
Bohl, D. D.; Basques, B. A.; Golinvaux, N. S.; Miller, C. P.; Baumgaertner, M. R.; Grauer, J. N.	Extramedullary compared with intramedullary implants for intertrochanteric hip fractures: thirty-day outcomes of 4432 procedures from the ACS NSQIP database	2014	Does not meet inclusion criteria (non-RCT for cephalomedullary device vs. sliding hip screw)
Bohm, E.; Loucks, L.; Wittmeier, K.; Lix, L. M.; Oppenheimer, L.	Reduced time to surgery improves mortality and length of stay following hip fracture: results from an intervention study in a Canadian health authority	2015	Does not meet inclusion criteria (non-RCT for timing PICO)
Boldin, C.; Seibert, F. J.; Fankhauser, F.; Peicha, G.; Grechenig, W.; Szyszkowitz, R.	The proximal femoral nail (PFN)--a minimal invasive treatment of unstable proximal femoral fractures: a prospective study of 55 patients with a follow-up of 15 months	2003	Incorrect patient population (<30 pts/group)
Bollinger, A. J.; Butler, P. D.; Nies, M. S.; Sietsema, D. L.; Jones, C. B.; Endres, T. J.	Is Scheduled Intravenous Acetaminophen Effective in the Pain Management Protocol of Geriatric Hip Fractures?	2015	not best available evidence
Bone, H. G.; Lindsay, R.; McClung, M. R.; Perez, A. T.; Raanan, M. G.; Spanheimer, R. G.	Effects of pioglitazone on bone in postmenopausal women with impaired fasting glucose or impaired glucose tolerance: A randomized, double-Blind, placebo-Controlled study	2013	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Bone, H. G.; Wagman, R. B.; Brandi, M. L.; Brown, J. P.; Chapurlat, R.; Cummings, S. R.; Czerwinski, E.; Fahrleitner-Pammer, A.; Kendler, D. L.; Lippuner, K.; Reginster, J. Y.; Roux, C.; Malouf, J.; Bradley, M. N.; Daizadeh, N. S.; Wang, A.; Dakin, P.; Pannacciulli, N.; Dempster, D. W.; Papapoulos, S.	10 years of denosumab treatment in postmenopausal women with osteoporosis: results from the phase 3 randomised FREEDOM trial and open-label extension	2017	Does not address question of interest
Bonicoli, E.; Parchi, P.; Piolanti, N.; Andreani, L.; Niccolai, F.; Lisanti, M.	Comparison of the POSSUM score and P-POSSUM score in patients with femoral neck fracture	2014	Incorrect patient population (includes age<50 yrs)
Boone, C.; Carlberg, K. N.; Koueiter, D. M.; Baker, K. C.; Sadowski, J.; Wiater, P. J.; Nowinski, G. P.; Grant, K. D.	Short versus long intramedullary nails for treatment of intertrochanteric femur fractures (OTA 31-A1 and A2)	2014	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Borges, F. K.; Bhandari, M.; Guerra-Farfan, E.; Patel, A.; Sigamani, A.; Umer, M.; Tiboni, M. E.; Villar-Casares, M. D. M.; Tandon, V.; Tomas-Hernandez, J.; Teixidor-Serra, J.; Avram, V. R.; Winemaker, M.; Ramokgopa, M. T.; Szczeklik, W.; Landoni, G.; Wang, C. Y.; Begum, D.; Neary, J. D.; Adili, A.; Sancheti, P. K.; Lawendy, A. R.; Balaguer-Castro, M.; Å?lÄ?czka, P.; Jenkinson, R. J.; Nur, A. N.; Wood, G. C.; Feibel, R. J.; McMahon, S. J.; Sigamani, A.; Popova, E.; Biccard, B. M.; Moppett, I. K.	Accelerated surgery versus standard care in hip fracture (HIP ATTACK): an international, randomised, controlled trial	2020	Incorrect patient population (includes age<50 yrs)
Bouche, P. A.; Corsia, S.; Boukebous, B.; Boutroux, P.; Zahi, R.; Guillon, P.	Is the position of dual-mobility cup in THA for femoral neck fractures optimal? A retrospective study	2020	Does not address question of interest - stratified by pt characteristics
Boukebous, B.; Boutroux, P.; Zahi, R.; Azmy, C.; Guillon, P.	Comparison of dual mobility total hip arthroplasty and bipolar arthroplasty for femoral neck fractures: A retrospective case-control study of 199 hips	2018	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Bouman, A. I. E.; Hemmen, B.; Evers, S. M. A. A.; Van De Meent, H.; Ambergen, T.; Vos, P. E.; Brink, P. R. G.; Seelen, H. A. M.	Effects of an integrated 'Fast Track' rehabilitation service for multi-trauma patients: A non-randomized clinical trial in the Netherlands	2017	Incorrect patient population (includes age<50 yrs)
Branas, F.; Ruiz-Pinto, A.; Fernandez, E.; Del Cerro, A.; de Dios, R.; Fuentetaja, L.; Cebrian, L.; Larrainzar-Garijo, R.	Beyond orthogeriatric co-management model: benefits of implementing a process management system for hip fracture	2018	not best available evidence
Braun, B. J.; Veith, N. T.; Rollmann, M.; Orth, M.; Fritz, T.; Herath, S. C.; Holstein, J. H.; Pohlemann, T.	Weight-bearing recommendations after operative fracture treatment-fact or fiction? Gait results with and feasibility of a dynamic, continuous pedobarography insole	2017	Incorrect patient population (includes age<50 yrs)
Bray, T. J.; Smith-Hoefer, E.; Hooper, A.; Timmerman, L.	The displaced femoral neck fracture. Internal fixation versus bipolar endoprosthesis. Results of a prospective, randomized comparison	1988	Sample Size too Small (n < 30 per group)
Bretherton, C. P.; Parker, M. J.	Femoral Medialization, Fixation Failures, and Functional Outcome in Trochanteric Hip Fractures Treated With Either a Sliding Hip Screw or an Intramedullary Nail From Within a Randomized Trial	2016	Incorrect patient population (includes age<50 yrs)
Brewster, J.; Grenier, G.; Taylor, B. C.; Carter, C.; Degenova, D.; Ebaugh, M. P.; Halverson, A.	Long-term Comparison of Retrograde and Antegrade Femoral Nailing	2020	Incorrect patient population (includes age<50 yrs)
Brin, Y. S.; Palmanovich, E.; Aliev, E.; Laver, L.; Yaacobi, E.; Nyska, M.; Kish, B. J.	Closed reduction and internal fixation for intertrochanteric femoral fractures is safer and more efficient using two fluoroscopes simultaneously	2014	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Broden, C.; Mukka, S.; Muren, O.; Eisler, T.; Boden, H.; Stark, A.; Skoldenberg, O.	High risk of early periprosthetic fractures after primary hip arthroplasty in elderly patients using a cemented, tapered, polished stem	2015	Does not address question of interest - stratified by pt characteristics
Broderick, J. M.; Bruce-Brand, R.; Stanley, E.; Mulhall, K. J.	Osteoporotic hip fractures: the burden of fixation failure	2013	Narrative review
Brown, C. H. th; Azman, A. S.; Gottschalk, A.; Mears, S. C.; Sieber, F. E.	Sedation depth during spinal anesthesia and survival in elderly patients undergoing hip fracture repair	2014	Does not address question of interest - both groups received spinal anesthesia
Bruckbauer, M.; Prexl, O.; Voelckel, W.; Ziegler, B.; Grottke, O.; Maegele, M.; Schochl, H.	Impact of Direct Oral Anticoagulants in Patients With Hip Fractures	2019	Does not meet inclusion criteria (non-post-operative for VTE)
Brunner, A.; Buttler, M.; Lehmann, U.; Frei, H. C.; Kratter, R.; Di Lazzaro, M.; Scola, A.; Sermon, A.; Attal, R.	What is the optimal salvage procedure for cut-out after surgical fixation of trochanteric fractures with the PFNA or TFN?: A multicentre study	2016	Incorrect patient population (<30 pts/group)
Brunskill, S. J.; Millette, S. L.; Shokoohi, A.; Pulford, E. C.; Doree, C.; Murphy, M. F.; Stanworth, S.	Red blood cell transfusion for people undergoing hip fracture surgery	2015	Systematic review
Bucs, G.; Dande, A.; Patczai, B.; Sebestyen, A.; Almasi, R.; Not, L. G.; Wiegand, N.	Bipolar hemiarthroplasty for the treatment of femoral neck fractures with minimally invasive anterior approach in elderly	2020	not best available evidence
Buecking, B.; Eschbach, D.; Bliemel, C.; Oberkircher, L.; Struewer, J.; Ruchholtz, S.; Sachs, U. J.	Effectiveness of vitamin K in anticoagulation reversal for hip fracture surgery--a prospective observational study	2014	Does not meet inclusion criteria (non-post-operative for VTE)

Authors	Article Title	Year	Reason for Exclusion
Buecking, B.; Struewer, J.; Waldermann, A.; Horstmann, K.; Schubert, N.; Balzer-Geldsetzer, M.; Dodel, R.; Bohl, K.; Ruchholtz, S.; Bliemel, C.	What determines health-related quality of life in hip fracture patients at the end of acute care?--a prospective observational study	2014	Does not address question of interest - prognostic endpoints
Buecking, B.; Timmesfeld, N.; Riem, S.; Bliemel, C.; Hartwig, E.; Friess, T.; Liener, U.; Ruchholtz, S.; Eschbach, D.	Early orthogeriatric treatment of trauma in the elderly: a systematic review and metaanalysis	2013	Systematic review
Burastero, G.; Basso, M.; Carrega, G.; Cavagnaro, L.; Chiarlone, F.; Salomone, C.; Papa, G.; Felli, L.	Acetabular spacers in 2-stage hip revision: is it worth it? A single-centre retrospective study	2017	Incorrect patient population (includes age<50 yrs)
Burgers, P. T.; Van Lieshout, E. M.; Verhelst, J.; Dawson, I.; de Rijcke, P. A.	Implementing a clinical pathway for hip fractures; effects on hospital length of stay and complication rates in five hundred and twenty six patients	2014	not best available evidence
Burness, R.; Horne, G.; Purdie, G.	Albumin levels and mortality in patients with hip fractures	1996	Excluded PICO
Burton, A.; Davis, C. M.; Boateng, H.; Fox, E. J.; McQuillan, P. M.; Mets, B.; Hassenbein, S.; Black, K. P.; Munyon, R.; McGillen, B.; Armstrong, A. D.	A Multidisciplinary Approach to Expedite Surgical Hip Fracture Care	2020	Does not address question of interest - stratified by pt characteristics

Authors	Article Title	Year	Reason for Exclusion
Butler, C. C.; van der Velden, A. W.; Bongard, E.; Saville, B. R.; Holmes, J.; Coenen, S.; Cook, J.; Francis, N. A.; Lewis, R. J.; Godycki-Cwirko, M.; Llor, C.; Chlabicz, S.; Lionis, C.; Seifert, B.; Sundvall, P. D.; Colliers, A.; Aabenhus, R.; Bjerrum, L.; Jonassen Harbin, N.; LindbÃ¦k, M.; Glinz, D.; Bucher, H. C.; KovÃ¡cs, B.; Radzeviciene Jurgute, R.; Touboul Lundgren, P.; Little, P.; Murphy, A. W.; De Sutter, A.; Openshaw, P.; de Jong, M. D.; Connor, J. T.; Matheeussen, V.; Ieven, M.; Gooss	Oseltamivir plus usual care versus usual care for influenza-like illness in primary care: an open-label, pragmatic, randomised controlled trial	2020	Does not address question of interest - Not exclusive to hip
Butt, F. F.; Hussain, A. S.; Khan, A. M.; Sultan, M.	Implants For Extracapsular Neck Of Femur Fracture Dynamic Hip Screw Versus Intramedullary Nailing	2017	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)Intramedullary Hip Screw Versus Hip Screw
Cabrerizo, S.; Cuadras, D.; Gomez-Busto, F.; Artaza-Artabe, I.; Marin-Ciancas, F.; Malafarina, V.	Serum albumin and health in older people: Review and meta analysis	2015	Meta-analysis
Cadossi, M.; Chiarello, E.; Savarino, L.; Tedesco, G.; Baldini, N.; Faldini, C.; Giannini, S.	A comparison of hemiarthroplasty with a novel polycarbonate-urethane acetabular component for displaced intracapsular fractures of the femoral neck: a randomised controlled trial in elderly patients	2013	duplicate of AAOS #8665

Authors	Article Title	Year	Reason for Exclusion
Cafaro, T.; Simard, C.; Tagalakis, V.; Koolian, M.	Delayed time to emergency hip surgery in patients taking oral anticoagulants	2019	Incorrect patient population (includes age<50 yrs)
Caiaffa, V.; Vicenti, G.; Mori, C.; Panella, A.; Conserva, V.; Corina, G.; Scialpi, L.; Abate, A.; Carrozzo, M.; Petrelli, L.; Picca, G.; Aloisi, A.; Rollo, G.; Filipponi, M.; Freda, V.; Pansini, A.; Puce, A.; Solarino, G.; Moretti, B.	Is distal locking with short intramedullary nails necessary in stable pertrochanteric fractures? A prospective, multicentre, randomised study	2016	Did not address question of interest
Calderazzi, F.; Pompili, M.; Carolla, A.; Schiavi, P.; Groppi, G.; Ceccarelli, F.	Gamma nail TM in pertrochanteric fractures in elderly patients: is anatomical reduction necessary? A preliminary study	2015	Incorrect patient population (<30 patients/group)
Calderazzi, F.; Ricotta, A.; Schiavi, P.; Ceccarelli, F.	Medial neck femoral fractures: algorithm of treatment and the use of f.g.L. TM memory shape stem	2014	Incorrect patient population (<30 patients/group)
Campbell, A.; Lott, A.; Gonzalez, L.; Kester, B.; Egol, K. A.	Patient-Centered Care: Total Hip Arthroplasty for Displaced Femoral Neck Fracture Does Not Increase Infection Risk	2020	not best available evidence
Campbell, S. T.; Bala, A.; Jiang, S. Y.; Gardner, M. J.; Bishop, J. A.	Are factor Xa inhibitors effective thromboprophylaxis following hip fracture surgery?: A large national database study	2017	Does not meet inclusion criteria (non-post-operative for VTE)
Camu, F.; Borgeat, A.; Heylen, R. J.; Viel, E. J.; Boye, M. E.; Cheung, R. Y.	Parecoxib, propacetamol, and their combination for analgesia after total hip arthroplasty: a randomized non-inferiority trial	2017	Incorrect patient population (includes age<50 yrs)
Cankaya, D.; Ozkurt, B.; Tabak, A. Y.	Cemented calcar replacement versus cementless hemiarthroplasty for unstable intertrochanteric femur fractures in the elderly	2013	not best available evidence
Cao, X.; Kong, X.; Li, A.	Auxiliary biological cemented femoral stem was effective in treating elderly patients with intertrochanteric fracture	2017	Doesn't address comparison of interest

Authors	Article Title	Year	Reason for Exclusion
Capone, A.; Peri, M.; Mastio, M.	Surgical treatment of acetabular fractures in the elderly: a systematic review of the results	2017	Systematic review
Carson, J. L.; Terrin, M. L.; Barton, F. B.; Aaron, R.; Greenburg, A. G.; Heck, D. A.; Magaziner, J.; Merlino, F. E.; Bunce, G.; McClelland, B.; Duff, A.; Noveck, H.	A pilot randomized trial comparing symptomatic vs. hemoglobin-level-driven red blood cell transfusions following hip fracture	1998	population included ages below 50yrs
Carta, S.; Falzarano, G.; Rollo, G.; Grubor, P.; Fortina, M.; Meccariello, L.; Medici, A.; Riva, A.; Sampieri, L.; Ferrata, P.	Total hip arthroplasty vs. osteosynthesis in acute complex acetabular fractures in the elderly: Evaluation of surgical management and outcomes	2017	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Casati, A.; Aldegheri, G.; Vinciguerra, E.; Marsan, A.; Fraschini, G.; Torri, G.	Randomized comparison between sevoflurane anaesthesia and unilateral spinal anaesthesia in elderly patients undergoing orthopaedic surgery	2003	<30 per group
Casey, S. D.; Stevenson, D. E.; Mumma, B. E.; Slee, C.; Wolinsky, P. R.; Hirsch, C. H.; Tyler, K.	Emergency Department Pain Management Following Implementation of a Geriatric Hip Fracture Program	2017	not best available evidence
Catania, P.; Passaretti, D.; Montemurro, G.; Ripanti, S.; Carbone, S.; Candela, V.; Carnovale, M.; Gumina, S.; Pallotta, F.	Intramedullary nailing for pertrochanteric fractures of proximal femur: a consecutive series of 323 patients treated with two devices	2019	Confounding effect - comparison of length between 2 different devices

Authors	Article Title	Year	Reason for Exclusion
Cauley, J. A.; Danielson, M. E.; Jammy, G. R.; Bauer, D. C.; Jackson, R.; Wactawski-Wende, J.; Chlebowski, R. T.; Ensrud, K. E.; Boudreau, R.	Sex Steroid Hormones and Fracture in a Multiethnic Cohort of Women: The Women's Health Initiative Study (WHI)	2017	Does not address question of interest
Celik, H.; Kara, A.; Saglam, Y.; Turkmen, I.; Aykut, S.; Erdil, M.	Can double fluoroscopy in the oblique position reduce surgical time and radiation exposure during intertrochanteric femur fracture nailing?	2018	Incorrect patient population (<30 patients/group)
Cengiz, Ã?; Demir, N.; Dirvar, F.; Ceylan, H. H.	Mortality and the factors affecting patients over 65 age with unstable intertrochanteric fractures treated with proximal femoral nail	2018	not best available evidence
Cengiz, O.; Polat, G.; Karademir, G.; Tunc, O. D.; Erdil, M.; Tuncay, I.; Sen, C.	Effects of Zoledronate on Mortality and Morbidity after Surgical Treatment of Hip Fractures	2016	Does not address question of interest (not among specified interventions)
Cha, Y. H.; Ha, Y. C.; Yoo, J. I.; Min, Y. S.; Lee, Y. K.; Koo, K. H.	Effect of causes of surgical delay on early and late mortality in patients with proximal hip fracture	2017	Does not meet inclusion criteria (non-RCT for timing PICO)
Chakravarthy, U.; Harding, S. P.; Rogers, C. A.; Downes, S.; Lotery, A. J.; Dakin, H. A.; Culliford, L.; Scott, L. J.; Nash, R. L.; Taylor, J.; Muldrew, A.; Sahni, J.; Wordsworth, S.; Raftery, J.; Peto, T.; Reeves, B. C.	A randomised controlled trial to assess the clinical effectiveness and cost-effectiveness of alternative treatments to Inhibit VEGF in Age-related choroidal Neovascularisation (IVAN)	2015	Does not address question of interest (not among specified interventions)
Chammout, G.; Muren, O.; BodÃ©n, H.; Salemyr, M.; SkÃ¶ldenberg, O.	Cemented compared to uncemented femoral stems in total hip replacement for displaced femoral neck fractures in the elderly: Study protocol for a single-blinded, randomized controlled trial (CHANCE-trial)	2016	Protocol

Authors	Article Title	Year	Reason for Exclusion
Chan, Y. M.; Tang, N.; Chow, S. K.	Surgical outcome of daytime and out-of-hours surgery for elderly patients with hip fracture	2018	Does not meet inclusion criteria (not RCT for timing PICO)
Chana, R.; Noorani, A.; Ashwood, N.; Chatterji, U.; Healy, J.; Baird, P.	The role of MRI in the diagnosis of proximal femoral fractures in the elderly	2006	Advanced Imaging
Chang, F. H.; Latham, N. K.; Ni, P.; Jette, A. M.	Does self-efficacy mediate functional change in older adults participating in an exercise program after hip fracture? A randomized controlled trial	2015	Does not address question of interest (not among specified interventions)
Chang, S. C.; Lai, J. I.; Lu, M. C.; Lin, K. H.; Wang, W. S.; Lo, S. S.; Lai, Y. C.	Reduction in the incidence of pneumonia in elderly patients after hip fracture surgery: An inpatient pulmonary rehabilitation program	2018	not best available evidence
Chapman, T.; Zmistowski, B.; Krieg, J.; Stake, S.; Jones, C. M.; Levicoff, E.	Helical Blade Versus Screw Fixation in the Treatment of Hip Fractures With Cephalomedullary Devices: Incidence of Failure and Atypical "Medial Cutout"	2018	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Chapuy, M. C.; Arlot, M. E.; Duboeuf, F.; Brun, J.; Crouzet, B.; Arnaud, S.; Delmas, P. D.; Meunier, P. J.	Vitamin D3 and calcium to prevent hip fractures in elderly women	1992	Excluded PICO
Charles, J. M.; Roberts, J. L.; Ud Din, N.; Williams, N. H.; Yeo, S. T.; Edwards, R. T.	Preferences of older patients regarding hip fracture rehabilitation service configuration: A feasibility discrete choice experiment	2018	Does not address question of interest
Chau, S. H.; Sluiter, R. L.; Kievit, W.; Wensing, M.; Teichert, M.; Hugtenburg, J. G.	Cost Effectiveness of Gastroprotection with Proton Pump Inhibitors in Older Low-Dose Acetylsalicylic Acid Users in the Netherlands	2017	Incorrect patient population (not exclusive to hip)
Chaudet, A.; Bouhours, G.; Rineau, E.; Hamel, J. F.; Leblanc, D.; Steiger, V.; Lasocki, S.	Impact of preoperative continuous femoral blockades on morphine consumption and morphine side effects in hip-fracture patients: A randomized, placebo-controlled study	2016	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Chawla, L.; Bandekar, S. M.; Dixit, V.; P, A.; Krishnamoorthi, A.; Mummigatti, S.	Functional outcome of patellar resurfacing vs non resurfacing in Total Knee Arthoplasty in elderly: A prospective five year follow-up study	2019	Incorrect patient population (not exclusive to hip)
Chechik, O.; Amar, E.; Khashan, M.; Pritsch, T.; Drexler, M.; Goldstein, Y.; Steinberg, E. L.	Favorable radiographic outcomes using the expandable proximal femoral nail in the treatment of hip fractures - A randomized controlled trial	2014	Incorrect patient population (<30 patients/group)
Checketts, R. G.; Bradley, J. G.	Low-dose heparin in femoral neck fractures	1974	Incorrect patient population (< 30 pts/group)
Chen, C. H.; Chou, M. Y.; Wang, C. C.; Hsieh, M. K.; Huang, H. L.; Liu, C. Y.; Zeng, Z. P.; Renn, J. H.; Lu, Y. C.	Comparison of clinical results for patients undergoing unilateral total knee replacement with or without tranexamic acid	2017	Incorrect patient population (not exclusive to hip)
Chen, C. H.; Huang, P. J.; Huang, H. T.; Lin, S. Y.; Wang, H. Y.; Fang, T. J.; Lin, Y. C.; Ho, C. J.; Lee, T. C.; Lu, Y. M.; Chiu, H. C.	Impact of orthogeriatric care, comorbidity, and complication on 1-year mortality in surgical hip fracture patients: An observational study	2019	not best available evidence
Chen, D. X.; Yang, L.; Ding, L.; Li, S. Y.; Qi, Y. N.; Li, Q.	Perioperative outcomes in geriatric patients undergoing hip fracture surgery with different anesthesia techniques: A systematic review and meta-analysis	2019	Systematic review
Chen, F.; Dai, Z.; Kang, Y.; Lv, G.; Keller, E. T.; Jiang, Y.	Effects of zoledronic acid on bone fusion in osteoporotic patients after lumbar fusion	2016	Insufficient data - age range not provided
Chen, J. Y.; She, G. R.; Luo, S. M.; Wu, W. R.; Zhuang, T. F.; Huan, S. W.; Liu, N.; Zha, Z. G.	Hemiarthroplasty compared with internal fixation for treatment of nondisplaced femoral neck fractures in elderly patients: a retrospective study	2020	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Chen, J.; Ma, J. X.; Wang, Y.; Bai, H. H.; Sun, L.; Wang, Y.; Lu, B.; Dong, B. C.; Tian, A. X.; Ma, X. L.	Finite element analysis of two cephalomedullary nails in treatment of elderly reverse obliquity intertrochanteric fractures: zimmer natural nail and proximal femoral nail antirotation-Iotalota	2019	Case report

Authors	Article Title	Year	Reason for Exclusion
Chen, M.; Luo, Z.; Ji, X.; Cheng, P.; Tang, G.; Shang, X.	Direct Anterior Approach for Total Hip Arthroplasty in the Lateral Decubitus Position: Our Experiences and Early Results	2017	Incorrect patient population (includes age<50 yrs)
Chen, P.; Shen, X.; Xu, W.; Yao, W.; Ma, N.	Comparative assessment of early versus delayed surgery to treat proximal femoral fractures in elderly patients: A systematic review and meta-analysis	2019	Meta-analysis
Chen, W. Q.; Guo, N.; Wang, S. S.; Wang, R.; Huang, F.; Li, S. R.	General laryngeal mask airway anesthesia with lumbar plexus and sciatic block provides better outcomes than general anesthesia and endotracheal intubation in elderly patients undergoing hip surgery	2018	Imperfect comparasion
Chen, X.; Xu, H. T.; Zhang, H. J.; Chen, J.	Suprapatellar versus infrapatellar intramedullary nailing for treatment of tibial shaft fractures in adults	2018	Meta-analysis
Chen, X.; Zhang, J.; Wang, X.; Ren, J.; Liu, Z.	Incidence of and Factors Influencing Femoral Neck Shortening in Elderly Patients After Fracture Fixation with Multiple Cancellous Screws	2017	Does not address question of interest
Cheng, L.; Long, H. T.; Sun, B. H.; Zhao, S. S.; Zhu, Y.	The efficacy of a multimodal analgesia protocol in preventing heterotopic ossification after acetabular fractures surgery	2017	Incorrect patient population (includes age<50 yrs)
Cheng, Q.; Huang, W.; Gong, X.; Wang, C.; Liang, X.; Hu, N.	Minimally invasive percutaneous compression plating versus dynamic hip screw for intertrochanteric fractures: a randomized control trial	2014	Not comparison of interest
Cheng, T. E.; Wallis, J. A.; Taylor, N. F.; Holden, C. T.; Marks, P.; Smith, C. L.; Armstrong, M. S.; Singh, P. J.	A Prospective Randomized Clinical Trial in Total Hip Arthroplastyâ??Comparing Early Results Between the Direct Anterior Approach and the Posterior Approach	2017	Incorrect patient population (includes age<50 yrs)
Cheng, T.; Xia, R. G.; Dong, S. K.; Yan, X. Y.; Luo, C. F.	Interlocking Intramedullary Nailing Versus Locked Dual-Plating Fixation for Femoral Shaft Fractures in Patients with Multiple Injuries: A Retrospective Comparative Study	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Chesser, T. J.; Fox, R.; Harding, K.; Halliday, R.; Barnfield, S.; Willett, K.; Lamb, S.; Yau, C.; Javaid, M. K.; Gray, A. C.; Young, J.; Taylor, H.; Shah, K.; Greenwood, R.	The administration of intermittent parathyroid hormone affects functional recovery from trochanteric fractured neck of femur: a randomised prospective mixed method pilot study	2016	Incorrect patient population (<30 patients/group)
Chesser, T.; Fox, R.; Harding, K.; Greenwood, R.; Javaid, K.; Barnfield, S.; Halliday, R.; Willett, K.; Lamb, S.	The administration of intermittent parathyroid hormone affects functional recovery from pertrochanteric fractured neck of femur: A protocol for a prospective mixed method pilot study with randomisation of treatment allocation and blinded assessment (FRACTT)	2014	Protocol
Cheung, W. H.; Shen, W. Y.; Dai, D. L.; Lee, K. B.; Zhu, T. Y.; Wong, R. M.; Leung, K. S.	Evaluation of a multidisciplinary rehabilitation programme for elderly patients with hip fracture: A prospective cohort study	2018	not best available evidence
Chiang, M. H.; Wang, C. L.; Fu, S. H.; Hung, C. C.; Yang, R. S.	Does fully-threaded Headless Compression Screw provide a length-stable fixation in undisplaced femoral neck fractures?	2019	Incorrect pt population (<30 pts/group)
Chin, R. P. H.; Ho, C. H.; Cheung, L. P. C.	Scheduled analgesic regimen improves rehabilitation after hip fracture surgery hip	2013	Duplicate study (identical to AAOS ID 4698)
Chin, R. P.; Ho, C. H.; Cheung, L. P.	Scheduled analgesic regimen improves rehabilitation after hip fracture surgery	2013	Imperfect comparison group
Chinzei, N.; Hiranaka, T.; Niikura, T.; Tsuji, M.; Kuroda, R.; Doita, M.; Kurosaka, M.	Comparison of the Sliding and Femoral Head Rotation among Three Different Femoral Head Fixation Devices for Trochanteric Fractures	2015	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Chlebeck, J. D.; Birch, C. E.; Blankstein, M.; Kristiansen, T.; Bartlett, C. S.; Schottel, P. C.	Nonoperative Geriatric Hip Fracture Treatment Is Associated With Increased Mortality: A Matched Cohort Study	2019	not best available evidence
Cho, M. R.; Lee, H. S.; Lee, S. W.; Choi, C. H.; Kim, S. K.; Ko, S. B.	Results after total hip arthroplasty with a large head and bipolar arthroplasty in patients with displaced femoral neck fractures	2011	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Cho, M. R.; Lee, J. H.; Kwon, J. B.; Do, J. S.; Chae, S. B.; Choi, W. K.	The Effect of Positive Medial Cortical Support in Reduction of Pertrochanteric Fractures with Posteromedial Wall Defect Using a Dynamic Hip Screw	2018	Does not address question of interest
Cho, W. T.; Cho, J. W.; Yoon, Y. C.; Kim, Y.; Oh, C. W.; Oh, J. K.	Provisional pin fixation: An efficient alternative to manual maintenance of reduction in nailing of intertrochanteric fractures	2016	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Choi, H. J.; Kim, E.; Shin, Y. J.; Choi, B. Y.; Kim, Y. H.; Lim, T. H.	The timing of surgery and mortality in elderly hip fractures: A retrospective, multicenteric cohort study	2014	Does not meet inclusion criteria (not RCT for timing PICO)
Choi, Y. H.; Kim, D. H.; Kim, T. Y.; Lim, T. W.; Kim, S. W.; Yoo, J. H.	Early postoperative delirium after hemiarthroplasty in elderly patients aged over 70 years with displaced femoral neck fracture	2017	Does not meet inclusion criteria (not RCT for timing PICO)
Choo, S. K.; Oh, H. K.; Ko, H. T.; Min, D. U.; Kim, Y.	Effectiveness of controlled telescoping system for lateral hip pain caused by sliding of blade following intramedullary nailing of trochanteric fracture	2017	Incorrect patient population (includes aged<50 yrs)
Chotanaphuti, T.; Jareonarpornwatana, A.; Laoruengthana, A.	The mortality rate after thromboembolism prophylaxis in the hip fracture surgery	2009	Incorrect patient population (< 30 pts/group)
Chow, J.; Fitch, D. A.	In-hospital costs for total hip replacement performed using the supercapsular percutaneously-assisted total hip replacement surgical technique	2017	Incorrect patient population (includes age<50 yrs)
Christensen, C. P.; Jacobs, C. A.	Clinical comparison of THA with a standard-length or short femoral component	2013	Does not address question of interest (not among specified interventions) - Patients receive THA for comparing long vs. short
Christiano, A. V.; Elsevier, H. C.; Sarker, S.; Agriantonis, G.; Joseph, D.; Hasija, R.	Improving outcomes after hip fracture at a safety net hospital with a standardised hip fracture protocol	2020	Insufficient data detailing multi-disciplinary care
Chua, I. T.; Rajamoney, G. N.; Kwek, E. B.	Cephalomedullary nail versus sliding hip screw for unstable intertrochanteric fractures in elderly patients	2013	Incorrect pt population (<30 pts/group)

Authors	Article Title	Year	Reason for Exclusion
Chuan, A.; Zhao, L.; Tillekeratne, N.; Alani, S.; Middleton, P. M.; Harris, I. A.; McEvoy, L.; Ni Chroinin, D.	The effect of a multidisciplinary care bundle on the incidence of delirium after hip fracture surgery: a quality improvement study	2020	not best available evidence
Chudyk, A. M.; Jutai, J. W.; Petrella, R. J.; Speechley, M.	Systematic Review of Hip Fracture Rehabilitation Practices in the Elderly	2009	Systematic review
Ciaffa, V.; Vicenti, G.; Mori, C. M.; Panella, A.; Conserva, V.; Corina, G.; Scialpi, L.; Speciale, M.; Fraccascia, A.; Picca, G.; Carrozzo, M.; Leone, A.; Morizio, A.; Abate, A.; Petrelli, L.; Aloisi, A.; Rollo, G.; Filipponi, M.; Freda, V.; Pansini, A.; Puce, A.; De Gabriele, S.; Solarino, G.; Moretti, B.	Unlocked versus dynamic and static distal locked femoral nails in stable and unstable intertrochanteric fractures. A prospective study	2018	Does not address question of interest - not stratified by fracture type
Cicek, H.; Seyfettinoglu, F.; Kilicarslan, K.; Ogur, H. U.; Ozturk, L.; Inkaya, E.	What should be the preferred choice of hemiarthroplasty technique in American Society of Anesthesiologists (ASA) class III patients with femoral neck fractures? Cemented or cementless	2015	not best available evidence
Cichos, K. H.; Spitler, C. A.; Quade, J. H.; Almaguer, A.; McGwin, G.; Ghanem, E. S.	Do Indomethacin or Radiation for Heterotopic Ossification Prophylaxis Increase the Rates of Infection or Wound Complications after Acetabular Fracture Surgery?	2020	Incorrect patient population (includes age<50 yrs)
Civinini, R.; Cozzi Lepri, A.; Carulli, C.; Matassi, F.; Villano, M.; Innocenti, M.	The anterior-based muscle-sparing approach to the hip: the "other" anterior approach to the hip	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Clauss, M.; Bolliger, L.; Brandenberger, D.; Ochsner, P. E.; Ilchmann, T.	Similar effect of stem geometry on radiological changes with 2 types of cemented straight stem	2016	Does not address question of interest - comparison of 2 cemented stems
Clave, A.; Fazilleau, F.; Dumser, D.; Lacroix, J.	Efficacy of tranexamic acid on blood loss after primary cementless total hip replacement with rivaroxaban thromboprophylaxis: A case-control study in 70 patients	2012	Incorrect patient population (includes age<50 yrs)
Clement, N. D.; Aitken, S. A.; Duckworth, A. D.; McQueen, M. M.; Court-Brown, C. M.	The outcome of fractures in very elderly patients	2011	Does not address question of interest
Clement, R. C.; Strassle, P. D.; Ostrum, R. F.	Does Very High Surgeon or Hospital Volume Improve Outcomes for Hemiarthroplasty Following Femoral Neck Fractures?	2019	Does not address question of interest
Clemmesen, C. G.; Tavenier, J.; Andersen, O.; Palm, H.; Foss, N. B.	Methylprednisolone and inflammatory stress response in older people undergoing surgery for hip fracture: a secondary analysis of a randomized controlled trial	2019	Secondary analysis
Cobden, A.; Cobden, S. B.; Camurcu, Y.; Ucpunar, H.; Duman, S.; Sofu, H.	Effects of postoperative osteoporosis treatment on subsequent fracture and the 5-year survival rates after hemiarthroplasty for hip fracture	2019	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Coburn, M.; Sanders, R. D.; Maze, M.; Nguyen-Pascal, M. L.; Rex, S.; Garrigues, B.; Carbonell, J. A.; Garcia-Perez, M. L.; Stevanovic, A.; Kienbaum, P.; Neukirchen, M.; Schaefer, M. S.; Borghi, B.; van Oven, H.; Tognu, A.; Al Tmimi, L.; Eyrolle, L.; Langeron, O.; Capdevila, X.; Arnold, G. M.; Schaller, M.; Rossaint, R.; Hipeld Study Investigators	The hip fracture surgery in elderly patients (HIPELD) study to evaluate xenon anaesthesia for the prevention of postoperative delirium: a multicentre, randomized clinical trial	2018	Does not address question of interest - both groups received general anesthesia
Codesido, P.; Mejia, A.; Riego, J.; Ojeda-Thies, C.	Subtrochanteric fractures in elderly people treated with intramedullary fixation: quality of life and complications following open reduction and cerclage wiring versus closed reduction	2017	Imperfect comparasion
Cohen-Levy, W. B.; Rush, A. J.; Goldstein, J. P.; Sheu, J. I.; Hernandez-Irizarry, R. C.; Quinnan, S. M.	Tranexamic acid with a pre-operative suspension of anticoagulation decreases operative time and blood transfusion in the treatment of pelvic and acetabulum fractures	2020	Incorrect patient population (includes age<50 yrs)
Cohn, M. R.; Cong, G. T.; Nwachukwu, B. U.; Patt, M. L.; Desai, P.; Zambrana, L.; Lane, J. M.	Factors Associated With Early Functional Outcome After Hip Fracture Surgery	2016	Does not meet inclusion criteria (non-RCT for timing PICO)
Cohn, M. R.; Levack, A. E.; Trivedi, N. N.; Villa, J. C.; Wellman, D. S.; Lyden, J. P.; Lorich, D. G.; Lane, J. M.	The Hip Fracture Patient on Warfarin: Evaluating Blood Loss and Time to Surgery	2017	Does not meet inclusion criteria (non-post-operative for VTE)

Authors	Article Title	Year	Reason for Exclusion
Colais, P.; Agabiti, N.; Fusco, D.; Pinnarelli, L.; Sorge, C.; Perucci, C. A.; Davoli, M.	Inequality in 30-day mortality and the wait for surgery after hip fracture: the impact of the regional health care evaluation program in Lazio (Italy)	2013	Does not address question of interest
Colais, P.; Pinnarelli, L.; Fusco, D.; Davoli, M.; Braga, M.; Perucci, C. A.	The impact of a pay-for-performance system on timing to hip fracture surgery: experience from the Lazio Region (Italy)	2013	Does not address question of interest
Collinge, C. A.; Beltran, C. P.	Does modern nail geometry affect positioning in the distal femur of elderly patients with hip fractures? A comparison of otherwise identical intramedullary nails with a 200 versus 150 cm radius of curvature	2013	Incorrect patient population (<30 patients/group)
Collinge, C. A.; McWilliam-Ross, K.; Beltran, M. J.; Weaver, T.	Measures of clinical outcome before, during, and after implementation of a comprehensive geriatric hip fracture program: is there a learning curve?	2013	not best available evidence
Consigliere, P.; Iliopoulos, E.; Ads, T.; Trompeter, A.	Early versus delayed weight bearing after surgical fixation of distal femur fractures: a non-randomized comparative study	2019	Incorrect patient population (<30 patients/group)
Conti, D.; Ballo, P.; Salucci, L.; Benvenuti, E.; Metrangolo, L.; Barucci, R.; Giulietti, C.; Giardini, S.; Boccalini, R.; Santoro, G. M.; Sarti, A.	Clinical impact of recovery room on post-operative walking performance in elderly patients submitted to hip surgery: a real-world analysis	2018	Does not address question of interest - prognostic endpoints
Cook, W. L.; Brasher, P. M. A.; Guy, P.; Bryan, S.; Donaldson, M. G.; Sims-Gould, J.; McKay, H. A.; Khan, K. M.; Ashe, M. C.	Comprehensive Geriatric Care to Improve Mobility after Hip Fracture: An RCT	2020	Incorrect patient population (< 30 pts/group)
Cornell, C. N.; Levine, D.; O'Doherty, J.; Lyden, J.	Unipolar versus bipolar hemiarthroplasty for the treatment of femoral neck fractures in the elderly	1998	Incorrect patient population (< 30 pts/group)

Authors	Article Title	Year	Reason for Exclusion
Cosman, F.; Dempster, D. W.; Nieves, J. W.; Zhou, H.; Zion, M.; Roimisher, C.; Houle, Y.; Lindsay, R.; Bostrom, M.	Effect of Teriparatide on Bone Formation in the Human Femoral Neck	2016	Incorrect patient population (<30 pts/group)
Coulibaly, M. O.; Jones, C. B.; Sietsema, D. L.; Schildhauer, T. A.	Results of 70 consecutive ulnar nightstick fractures	2015	Incorrect pt population (includes age<50 yrs)
Coventry, L. S.; Nguyen, A.; Karahalios, A.; Roshan-Zamir, S.; Tran, P.	Comparison of 3 Different Perioperative Care Models for Patients With Hip Fractures Within 1 Health Service	2017	Does not address question of interest - prognostic endpoints
Craik, J.; Geleit, R.; Hiddema, J.; Bray, E.; Hampton, R.; Railton, G.; Ward, D.; Windley, J.	The effect of time to surgery on outcomes and complication rates following total hip arthroplasty for fractured neck of femur	2019	Incorrect patient population (<30 patients/group)
Crampet, C.; Common, H.; Bajeux, E.; Bourgoin, A.; Thomazeau, H.; Polard, J. L.	Does performing outpatient total hip arthroplasty contribute to early complications and readmissions? Retrospective case-control study of 50 patients	2019	Insufficient data - age range not provided
Crist, B. D.; Oladeji, L. O.; Khazzam, M.; Della Rocca, G. J.; Murtha, Y. M.; Stannard, J. P.	Role of acute negative pressure wound therapy over primarily closed surgical incisions in acetabular fracture ORIF: A prospective randomized trial	2017	Incorrect patient population (includes age<50 yrs)
Crotty, M.; Whitehead, C. H.; Gray, S.; Finucane, P. M.	Early discharge and home rehabilitation after hip fracture achieves functional improvements: A randomized controlled trial	2002	Imperfect comparator (both groups received some form of collaboration)
Cserhati, P.; Kazar, G.; Manninger, J.; Fekete, K.; Frenyo, S.	Non-operative or operative treatment for undisplaced femoral neck fractures: A comparative study of 122 non-operative and 125 operatively treated cases	1996	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Cui, Q.; Liu, Y. S.; Li, D. F.; Zhang, P.; Guo, J.; Liu, C.; Jiang, W. H.; Zhang, B.; Liu, S. B.; Zeng, Y. J.	Cemented hip hemiarthroplasty clinical observations on unstable intertrochanteric fracture in elderlies	2016	Incorrect patient population (<30 patients/group)
Cui, S.; Wang, D.; Wang, X.; Li, Z.; Guo, W.	The choice of screw internal fixation and hemiarthroplasty in the treatment of femoral neck fractures in the elderly: a meta-analysis	2020	Meta-analysis
Cunningham, B. P.; Ali, A.; Parikh, H. R.; Heare, A.; Blaschke, B.; Zaman, S.; Montalvo, R.; Reahl, B.; Rotuno, G.; Kark, J.; Bender, M.; Miller, B.; Basmajian, H.; McLemore, R.; Shearer, D. W.; Obremskey, W.; Sagi, C.; O'Toole, R. V.	Immediate weight bearing as tolerated (WBAT) correlates with a decreased length of stay post intramedullary fixation for subtrochanteric fractures: a multicenter retrospective cohort study	2020	Incorrect patient population (includes age<50 yrs)
Dai, Y. T.; Huang, G. S.; Yang, R. S.; Tsauo, J. Y.; Yang, L. H.	Effectiveness of a multidisciplinary rehabilitation program in elderly patients with hip fractures	2001	not best available evidence
Dai, Y. T.; Huang, G. S.; Yang, R. S.; Tsauo, J. Y.; Yang, L. H.	Functional recovery after hip fracture: Six months' follow-up of patients in a multidisciplinary rehabilitation program	2002	not best available evidence
Dale, H.; BÃ¸rsheim, S.; Kristensen, T. B.; Fenstad, A. M.; Gjertsen, J. E.; Hallan, G.; Lie, S. A.; Furnes, O.	Perioperative, short-, and long-term mortality related to fixation in primary total hip arthroplasty: a study on 79,557 patients in the ÂNorwegian Arthroplasty Register	2020	Incorrect patient population (includes age<50 yrs)
Damm, P.; Schwachmeyer, V.; Dymke, J.; Bender, A.; Bergmann, G.	In vivo hip joint loads during three methods of walking with forearm crutches	2013	Does not address question of interest
Dangelmajer, S.; Yang, A.; Githens, M.; Harris, A. H. S.; Bishop, J. A.	Disparities in Total Hip Arthroplasty Versus Hemiarthroplasty in the Management of Geriatric Femoral Neck Fractures	2017	Does not address question of interest - demographic/prognostic study

Authors	Article Title	Year	Reason for Exclusion
Daugaard, C.; Pedersen, A. B.; Kristensen, N. R.; Johnsen, S. P.	Preoperative antithrombotic therapy and risk of blood transfusion and mortality following hip fracture surgery: a Danish nationwide cohort study	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Dawe, E. J. C.; Lindisfarne, E. A. O.; Nicol, S.; White, S. M.; Stott, P. M.	Does using a modular variable offset hemiarthroplasty reduce length of stay after hip fracture? Early experience with the Exeter Unipolar hemiarthroplasty	2014	Does not meet inclusion criteria (non-RCT for unipolar vs bipolar PICO)
Dawson, D.; Milligan, D.; Callachand, F.; Cusick, L.	Hip Hemi-Arthroplasty vs Total Hip Replacement for Displaced Intra-Capsular Hip Fractures: Retrospective Age and Sex Matched Cohort Study	2018	not best available evidence
Dawson-Bowling, S. J.; Jha, S.; Chettiar, K. K.; East, D. J.; Gould, G. C.; Apthorp, H. D.	A multidisciplinary enhanced recovery programme allows discharge within two days of total hip replacement; three- to five-year results of 100 patients	2014	Incorrect pt population (age range includes pts <50 yrs)
Day, G. A.; Swanson, C.; Yelland, C.; Broome, J.; Dimitri, K.; Massey, L.; Richardson, H.; Marsh, A.	Surgical outcomes of a randomized prospective trial involving patients with a proximal femoral fracture	2001	Doesn't address question of interest;
de Abreu, E. L.; de Oliveira, M. H.	Evaluation of the quality of life of patients undergoing hemiarthroplasty of the hip	2015	Incorrect patient population (<30 patients/group)
de Jonghe, A.; van Munster, B. C.; Goslings, J. C.; Kloen, P.; van Rees, C.; Wolvius, R.; van Velde, R.; Levi, M.; de Haan, R. J.; de Rooij, S. E.; Amsterdam Delirium Study, Group	Effect of melatonin on incidence of delirium among patients with hip fracture: a multicentre, double-blind randomized controlled trial	2014	Does not address question of interest - not among treatments of interest (melatonin)
de Sire, A.; Baricich, A.; Reno, F.; Cisari, C.; Fusco, N.; Invernizzi, M.	Myostatin as a potential biomarker to monitor sarcopenia in hip fracture patients undergoing a multidisciplinary rehabilitation and nutritional treatment: a preliminary study	2019	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
de Visme, V.; Picart, F.; Le Jouan, R.; Legrand, A.; Savry, C.; Morin, V.	Combined lumbar and sacral plexus block compared with plain bupivacaine spinal anesthesia for hip fractures in the elderly	2000	<30 per group
de Vries, E. N.; Gardenbroek, T. J.; Ammerlaan, H.; Steenstra, F.; Vervest, Amjs; Hogervorst, M.; van Velde, R.	The optimal approach in hip hemiarthroplasty: a cohort of 1009 patients	2019	not best available evidence
Debbi, E. M.; Garlich, J. M.; Yalamanchili, D. R.; Stephan, S. R.; Johnson, C. R.; Polakoff, L. S.; Noorzad, A. S.; Pujari, A.; Little, M. T. M.; Moon, C. N.; Anand, K.; Lin, C. A.	Fascia Iliaca Regional Anesthesia in Hip Fracture Patients Revisited: Which Fractures and Surgical Procedures Benefit Most?	2020	Imperfect comparison group
Dedovic, Z.; Talic-Tanovic, A.; Resic, H.; Vavra-Hadziahmetovic, N.	Mortality among third age patients with hip fracture and high cardiac risk	2013	not best available evidence
del Toro, M. D.; Nieto, I.; Guerrero, F.; Corzo, J.; del Arco, A.; Palomino, J.; Nuno, E.; Lomas, J. M.; Natera, C.; Fajardo, J. M.; Delgado, J.; Torres-Tortosa, M.; Romero, A.; Martin-Rico, P.; Muniain, M. A.; Rodriguez-Bano, J.; Pjig-Saei Reipi group	Are hip hemiarthroplasty and total hip arthroplasty infections different entities? The importance of hip fractures	2014	Incorrect patient population (includes age<50 yrs)
Delaveau, A.; Saint-Genez, F.; Gayet, L. E.; Paccalin, M.; Ounajim, A.; Vendeuvre, T.	Impact of time to surgery in upper femoral fracture in orthogeriatrics	2019	Does not meet inclusion criteria (not RCT for timing PICO)

Authors	Article Title	Year	Reason for Exclusion
Della Rocca, G. J.; Moylan, K. C.; Crist, B. D.; Volgas, D. A.; Stannard, J. P.; Mehr, D. R.	Comanagement of geriatric patients with hip fractures: a retrospective, controlled, cohort study	2013	not best available evidence
den Daas, A.; van Raaij, T.; Buckley, R.	Nondisplaced femoral neck fracture in an elderly (>80yo) patient - operative fixation with cannulated screws or hemiarthroplasty	2020	Case report
den Hartog, Y. M.; Mathijssen, N. M.; Peters, S. J.; Vehmeijer, S. B.	The anterior supine intermuscular approach for total hip arthroplasty: reducing the complication rate by improving the procedure	2015	Insufficient data - age range not provided
Deneckere, S.; Euwema, M.; Lodewijckx, C.; Panella, M.; Mutsvari, T.; Sermeus, W.; Vanhaecht, K.	Better interprofessional teamwork, higher level of organized care, and lower risk of burnout in acute health care teams using care pathways: a cluster randomized controlled trial	2013	Incorrect patient population (includes age<50 yrs)
Deniz, S.; Atim, A.; Kurklu, M.; Cayci, T.; Kurt, E.	Comparison of the postoperative analgesic efficacy of an ultrasound-guided fascia iliaca compartment block versus 3 in 1 block in hip prosthesis surgery	2014	Incorrect pt population (<30 pts/group)
DeRogatis, M. J.; Piatek, A. Z.; Jacob, R.; Kelly, S. C.; Issack, P. S.	Hemiarthroplasty for Femoral Neck Fractures in the Elderly: A Comparison of Cemented and Uncemented Femoral Stems	2020	Narrative review
Dettmer, M.; Pourmoghaddam, A.; Kreuzer, S. W.	Comparison of Patient-Reported Outcome from Neck-Preserving, Short-Stem Arthroplasty and Resurfacing Arthroplasty in Younger Osteoarthritis Patients	2015	Incorrect patient population (includes age<50 yrs)
Dharmarajan, T. S.; Tankala, H.; Patel, B.; Sipalay, M.; Norkus, E. P.	Outcome in ambulatory status immediately following hip fracture surgery in the acute setting: A comparison of nursing home residents and community older adults	2001	Does not address question of interest (insufficient Interdisciplinary details)
Di Monaco, M.; De Toma, E.; Gardin, L.; Giordano, S.; Castiglioni, C.; Vallero, F.	A single postdischarge telephone call by an occupational therapist does not reduce the risk of falling in women after hip fracture: a randomized controlled trial	2015	Doesn't address question of interest;

Authors	Article Title	Year	Reason for Exclusion
Diakomi, M.; Papaioannou, M.; Georgoudis, G.; Argyra, E.; Mela, A.; Siafaka, I.; Makris, A.	The impact of fascia iliaca compartment block on chronic postsurgical pain in patients undergoing hip fracture repair	2020	Incorrect patient population (includes age<50 yrs)
Diakomi, M.; Papaioannou, M.; Mela, A.; Kouskouni, E.; Makris, A.	Preoperative fascia iliaca compartment block for positioning patients with hip fractures for central nervous blockade: a randomized trial	2014	Incorrect patient population (includes age<50 yrs)
Dickman, E.; Pushkar, I.; Likourezos, A.; Todd, K.; Hwang, U.; Akhter, S.; Morrison, S.	Ultrasound-guided nerve blocks for intracapsular and extracapsular hip fractures	2016	Secondary analysis
Dienstknecht, T.; Luring, C.; Tingart, M.; Grifka, J.; Sendtner, E.	Total hip arthroplasty through the mini-incision (Micro-hip) approach versus the standard transgluteal (Bauer) approach: a prospective, randomised study	2014	Incorrect patient population (includes age<50 yrs)
Dimitriou, D.; Helmy, N.; Hasler, J.; Flury, A.; Finsterwald, M.; Antoniadis, A.	The Role of Total Hip Arthroplasty Through the Direct Anterior Approach in Femoral Neck Fracture and Factors Affecting the Outcome	2019	Does not address question of interest - stratified by pt characteristics
Dix, D. B.; Araoye, I. B.; Staggers, J. R.; Lin, C. P.; Shah, A. B.; Agarwal, A. K.; Naranje, S. M.	A systematic review and meta-analysis of complications in conversion arthroplasty methods for failed intertrochanteric fracture fixation	2019	Systematic review
Dizdarevic, A.; Farah, F.; Ding, J.; Shah, S.; Bryan, A.; Kahn, M.; Kaye, A. D.; Gritsenko, K.	A Comprehensive Review of Analgesia and Pain Modalities in Hip Fracture Pathogenesis	2019	Narrative review
Dochez, E.; van Geffen, G. J.; Bruhn, J.; Hoogerwerf, N.; van de Pas, H.; Scheffer, G.	Prehospital administered fascia iliaca compartment block by emergency medical service nurses, a feasibility study	2014	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Dolata, J.; Pietrzak, K.; Manikowski, W.; Kaczmarczyk, J.; Gajewska, E.; Kaczmarek, W.	Influence of age on the outcome of rehabilitation after total hip replacement	2013	Incorrect patient population (includes age<50 yrs)
Doleman, B.; Moppett, I. K.	Is early hip fracture surgery safe for patients on clopidogrel? Systematic review, meta-analysis and meta-regression	2015	Systematic review
Dolma, L.; Salhotra, R.; Rautela, R. S.; Banerjee, A.	Isobaric ropivacaine with or without dexmedetomidine for surgery of neck femur fracture under subarachnoid block	2018	Incorrect patient population (includes age<50 yrs)
Dong, C.; Wang, Y.; Wang, Z.; Wang, Y.; Wu, S.; Du, Q.; Wang, A.	Damage Control Orthopedics Management as Vital Procedure in Elderly Patients with Femoral Neck Fractures Complicated with Chronic Renal Failure: A Retrospective Cohort Study	2016	Incorrect pt population (<30 pts/group)
Dong, J.; Zhang, Y.; Chen, X.; Ni, W.; Yan, H.; Liu, Y.; Shi, H.; Jiang, W.; Zhao, D.; Xu, T.	Ultrasound-guided anterior iliopsoas muscle space block versus posterior lumbar plexus block in hip surgery in the elderly: A randomised controlled trial	2021	Incorrect patient population (<30 patients/group)
Dong, Q.; Zhang, Y. G.; Tian, W.	The effect of pfna minimally invasive internal fixation on the postoperative slippage of fixing needle in elderly patients with femoral intertrochanteric fracture and the change of reset image	2018	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Dordevic, N.; Stanojlovic, M.; Milenkovic, S.; Stojiljkovic, P.; Kocic, M.; Golubovic, I.	Perioperative and Early Postoperative Outcome of Proximal Femoral Nailing for Stable and Unstable Trochanteric Fractures	2016	Incorrect patient population (<30 patients/group)
Doshi, H. K.; Wenxian, P.; Burgula, M. V.; Murphy, D. P.	Clinical outcomes of distal femoral fractures in the geriatric population using locking plates with a minimally invasive approach	2013	Incorrect patient population (<30 patients/group)
Drescher, F. S.; Sirovich, B. E.; Lee, A.; Morrison, D. H.; Chiang, W. H.; Larson, R. J.	Aspirin versus anticoagulation for prevention of venous thromboembolism major lower extremity orthopedic surgery: a systematic review and meta-analysis	2014	Meta-analysis

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Dretakis, E. K.; Steriopoulos, K. A.; Kontakis, G. M.; Giaourakis, G.; Economakis, G.; Dretakis, K. E.	Cervical hip fractures do not occur in arthrotic joints: A clinicoradiographic study of 256 patients	1998	Incorrect patient population (<30 patients/group)
Du, X.; Yu, J.; Mi, W.	The effect of dexmedetomidine on the perioperative hemodynamics and postoperative cognitive function of elderly patients with hypertension: Study protocol for a randomized controlled trial	2018	Protocol
Duan, S. J.; Liu, H. S.; Wu, W. C.; Yang, K.; Zhang, Z.; Liu, S. D.	Robot-assisted Percutaneous Cannulated Screw Fixation of Femoral Neck Fractures: Preliminary Clinical Results	2019	Incorrect patient population (<30 pts/group)
Duan, W.; Wu, Y.; Liu, G.; Chen, J.	Comparison of the curative effects of PFNA and DHS fixation in treating intertrochanteric fractures in elderly patients	2017	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Dubljanin-Raspopovic, E.; Markovic Denic, L.; Marinkovic, J.; Grajic, M.; Tomanovic Vujadinovic, S.; Bumbasirevic, M.	Use of early indicators in rehabilitation process to predict one-year mortality in elderly hip fracture patients	2012	Does not address question of interest - prognostic endpoints
Duckham, R. L.; Masud, T.; Taylor, R.; Kendrick, D.; Carpenter, H.; Iliffe, S.; Morris, R.; Gage, H.; Skelton, D. A.; Dinan-Young, S.; Brooke-Wavell, K.	Randomised controlled trial of the effectiveness of community group and home-based falls prevention exercise programmes on bone health in older people: The ProAct65+ bone study	2015	Does not address question of interest
Duckworth, A. D.; Clement, N. D.; McEachan, J. E.; White, T. O.; Court-Brown, C. M.; McQueen, M. M.	Prospective randomised trial of nonoperative versus operative management of olecranon fractures in the elderly	2017	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Dujardin, F.; Abdulmutalib, H.; Tobenas, A. C.	Total fractures of the tibial pilon	2014	Background article
Dunn, J.; Kusnezov, N.; Bader, J.; Waterman, B. R.; Orr, J.; Belmont, P. J.	Long versus short cephalomedullary nail for trochanteric femur fractures (OTA 31-A1, A2 and A3): a systematic review	2016	Systematic review
Duramaz, A.; Ilter, M. H.	The impact of proximal femoral nail type on clinical and radiological outcomes in the treatment of intertrochanteric femur fractures: a comparative study	2019	Incorrect patient population (includes age<50 yrs)
Duramaz, A.; SarÄ±, C.; Bilgili, M. G.; ErÃ§in, E.; Kural, C.; Avkan, M. C.	Outcomes of four different surgical techniques in the treatment of geriatric intertrochanteric femur fractures	2014	Foreign language
Durand, W. M.; Goodman, A. D.; Johnson, J. P.; Daniels, A. H.	Assessment of 30-day mortality and complication rates associated with extended deep vein thrombosis prophylaxis following hip fracture surgery	2018	Imperfect comparison group (control group received prophylaxis treatment)
Duriez, P.; Devaux, T.; Chantelot, C.; Baudrier, N.; Hery, J. Y.; Mainard, D.; Favier, T.; Massin, P.	Is arthroplasty preferable to internal fixation for the treatment of extracapsular fracture of the upper femur in the elderly?	2016	Does not address question of interest - prognostic endpoints
Duymus, T. M.; Aydogmus, S.; Ulusoy, I.; Kececi, T.; Adiyeke, L.; Dernek, B.; Mutlu, S.	Comparison of Intra- and Extramedullary Implants in Treatment of Unstable Intertrochanteric Fractures	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Eastell, R.; Nagase, S.; Small, M.; Boonen, S.; Spector, T.; Ohyama, M.; Kuwayama, T.; Deacon, S.	Effect of ONO-5334 on bone mineral density and biochemical markers of bone turnover in postmenopausal osteoporosis: 2-year results from the OCEAN study	2014	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Ebina, K.; Hirao, M.; Hashimoto, J.; Hagihara, K.; Kashii, M.; Kitaguchi, K.; Matsuoka, H.; Iwahashi, T.; Chijimatsu, R.; Yoshikawa, H.	Assessment of the effects of switching oral bisphosphonates to denosumab or daily teriparatide in patients with rheumatoid arthritis	2018	Does not address question of interest
Eceviz, E.; Ã?evik, H. B.; Bulut, G.	Comparison of intramedullary and extramedullary fixation of basicervical fractures of the femur in the elderly: A prospective randomized study	2020	Incorrect patient population (<30 patients/group)
Edgren, J.; Salpakoski, A.; Sihvonen, S. E.; Portegijs, E.; Kallinen, M.; Arkela, M.; JÃ¤ntti, P.; Vanhatalo, J.; Pekkonen, M.; Rantanen, T.; Heinonen, A.; SipilÃ¤, S.	Effects of a Home-Based Physical Rehabilitation Program on Physical Disability After Hip Fracture: A Randomized Controlled Trial	2015	Does not address question of interest (not among specified interventions)
Efstathopoulos, N. E.; Nikolaou, V. S.; Lazarettos, J. T.	Intramedullary fixation of intertrochanteric hip fractures: a comparison of two implant designs	2007	Does not meet inclusion criteria (combines stable and unstable patients)
Ehrnthaller, C.; Olivier, A. C.; Gebhard, F.; Durselen, L.	The role of lesser trochanter fragment in unstable pertrochanteric A2 proximal femur fractures - is refixation of the lesser trochanter worth the effort?	2017	Incorrect patient population (specimens)
Eimar, H.; Perez Lara, A.; Tamimi, I.; Marquez Sanchez, P.; Gormaz Talavera, I.; Rojas Tomba, F.; Garcia de la Oliva, T.; Tamimi, F.	Acetylcholinesterase inhibitors and healing of hip fracture in Alzheimer's disease patients: a retrospective cohort study	2013	Incorrect patient population (<30 patients/group)

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Ekeloef, S.; Homilius, M.; Stilling, M.; Ekeloef, P.; Koyuncu, S.; Munster, A. B.; Meyhoff, C. S.; Gundel, O.; Holst-Knudsen, J.; Mathiesen, O.; Gogenur, I.	The effect of remote ischaemic preconditioning on myocardial injury in emergency hip fracture surgery (PIXIE trial): phase II randomised clinical trial	2019	Does not address question of interest
Ekici, C.; Pazarci, O.; Kilinc, S.; Oztemur, Z.; Ozturk, H.; Tezeren, G.; Bulut, O.	Effect on mortality of treatment method and surgery time for hip fracture patients aged over 65 years	2020	not best available evidence
Ekman, E.; Laaksonen, I.; Isotalo, K.; Liukas, A.; Vahlberg, T.; Makela, K.	Cementing does not increase the immediate postoperative risk of death after total hip arthroplasty or hemiarthroplasty: a hospital-based study of 10,677 patients	2019	Incorrect patient population (includes age<50 yrs)
Ellanti, P.; Cushen, B.; Galbraith, A.; Brent, L.; Hurson, C.; Ahern, E.	Improving hip fracture care in ireland: a preliminary report of the irish hip fracture database	2014	Does not address question of interest
Ellenrieder, M.; Bader, R.; Bergschmidt, P.; Mittelmeier, W.	Press-fit versus threaded acetabular cups in total hip arthroplasty: Functional and radiological results after five years	2016	Incorrect patient population (includes age<50 yrs)
Eloy, J. D.; Anthony, C.; Amin, S.; Caparo, M.; Reilly, M. C.; Shulman, S.	Gabapentin Does Not Appear to Improve Postoperative Pain and Sleep Patterns in Patients Who Concomitantly Receive Regional Anesthesia for Lower Extremity Orthopedic Surgery: A Randomized Control Trial	2017	Incorrect pt population (<30 pts/group)
Emami, A.; Larsson, S.; Hellquist, E.; Mallmin, H.	Limited bone loss in the hip and heel after reamed intramedullary fixation and early weight-bearing of tibial fractures	2001	Incorrect patient population (<30 patients/group)
Emami, M.; Manafi, A.; Hashemi, B.; Nemati, A.; Safari, S.	Comparison of intertrochanteric fracture fixation with dynamic hip screw and bipolar hemiarthroplasty techniques	2013	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Emaus, N.; Nguyen, N. D.; Almaas, B.; Berntsen, G. K.; Center, J. R.; Christensen, M.; Gjesdal, C. G.; Grimsgaard, A. S.; Nguyen, T. V.; Salomonsen, L.; Eisman, J. A.; Fonnebo, V. M.	Serum level of under-carboxylated osteocalcin and bone mineral density in early menopausal Norwegian women	2013	Does not address question of interest - prognostic endpoints
Endo, A.; Baer, H. J.; Nagao, M.; Weaver, M. J.	Prediction Model of In-Hospital Mortality After Hip Fracture Surgery	2018	Does not address question of interest - prognostic endpoints
Eneroth, M.; Olsson, U. B.; Thorngren, K. G.	Nutritional supplementation decreases hip fracture-related complications	2006	Excluded PICO
Engel, J. L.; Gabra, J. N.; Kane, P.; Kurtz, W. J.	Intravenous Iron May Improve Outcomes in Elderly Patients With Operative Hip Fractures	2020	Does not meet inclusion criteria (non-RCT for Hg PICO)
Ernstberger, H.; Pieroh, P.; HÃ¶ch, A.; Josten, C.; Herath, S. C.; Osterhoff, G.	Minimally displaced acetabulum fractures in geriatric patients: a comparison of open, percutaneous and non-operative treatment from the German Pelvic Injury Register data	2020	not best available evidence
Errando, C. L.; Peiro, C. M.; Gimeno, A.; Soriano, J. L.	Single shot spinal anesthesia with very low hyperbaric bupivacaine dose (3.75 mg) for hip fracture repair surgery in the elderly. A randomized, double blinded study	2014	Does not meet inclusion criteria (comparing doses of same intervention))
Errando, C. L.; Soriano-Bru, J. L.; Peiro, C. M.; Ubeda, J.	Single shot spinal anaesthesia with hypobaric bupivacaine for hip fracture repair surgery in the elderly. Randomized, double blinded comparison of 3.75 mg vs. 7.5 mg	2014	Duplicate study (identical to AAOS ID 4055)
Eschler, A.; Brandt, S.; Gierer, P.; Mittlmeier, T.; Gradl, G.	Angular stable multiple screw fixation (Targon FN) versus standard SHS for the fixation of femoral neck fractures	2014	Incorrect patient population (<30 pts/group)

Authors	Article Title	Year	Reason for Exclusion
Esen, E.; Dur, H.; Ataoglu, M. B.; Ayanoglu, T.; Turanli, S.	Evaluation of proximal femoral nail-antirotation and cemented, bipolar hemiarthroplasty with calcar replacement in treatment of intertrochanteric femoral fractures in terms of mortality and morbidity ratios	2017	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Eskander, M. B.; Limb, D.; Stone, M. H.; Furlong, A. J.; Shardlow, D.; Stead, D.; Culleton, G.	Sequential mechanical and pharmacological thromboprophylaxis in the surgery of hip fractures. A pilot study	1997	Incorrect patient population (< 30 pts/group)
Eskildsen, S. M.; Kamath, G. V.; Del Gaizo, D. J.	Age matters when comparing hemiarthroplasty and total hip arthroplasty for femoral neck fractures in Medicare patients	2019	Insufficient data - age range not provided (includes aged <65yrs)
Espaulella, J.; Guyer, H.; Diaz-Escriu, F.; Mellado-Navas, J. A.; Castells, M.; Pladevall, M.	Nutritional supplementation of elderly hip fracture patients. A randomized, double-blind, placebo-controlled trial	2000	Excluded PICO
Fahad, S.; Nawaz Khan, M. Z.; Aqueel, T.; Hashmi, P.	Comparison of bipolar hemiarthroplasty and total hip arthroplasty with dual mobility cup in the treatment of old active patients with displaced neck of femur fracture: A retrospective cohort study	2019	Incorrect pt population (<30 pts/group)
Faith- Investigators; Slobogean, G. P.; Sprague, S.; Bzovsky, S.; Heels-Ansdell, D.; Thabane, L.; Scott, T.; Bhandari, M.	Fixation using alternative implants for the treatment of hip fractures (FAITH-2): design and rationale for a pilot multi-centre 2 x 2 factorial randomized controlled trial in young femoral neck fracture patients	2019	Incorrect patient population (includes age<50 yrs)
Faldini, C.; Perna, F.; Mazzotti, A.; Stefanini, N.; Panciera, A.; Geraci, G.; Mora, P.; Traina, F.	Direct anterior approach versus posterolateral approach in total hip arthroplasty: Effects on early post-operative rehabilitation period	2017	not best available evidence
Fan, D.; Han, L.; Qu, W.; Tian, S.; Li, Z.; Zhang, W.; Xu, L.; Gao, H.; Zhang, N.	Comprehensive nursing based on feedforward control and postoperative FMA and SF-36 levels in femoral intertrochanteric fracture	2019	not best available evidence

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Fan, W.; Zhu, L.; Chen, J.; Guo, C.; Yan, Z.	Identifying Patients Who Will Most Benefit from Single Photon Emission Computerized Tomography and Computerized Tomography After Femoral Neck Fracture	2017	Incorrect patient population (includes age<50 yrs)
Fang, C.; Lau, T. W.; Wong, T. M.; Lee, H. L.; Leung, F.	Sliding hip screw versus sliding helical blade for intertrochanteric fractures: a propensity score-matched case control study	2015	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)Intramedullary Hip Screw Versus Hip Screw
Fang, C.; Liu, R. P.; Lau, T. W.; Leung, A.; Wong, T. M.; Pun, T.; Leung, F.	Is It Time to Phase Out the Austin Moore Hemiarthroplasty? A Propensity Score Matched Case Control Comparison versus Cemented Hemiarthroplasty	2016	Incorrect patient population (includes age<50 yrs)
Farey, J. E.; Cuthbert, A. R.; Adie, S.; Harris, I. A.	Revision Risk After Unipolar or Bipolar Hemiarthroplasty for Femoral Neck Fractures: An Instrumental Variable Analysis of 62,875 Procedures from the Australian Orthopaedic Association National Joint Replacement Registry	2021	Does not meet inclusion criteria (non-RCT for unipolar vs bipolar PICO)
Farooqi, V.; Berg, M. E.; Cameron, I. D.; Crotty, M.	Anabolic steroids for rehabilitation after hip fracture in older people	2016	Narrative review
Farooqi, V.; van den Berg, M. E. L.; Cameron, I. D.; Crotty, M.	Anabolic steroids for rehabilitation after hip fracture in older people	2014	Systematic review
Farrow, L.; Ablett, A. D.; Sargeant, H. W.; Smith, T. O.; Johnston, A. T.	Does early surgery improve outcomes for periprosthetic fractures of the hip and knee? A systematic review and meta-analysis	2021	Systematic review
Feely, M. A.; Mabry, T. M.; Lohse, C. M.; Sems, S. A.; Mauck, K. F.	Safety of clopidogrel in hip fracture surgery	2013	Insufficient data - age range not provided
Feng, S.; Zhang, Y.; Bao, Y. H.; Yang, Z.; Zha, G. C.; Chen, X. Y.	Comparison of modular and nonmodular tapered fluted titanium stems in femoral revision hip arthroplasty: a minimum 6-year follow-up study	2020	Incorrect patient population - hip revision

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Ferbert, T.; Jaber, A.; Gress, N.; Schmidmaier, G.; Gotterbarm, T.; Merle, C.	Impact of intraoperative femoral fractures in primary hip arthroplasty: a comparative study with a mid-term follow-up	2019	Incorrect patient population (includes age<50 yrs)
Fernandez, M. A.; Achten, J.; Lerner, R. G.; Mironov, K.; Parsons, N.; Dritsaki, M.; Png, M. E.; McGibbon, A.; Gould, J.; Griffin, X.; Costa, M. L.	Randomised controlled trial comparing hydroxyapatite coated uncemented hemiarthroplasty with cemented hemiarthroplasty for the treatment of displaced intracapsular hip fractures: A protocol for the WHITE 5 study	2019	Protocol
Fichman, S. G.; Makinen, T. J.; Safir, O.; Vincent, A.; Lozano, B.; Kashigar, A.; Kuzyk, P. R.	Arthroplasty for unstable pertrochanteric hip fractures may offer a lower re-operation rate as compared to cephalomedullary nailing	2016	Incorrect patient population (<30 patients/group)
Fields, A. C.; Dieterich, J. D.; Buterbaugh, K.; Moucha, C. S.	Short-term complications in hip fracture surgery using spinal versus general anaesthesia	2015	Does not address question of interest - outcomes assessed utilizing prognostic statistics
Finsen, V.; Børset, M.; Buvik, G. E.; Hauke, I.	Preoperative traction in patients with hip fractures	1992	<30 per group
Firoozabadi, R.; Swenson, A.; Kleweno, C.; Routt, M. C.	Cell saver use in acetabular surgery: Does approach matter?	2015	Incorrect patient population (includes age<50 yrs)
Fisher, B. M.; Titus, A. J.; Gitajn, I. L.	Effectiveness of local anesthetic injection in geriatric patients following operative management of proximal and diaphyseal femur fracture	2019	not best available evidence
Fisher, M. A.; Matthei, J. D.; Obirieze, A.; Ortega, G.; Tran, D. D.; Carnegie, D. A.; Turner, P. L.; Fullum, T. M.; Rankin, M. E.	Open reduction internal fixation versus hemiarthroplasty versus total hip arthroplasty in the elderly: a review of the National Surgical Quality Improvement Program database	2013	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Fisher, W. D.; Agnelli, G.; George, D. J.; Kakkar, A. K.; Lassen, M. R.; Mismetti, P.; Mouret, P.; Turpie, A. G.	Extended venous thromboembolism prophylaxis in patients undergoing hip fracture surgery - the SAVE-HIP3 study	2013	Incorrect patient population (includes age<50 yrs)
Fitch, D. A.; Ancarani, C.; Bordini, B.	Long-term survivorship and complication rate comparison of a cementless modular stem and cementless fixed neck stems for primary total hip replacement	2015	Incorrect patient population (includes aged <50 yrs)
Fixation using Alternative Implants for the Treatment of Hip fractures, Investigators	Fracture fixation in the operative management of hip fractures (FAITH): an international, multicentre, randomised controlled trial	2017	Not comparison of interest
Fletcher, A. K.; Rigby, A. S.; Heyes, F. L.	Three-in-one femoral nerve block as analgesia for fractured neck of femur in the emergency department: a randomized, controlled trial	2003	<30 per group
Flikweert, E. R.; Izaks, G. J.; Knobben, B. A.; Stevens, M.; Wendt, K.	The development of a comprehensive multidisciplinary care pathway for patients with a hip fracture: design and results of a clinical trial	2014	not best available evidence
Flikweert, E. R.; Izaks, G. J.; Reininga, I. H.; Wendt, K. W.; Stevens, M.	Evaluation of the effect of a comprehensive multidisciplinary care pathway for hip fractures: design of a controlled study	2013	Protocol
Foissey, C.; Kenney, R.; Luceri, F.; Servien, E.; Lustig, S.; Batailler, C.	Greater trochanter fractures in the direct anterior approach: evolution during learning curve, risk factors and consequences	2021	Does not address question of interest - stratified by pt characteristics
Formiga, F.; Chivite, D.; Mascaró, J.; Ramón, J. M.; Pujol, R.	No correlation between mini-nutritional assessment (short form) scale and clinical outcomes in 73 elderly patients admitted for hip fracture	2005	Excluded PICO

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Formiga, F.; Chivite, D.; Navarro, M.; Montero, A.; Duaso, E.; Ruiz, D.; Perez-Castejon, J. M.; Lopez-Soto, A.; Corbella, X.	Characteristics of falls producing hip fracture in patients on oral anticoagulants	2016	Does not address question of interest - prognostic endpoints
Forni, S.; Pieralli, F.; Sergi, A.; Lorini, C.; Bonaccorsi, G.; Vannucci, A.	Mortality after hip fracture in the elderly: The role of a multidisciplinary approach and time to surgery in a retrospective observational study on 23,973 patients	2016	not best available evidence
Forouzan, A.; Masoumi, K.; Motamed, H.; Gousheh, M. R.; Rohani, A.	Nerve Stimulator versus Ultrasound-Guided Femoral Nerve Block; a Randomized Clinical Trial	2017	Incorrect patient population (<30 patients/group)
Foss, N. B.; Christensen, D. S.; Krasheninnikoff, M.; Kristensen, B.; Kehlet, H.	Post-operative rounds by anaesthesiologists after hip fracture surgery: A pilot study	2006	Imperfect comparison
Foss, N. B.; Kristensen, B. B.; Bundgaard, M.; Bak, M.; Heiring, C.; Virkelyst, C.; Hougaard, S.; Kehlet, H.	Fascia iliaca compartment blockade for acute pain control in hip fracture patients: a randomized, placebo-controlled trial	2007	<30 per group
Foss, N. B.; Kristensen, M. T.; Kristensen, B. B.; Jensen, P. S.; Kehlet, H.	Effect of postoperative epidural analgesia on rehabilitation and pain after hip fracture surgery: a randomized, double-blind, placebo-controlled trial	2005	<30 per group
Fox, H. J.; Pooler, J.; Prothero, D.; Bannister, G. C.	Factors affecting the outcome after proximal femoral fractures	1994	very low quality
Frenkel Rutenberg, T.; Assaly, A.; Vitenberg, M.; Shemesh, S.; Burg, A.; Haviv, B.; Velkes, S.	Outcome of non-surgical treatment of proximal femur fractures in the fragile elderly population	2019	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Frenkel Rutenberg, T.; Velkes, S.; Vitenberg, M.; Leader, A.; Halavy, Y.; Raanani, P.; Yassin, M.; Spectre, G.	Morbidity and mortality after fragility hip fracture surgery in patients receiving vitamin K antagonists and direct oral anticoagulants	2018	Does not meet inclusion criteria (non-post-operative for VTE)
Frenkel Rutenberg, T.; Vitenberg, M.; Yahav, D.; Spectre, G.; Velkes, S.	Surgical Site Infections in Elderly Fragility Hip Fractures Patients Undergoing Warfarin Treatment	2019	Does not meet inclusion criteria (non-post-operative for VTE)
Frenken, M. R. M.; Schotanus, M. G. M.; van Haaren, E. H.; Hendrickx, R.	Cemented versus uncemented hemiarthroplasty of the hip in patients with a femoral neck fracture: a comparison of two modern stem design implants	2018	not best available evidence
Freter, S.; Koller, K.; Dunbar, M.; MacKnight, C.; Rockwood, K.	Translating Delirium Prevention Strategies for Elderly Adults with Hip Fracture into Routine Clinical Care: A Pragmatic Clinical Trial	2017	Does not address question of interest (not among specified interventions)
Frisch, N. B.; Wessell, N.; Jildeh, T. R.; Greenstein, A.; Trent Guthrie, S.	Early-Stage Chronic Kidney Disease and Hip Fracture Mortality	2018	Does not address question of interest - stratified by pt characteristics
Fu, M. C.; Boddapati, V.; Gausden, E. B.; Samuel, A. M.; Russell, L. A.; Lane, J. M.	Surgery for a fracture of the hip within 24 hours of admission is independently associated with reduced short-term post-operative complications	2017	not RCT
Fu, Y. H.; Liu, P.; Xu, X.; Wang, P. F.; Shang, K.; Ke, C.; Fei, C.; Yang, K.; Zhang, B. F.; Zhuang, Y.; Zhang, K.	Deep vein thrombosis in the lower extremities after femoral neck fracture: A retrospective observational study	2020	Incorrect patient population (includes age<50 yrs)
Fuchs, M.; Sass, F. A.; Dietze, S.; Kramer, M.; Perka, C.; Muller, M.	Cemented Hemiarthroplasties Are Associated with a Higher Mortality Rate after Femoral Neck Fractures in Elderly Patients	2017	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Fuji, T.; Fujita, S.; Kawai, Y.; Nakamura, M.; Kimura, T.; Kiuchi, Y.; Abe, K.; Tachibana, S.	Safety and efficacy of edoxaban in patients undergoing hip fracture surgery	2014	Incorrect patient population (includes age<50 yrs)
Fujihara, Y.; Fukunishi, S.; Nishio, S.; Miura, J.; Koyanagi, S.; Yoshiya, S.	Fascia iliaca compartment block: its efficacy in pain control for patients with proximal femoral fracture	2013	Incorrect patient population (<30 patients/group)
Fujishiro, M.; Higuchi, K.; Kato, M.; Kinoshita, Y.; Iwakiri, R.; Watanabe, T.; Takeuchi, T.; Sugisaki, N.; Okada, Y.; Ogawa, H.; Arakawa, T.; Fujimoto, K.; Shoko, S.; Suzuki, Y.; Saitoh, Y.; Taruishi, M.; Doi, T.; Minami, S.; Yamauchi, M.; Nagaoka, Y.; Kamoshida, T.; Masuyama, H.; Kusano, M.; Shimoyama, Y.; Kawamura, O.; Uemura, N.; Kobayakawa, M.; Tokunaga, K.; Murakami, T.; Araki, M.; Takei, T.; Inamori, M.; Otsuka, S.; Yamamoto, H.; Nakamura, N.; Akamatsu, T.; Onishi, M.; Nakamura, M.; Akita	Long-term efficacy and safety of rabeprazole in patients taking low-dose aspirin with a history of peptic ulcers: A phase 2/3, randomized, parallel-group, multicenter, extension clinical trial	2015	Incorrect patient population (includes age<50 yrs)
Fujiwara, S.; Hamaya, E.; Sato, M.; Graham-Clarke, P.; Flynn, J. A.; Burge, R.	Systematic review of raloxifene in postmenopausal Japanese women with osteoporosis or low bone mass (osteopenia)	2014	Systematic review

Authors	Article Title	Year	Reason for Exclusion
Fukuda, T.; Imai, S.; Nakadera, M.; Wagatsuma, Y.; Horiguchi, H.	Postoperative daily living activities of geriatric patients administered general or spinal anesthesia for hip fracture surgery: A retrospective cohort study	2018	not best available evidence
Fukui, K.; Kaneuji, A.; Sugimori, T.; Ichiseki, T.; Matsumoto, T.	Does rotational acetabular osteotomy affect subsequent total hip arthroplasty?	2015	Incorrect patient population (includes age<50 yrs)
Furlan, A. D.; Irvin, E.; Munhall, C.; Giraldo-Prieto, M.; Fullerton, L.; McMaster, R.; Danak, S.; Costante, A.; Pitzul, K.; Bhide, R. P.; Marchenko, S.; Mahood, Q.; David, J. A.; Flannery, J. F.; Bayley, M.	Rehabilitation service models for people with physical and/or mental disability living in low- and middle-income countries: A systematic review	2018	Systematic review
Gaddi, D.; Piarulli, G.; Angeloni, A.; Gandolla, M.; Munegato, D.; Bigoni, M.	Gotfried percutaneous compression plating (PCCP) versus dynamic hip screw (DHS) in hip fractures: blood loss and 1-year mortality	2014	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Galanopoulos, I. P.; Mavrogenis, A. F.; Megaloikonomos, P. D.; Vottis, C. T.; Mitsiokapa, E.; Koulouvaris, P.; Mastrokalos, D. S.; Papagelopoulos, P. J.; Kontogeorgakos, V. A.	Similar function and complications for patients with short versus long hip nailing for unstable pertrochanteric fractures	2018	Incorrect patient population (<30 pts/group)
Gansslen, A.; Hildebrand, F.; Kretek, C.	Supraacetabular external fixation for pain control in geriatric type B pelvic injuries	2013	Incorrect patient population (<30 patients/group)
Gao, H.; Xing, D.; Liu, Z.; Zheng, J.; Xiong, Z.; Gong, M.; Liu, L.	The effect of bone morphogenetic protein 2 composite materials combined with cannulated screws in treatment of acute displaced femoral neck fractures	2020	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Garcia-Rey, E.; Cruz-Pardos, A.; Garcia-Cimbrelo, E.	The evolution of an uncemented acetabular component in alumina-on-alumina total hip arthroplasty has improved clinical outcome: a prospective, comparative five- to 15-year follow-up study	2017	Incorrect patient population (includes age<50 yrs)
Garcia-Rey, E.; Cruz-Pardos, A.; Madero, R.	The evolution of the technique of impaction bone grafting in femoral revision surgery has improved clinical outcome. A prospective mid-term study	2015	Incorrect pt population (includes <50 yrs)
Gardner, M. J.; Brophy, R. H.; Demetrakopoulos, D.; Koob, J.; Hong, R.; Rana, A.; Lin, J. T.; Lane, J. M.	Interventions to improve osteoporosis treatment following hip fracture. A prospective, randomized trial	2005	Excluded PICO
Garg, V.; Lawrence, H.; Joshi, Y.	Comparative outcome of anaesthetic for elderly hip fracture	2020	not best available evidence
Garlich, J. M.; Pujari, A.; Debbi, E. M.; Yalamanchili, D. R.; Moak, Z. B.; Stephenson, S. K.; Stephan, S. R.; Polakof, L. S.; Johnson, C. R.; Noorzad, A. S.; Little, M. T. M.; Moon, C. N.; Black, J. T.; Anand, K. K.; Lin, C. A.	Time to Block: Early Regional Anesthesia Improves Pain Control in Geriatric Hip Fractures	2020	Does not address question of interest - stratified by time to block
Garlich, J. M.; Pujari, A.; Moak, Z.; Debbi, E.; Yalamanchili, R.; Stephenson, S.; Stephan, S.; Polakof, L.; Little, M.; Moon, C.; Anand, K.; Lin, C. A.	Pain Management with Early Regional Anesthesia in Geriatric Hip Fracture Patients	2020	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Gashi, Y. N.; Elhadi, A. S.; Elbushra, I. M.	Outcome of Primary Cemented Bipolar Hemiarthroplasty compared with Dynamic Hip Screw in Elderly Patients with Unstable Intertrochanteric Fracture	2018	not best available evidence
Gausden, E. B.; Garner, M. R.; Warner, S. J.; Levack, A.; Nellestein, A. M.; Tedore, T.; Flores, E.; Lorich, D. G.	Tranexamic acid in hip fracture patients: A protocol for a randomised, placebo controlled trial on the efficacy of tranexamic acid in reducing blood loss in hip fracture patients	2016	Protocol
Gavaskar, A. S.; Tummala, N. C.; Srinivasan, P.; Gopalan, H.; Karthik, B.; S, S.	Helical Blade or the Integrated Lag Screws: A Matched Pair Analysis of 100 Patients With Unstable Trochanteric Fractures	2018	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Gavaskar, A. S.; Tummala, N. C.; Subramanian, M.	Cemented or cementless THA in patients over 80 years with fracture neck of femur: a prospective comparative trial	2014	not best available evidence
Gazineo, D.; Chiarabelli, M.; Cirone, R.; Chiari, P.; Ambrosi, E.	Effectiveness of Multilayered Polyurethane Foam Dressings to Prevent Hospital-Acquired Sacral Pressure Injuries in Patients With Hip Fracture: A Randomized Controlled Trial	2020	Does not address question of interest (not among specified interventions)
Geiger, I.; Kammerlander, C.; Hofer, C.; Volland, R.; Trinemeier, J.; Henschelchen, M.; Friess, T.; Fls-Care study group; Bocker, W.; Sundmacher, L.	Implementation of an integrated care programme to avoid fragility fractures of the hip in older adults in 18 Bavarian hospitals - study protocol for the cluster-randomised controlled fracture liaison service FLS-CARE	2021	Protocol
George, J.; Chughtai, M.; Khlopas, A.; Klika, A. K.; Barsoum, W. K.; Higuera, C. A.; Mont, M. A.	Readmission, Reoperation, and Complications: Total Hip vs Total Knee Arthroplasty	2018	Incorrect patient population (not exclusive to hip)
Georgiannos, D.; Lampridis, V.; Bisbinas, I.	Subtrochanteric femoral fractures treated with the Long Gamma3 R nail: A historical control case study versus Long trochanteric Gamma nail R	2015	Incorrect patient population (cohort includes aged<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Gerhardt, D. M.; Bisseling, P.; de Visser, E.; van Susante, J. L.	Modular necks in primary hip arthroplasty without anatomical deformity: no clear benefit on restoration of hip geometry and dislocation rate. An exploratory study	2014	Incorrect patient population (includes age<50 yrs)
Ghanem, E. S.; Richard, R. D.; Wingert, N. C. H.; Gotoff, J. R.; Graham, J. H.; Bowen, T. R.	Preoperative Use of Clopidogrel Does Not Affect Outcomes for Femoral Neck Fractures Treated With Hemiarthroplasty	2017	Incorrect patient population (includes age<50 yrs)
Ghimire, A.; Bhattarai, B.; Koirala, S.; Subedi, A.	Analgesia before Performing Subarachnoid Block in the Sitting Position in Patients with Proximal Femoral Fracture: A Comparison between Fascia Iliaca Block and Femoral Nerve Block	2015	Incorrect patient population (<30 patients/group)
Gholson, J. J.; Pugely, A. J.; Bedard, N. A.; Duchman, K. R.; Anthony, C. A.; Callaghan, J. J.	Can We Predict Discharge Status After Total Joint Arthroplasty? A Calculator to Predict Home Discharge	2016	Incorrect patient population (not exclusive to hip)
Giannini, S.; Chiarello, E.; Mazzotti, A.; Tedesco, G.; Faldini, C.	Surgical prevention of femoral neck fractures in elderly osteoporotic patients: a randomised controlled study on the prevention nail system device	2018	Incorrect patient population (<30 patients/group at 1 year follow-up)
Giardina, F.; Castagnini, F.; Stea, S.; Bordini, B.; Montalti, M.; Toni, A.	Short Stems Versus Conventional Stems in Cementless Total Hip Arthroplasty: A Long-Term Registry Study	2018	Incorrect patient population (includes age <50 yrs)
Gibbons, J. P.; Quinn, M.; O'Daly, B.; McElwain, J.; Leonard, M.	Peri-operative outcomes for ORIF of acetabular fracture in the elderly: Comparison with displaced intracapsular hip fractures in a national pelvic and acetabular referral centre over 5 years	2019	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Gillespie, R.; Shishani, Y.; Joseph, S.; Streit, J. J.; Gobezie, R.	Neer Award 2015: A randomized, prospective evaluation on the effectiveness of tranexamic acid in reducing blood loss after total shoulder arthroplasty	2015	Incorrect patient population (non-hip)
Ginsel, B. L.; Taher, A.; Whitehouse, S. L.; Bell, J. J.; Pulle, C. R.; Crawford, R. W.	Effects of anticoagulants on outcome of femoral neck fracture surgery	2015	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Gjertsen, J. E.; Baste, V.; Fevang, J. M.; Furnes, O.; Engesaeter, L. B.	Quality of life following hip fractures: results from the Norwegian hip fracture register	2016	Does not address question of interest
Glassou, E. N.; Kjorholt, K. K.; Hansen, T. B.; Pedersen, A. B.	Delay in surgery, risk of hospital-treated infections and the prognostic impact of comorbidity in hip fracture patients. A Danish nationwide cohort study, 2005-2016	2019	Does not meet inclusion criteria (Non-RCT for surgical timing)
Gleason, L. J.; Mendelson, D. A.; Kates, S. L.; Friedman, S. M.	Anticoagulation management in individuals with hip fracture	2014	Does not meet inclusion criteria (non-post-operative for VTE)
Gleich, J.; Pfeufer, D.; Zeckey, C.; Bocker, W.; Gosch, M.; Kammerlander, C.; Neuerburg, C.	Orthogeriatric treatment reduces potential inappropriate medication in older trauma patients: a retrospective, dual-center study comparing conventional trauma care and co-managed treatment	2019	not best available evidence
Gocer, H.; Cirakli, A.; Buyukceren, I.; Kilic, M.; Genc, A. S.; Dabak, N.	Preoperative platelettolymphocyte ratio as a prognostic factor in geriatric patients with proximal femoral fractures	2018	Does not address question of interest - prognostic endpoints
Gocer, H.; Coskun, S.; Karaismailoglu, N.	Comparison of treatment of unstable intertrochanteric fracture with different arthroplasty methods	2016	not best available evidence
Gofton, W. T.; Illical, E. M.; Feibel, R. J.; Kim, P. R.; Beaule, P. E.	A Single-Center Experience With a Titanium Modular Neck Total Hip Arthroplasty	2017	Incorrect patient population (includes age<50 yrs)
Golge, U. H.; Pazarci, O.; Kilinc, S.; Nusran, G.; Kaymaz, B.; Goksel, F.; Komurcu, E.; Bulut, O.	The treatment of intertrochanteric fractures comparison of PFN and hemiarthroplasty 3-year mortality study	2016	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Gomes, L. P.; do Nascimento, L. D.; Campos, T. V.; Paiva, E. B.; de Andrade, M. A.; Guimaraes, H. C.	Influence of age on delayed surgical treatment of proximal femoral fractures	2015	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Gormeli, G.; Korkmaz, M. F.; Gormeli, C. A.; Adanas, C.; Karatas, T.; Simsek, S. A.	Comparison of femur intertrochanteric fracture fixation with hemiarthroplasty and proximal femoral nail systems	2015	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Graham, J.; Bowen, T. R.; Strohecker, K. A.; Irgit, K.; Smith, W. R.	Reducing mortality in hip fracture patients using a perioperative approach and " Patient- Centered Medical Home" model: A prospective cohort study	2014	not best available evidence
Grammatico-Guillon, L.; Baron, S.; Rosset, P.; Gaborit, C.; Bernard, L.; Rusch, E.; Astagneau, P.	Surgical site infection after primary hip and knee arthroplasty: A cohort study using a hospital database	2015	Incorrect patient population (not exclusive to hip)
Grammatopoulos, G.; Wilson, H. A.; Kendrick, B. J.; Pulford, E. C.; Lippett, J.; Deakin, M.; Andrade, A. J.; Kambouroglou, G.	Hemiarthroplasty using cemented or uncemented stems of proven design: a comparative study	2015	not best available evidence
Gray Stephens, C. E.; Ashaye, O. J.; Ellenbogen, T. D.; Sexton, S. A.; Middleton, R. G.	Dual Mobility hip replacement in hip fractures offer functional equivalence and a stability advantage - A case-controlled study	2021	Imperfect comparison group
Greco, N. J.; Lombardi, A. V., Jr.; Morris, M. J.; Hobbs, G. R.; Berend, K. R.	Direct Anterior Approach and Perioperative Fracture With a Single-Taper Wedge Femoral Component	2019	Incorrect patient population (includes age<50 yrs)
Gregersen, M.; Borris, L. C.; Damsgaard, E. M.	Postoperative blood transfusion strategy in frail, anemic elderly patients with hip fracture: the TRIFE randomized controlled trial	2015	DUPLICATE to AAOS ID 2451
Gregersen, M.; Damsgaard, E. M.; Borris, L. C.	Blood transfusion and risk of infection in frail elderly after hip fracture surgery: the TRIFE randomized controlled trial	2015	Duplicate study (identical to AAOS ID 3764)
Gregory, J. J.; Kostakopoulou, K.; Cool, W. P.; Ford, D. J.	One-year outcome for elderly patients with displaced intracapsular fractures of the femoral neck managed non-operatively	2010	Incorrect patient population (<30 patients in non-operative group)

Authors	Article Title	Year	Reason for Exclusion
Greidanus, N. V.; Chihab, S.; Garbuz, D. S.; Masri, B. A.; Tanzer, M.; Gross, A. E.; Duncan, C. P.	Outcomes of minimally invasive anterolateral THA are not superior to those of minimally invasive direct lateral and posterolateral THA	2013	Incorrect patient population (includes age<50 yrs)
Grey, A.; Bolland, M. J.; Horne, A.; Mihov, B.; Gamble, G.; Reid, I. R.	Duration of antiresorptive activity of zoledronate in postmenopausal women with osteopenia: A randomized, controlled multidose trial	2017	Does not address question of interest
Griffin, J.; Anthony, T. L.; Murphy, D. K.; Brennan, K. L.; Brennan, M. L.	What is the impact of age on reoperation rates for femoral neck fractures treated with internal fixation and hemiarthroplasty? A comparison of hip fracture outcomes in the very elderly population	2016	Very low quality
Griffin, X. L.; Achten, J.; O'Connor, H. M.; Cook, J. A.; Costa, M. L.; W. HiTE Four Investigators	Effect on health-related quality of life of the X-Bolt dynamic plating system versus the sliding hip screw for the fixation of trochanteric fractures of the hip in adults: the WHiTE Four randomized clinical trial	2021	Not comparison of interest
Griffin, X. L.; Achten, J.; Parsons, N.; Costa, M. L.	Platelet-rich therapy in the treatment of patients with hip fractures: a single centre, parallel group, participant-blinded, randomised controlled trial	2013	Does not address question of interest
Griffin, X. L.; Achten, J.; Sones, W.; Cook, J.; Costa, M. L.	Randomised controlled trial of the sliding hip screw versus X-Bolt Dynamic Hip Plating System for the fixation of trochanteric fractures of the hip in adults: A protocol study for WHiTE 4 (WHiTE4)	2018	Protocol
Griffin, X. L.; Parsons, N.; Achten, J.; Costa, M. L.	the Targon femoral neck hip screw versus cannulated screws for internal fixation of intracapsular fractures of the hip: a randomised controlled trial	2014	Does not address question of interest (stable + unstable fractures) comparing fixation techniques
Griffin, X. L.; Parsons, N.; Achten, J.; Costa, M. L.	A randomised feasibility study comparing total hip arthroplasty with and without dual mobility acetabular component in the treatment of displaced intracapsular fractures of the proximal femur : The Warwick Hip Trauma Evaluation Two : WHiTE Two	2016	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Grigoryan, K. V.; Javedan, H.; Rudolph, J. L.	Orthogeriatric care models and outcomes in hip fracture patients: a systematic review and meta-analysis	2014	Meta-analysis
Gromov, K.; Willendrup, F.; Palm, H.; Troelsen, A.; Husted, H.	Fast-track pathway for reduction of dislocated hip arthroplasty reduces surgical delay and length of stay	2015	Does not meet inclusion criteria (non-RCT for timing PICO)
Gu, W. J.; Gu, X. P.; Wu, X. D.; Chen, H.; Kwong, J. S. W.; Zhou, L. Y.; Chen, S.; Ma, Z. L.	Restrictive Versus Liberal Strategy for Red Blood-Cell Transfusion: A Systematic Review and Meta-Analysis in Orthopaedic Patients	2018	Systematic review
Guay, J.; Parker, M. J.; Gajendragadkar, P. R.; Kopp, S.	Anaesthesia for hip fracture surgery in adults	2016	Systematic review
Guay, J.; Parker, M. J.; Griffiths, R.; Kopp, S.	Peripheral nerve blocks for hip fractures	2017	Systematic review
Guerado, E.; Cano, J. R.; Cruz, E.; Bertrand, M. L.; Hirschfeld, M.; Benitez-Parejo, N.	Should hip fractures be operated upon only by specialist hip unit surgeons in order to lower rates of surgical site infection?	2015	not best available evidence
Guerra, M. T.; Pasqualin, S.; Souza, M. P.; Lenz, R.	Functional recovery of elderly patients with surgically-treated intertrochanteric fractures: preliminary results of a randomised trial comparing the dynamic hip screw and proximal femoral nail techniques	2014	Incorrect patient population (<30 pts/group)
Guo, J.; Dong, W.; Yin, B.; Jin, L.; Lin, Z.; Hou, Z.; Zhang, Y.	Intramedullary nails with cannulated screw fixation for the treatment of unstable femoral neck fractures	2019	Incorrect patient population (includes age<50 yrs)
Guo, Q.; Shen, Y.; Zong, Z.; Zhao, Y.; Liu, H.; Hua, X.; Chen, H.	Percutaneous compression plate versus proximal femoral nail anti-rotation in treating elderly patients with intertrochanteric fractures: a prospective randomized study	2013	Does not meet inclusion criteria (combines stable and unstable fracture patients)
Guo, Y.; Jia, P.; Zhang, J.; Wang, X.; Jiang, H.; Jiang, W.	Prevalence and risk factors of postoperative delirium in elderly hip fracture patients	2016	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Guo, Y.; Yang, H. P.; Dou, Q. J.; He, X. B.; Yang, X. F.	Efficacy of femoral nail anti-rotation of helical blade in unstable intertrochanteric fracture	2017	Incorrect patient population (includes age<50 yrs)
Gupta, A.	The effectiveness of geriatrician-led comprehensive hip fracture collaborative care in a new acute hip unit based in a general hospital setting in the UK	2014	Incorrect pt population (includes pts <40yrs)
Gupta, P. B.; DeMario, V. M.; Amin, R. M.; Gehrie, E. A.; Goel, R.; Lee, K. H. K.; Yang, W. W.; Khanuja, H. S.; Sterling, R. S.; Ness, P. M.; Frank, S. M.	Patient Blood Management Program Improves Blood Use and Clinical Outcomes in Orthopedic Surgery	2018	Incorrect patient population (not exclusive to hip)
Gurger, M.	Factors impacting 1-year mortality after hip fractures in elderly patients: A retrospective clinical study	2019	Does not address question of interest - prognostic endpoints
Gursoy, S.; Simsek, M. E.; Akkaya, M.; Dogan, M.; Bozkurt, M.	Transtrochanteric approach can provide better postoperative care and lower complication rate in the treatment of hip fractures	2019	not best available evidence
Guven, M.; Kocadal, O.; Akman, B.; Poyanli, O. S.; Kemah, B.; Atay, E. F.	Proximal femoral nail shows better concordance of gait analysis between operated and uninjured limbs compared to hemiarthroplasty in intertrochanteric femoral fractures	2016	Incorrect patient population (<30 pts/group)
Ha, Y. C.; Baek, J. H.; Ko, Y. B.; Park, S. M.; Song, S. H.	High mortality and poor morbidity after hip fracture in patients with previous vertebral fractures	2015	Incorrect patient population (includes age<50 yrs)
Habernek, H.; Wallner, T.; Aschauer, E.; Schmid, L.	Comparison of Ender nails, dynamic hip screws, and Gamma nails in the treatment of peritrochanteric femoral fractures	2000	Incorrect patient population (includes age<50 yrs)
Haddad, F. S.; Williams, R. L.	Femoral nerve block in extracapsular femoral neck fractures	1995	<30 per group
Haddon, J.; Buciuto, R.; Johnsen, L. G.	A prospective randomized trial of 100 patients using trochanteric support plates; worth their mettle?	2019	Insufficient data - age range not provided

Authors	Article Title	Year	Reason for Exclusion
Hadji, P.; Felsenberg, D.; Amling, M.; Hofbauer, L. C.; Kandenwein, J. A.; Kurth, A.	The non-interventional BonViva Intravenous Versus Alendronate (VIVA) study: real-world adherence and persistence to medication, efficacy, and safety, in patients with postmenopausal osteoporosis	2014	Incorrect patient population (postmenopausal osteoporosis)
Hagino, T.; Ochiai, S.; Senga, S.; Watanabe, Y.; Wako, M.; Ando, T.; Haro, H.	Efficacy of early surgery and causes of surgical delay in patients with hip fracture	2015	Does not meet inclusion criteria (Non-RCT for surgical timing)
Hagsten, B.; Svensson, O.; Gardulf, A.	Health-related quality of life and self-reported ability concerning ADL and IADL after hip fracture: a randomized trial	2006	Excluded PICO
Hagsten, B.; Svensson, O.; Gardulf, A.	Early individualized postoperative occupational therapy training in 100 patients improves ADL after hip fracture: a randomized trial	2004	Excluded PICO
Halm, E. A.; Wang, J. J.; Boockvar, K.; Penrod, J.; Silberzweig, S. B.; Magaziner, J.; Koval, K. J.; Siu, A. L.	Effects of blood transfusion on clinical and functional outcomes in patients with hip fracture	2003	Does not meet inclusion criteria (non-RCT for blood transfusion PICO)
Hamilton, W. G.; McAuley, J. P.; Blumenfeld, T. J.; Lesko, J. P.; Himden, S. E.; Dennis, D. A.	Midterm Results of Delta Ceramic-on-Ceramic Total Hip Arthroplasty	2015	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Hammond, S. P.; Cross, J. L.; Shepstone, L.; Backhouse, T.; Henderson, C.; Poland, F.; Sims, E.; MacLullich, A.; Penhale, B.; Howard, R.; Lambert, N.; Varley, A.; Smith, T. O.; Sahota, O.; Donell, S.; Patel, M.; Ballard, C.; Young, J.; Knapp, M.; Jackson, S.; Waring, J.; Leavey, N.; Howard, G.; Fox, C.	PERFECTED enhanced recovery (PERFECT-ER) care versus standard acute care for patients admitted to acute settings with hip fracture identified as experiencing confusion: Study protocol for a feasibility cluster randomized controlled trial	2017	Protocol
Han, G.; Zhao, G. Y.; Li, L.; Zhao, P.	Comparison of hemodynamics after combined spinal-epidural anesthesia between decubitus and sitting positions in aged patients undergoing total hip replacement	2014	Does not address question of interest (not among specified interventions)
Han, L.; Liu, J. J.; Hu, Y. G.; Quan, R. F.; Fang, W. L.; Jin, B.; Lin, W. L.	Controlled study on Gamma nail and proximal femoral locking plate for unstable intertrochanteric femoral fractures with broken lateral wall	2018	Incorrect patient population (includes age<50 yrs)
Han, N.; Sun, G. X.; Li, Z. C.; Li, G. F.; Lu, Q. Y.; Han, Q. H.; Wei, X.	Comparison of proximal femoral nail antirotation blade and reverse less invasive stabilization system-distal femur systems in the treatment of proximal femoral fractures	2011	Incorrect patient population (<30 patients/group)
Handoll, H. H. G.; Sherrington, C.	Mobilisation strategies after hip fracture surgery in adults	2007	Systematic review
Handoll, H. H.; Sherrington, C.; Parker, M. J.	Mobilisation strategies after hip fracture surgery in adults	2004	Systematic review
Hansson, S.; BÃ¼low, E.; Garland, A.; KÃ¤rrholm, J.; Rogmark, C.	More hip complications after total hip arthroplasty than after hemiÂarthroplasty as hip fracture treatment: analysis of 5,815 matched pairs in the Swedish Hip Arthroplasty Register	2020	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Hao, J.; Dong, B.; Zhang, J.; Luo, Z.	Pre-emptive analgesia with continuous fascia iliaca compartment block reduces postoperative delirium in elderly patients with hip fracture. A randomized controlled trial	2019	Imperfect comparison
Hapuarachchi, K. S.; Ahluwalia, R. S.; Bowditch, M. G.	Neck of femur fractures in the over 90s: a select group of patients who require prompt surgical intervention for optimal results	2014	Does not meet inclusion criteria (non-RCT for timing PICO)
Haramati, N.; Staron, R. B.; Barax, C.; Feldman, F.	Magnetic resonance imaging of occult fractures of the proximal femur	1994	Advanced Imaging
Hard af Segerstad, M.; Olsen, F.; Houltz, E.; Nellgard, B.; Ricksten, S. E.	Inhaled prostacyclin for the prevention of increased pulmonary vascular resistance in cemented hip hemiarthroplastyâ??A randomised trial	2019	Incorrect patient population (<30 patients/group)
Harper, K. D.; Navo, P.; Ramsey, F.; Jallow, S.; Rehman, S.	â??Hiddenâ?첼 Preoperative Blood Loss With Extracapsular Versus Intracapsular Hip Fractures: What Is the Difference?	2017	Does not address question of interest - stratified by pt characteristics
Harris, I. A.; Cuthbert, A.; de Steiger, R.; Lewis, P.; Graves, S. E.	Practice variation in total hip arthroplasty versus hemiarthroplasty for treatment of fractured neck of femur in Australia	2019	Does not address question of interest
Hartmann, F. V.; Novaes, M. R.; de Carvalho, M. R.	Femoral nerve block versus intravenous fentanyl in adult patients with hip fractures - a systematic review	2017	Systematic review
Harwood, R. H.; Sahota, O.; Gaynor, K.; Masud, T.; Hosking, D. J.	A randomised, controlled comparison of different calcium and vitamin D supplementation regimens in elderly women after hip fracture: The Nottingham Neck of Femur (NONOF) Study	2004	Excluded PICO
Hassankhani, E. G.; Omidi-Kashani, F.; Hajitaghi, H.; Hassankhani, G. G.	How to Treat the Complex Unstable Intertrochanteric Fractures in Elderly Patients? DHS or Arthroplasty	2014	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Hassel, B.; Mariussen, E.; Idland, A. V.; Dahl, G. T.; Raeder, J.; Frihagen, F.; Berg, J. P.; Chaudhry, F. A.; Wyller, T. B.; Watne, L. O.	CSF sodium at toxic levels precedes delirium in hip fracture patients	2018	Incorrect patient population (<30 patients/group)
Haugan, K.; Johnsen, L. G.; Basso, T.; Foss, O. A.	Mortality and readmission following hip fracture surgery: a retrospective study comparing conventional and fast-track care	2017	not best available evidence
Haugan, K.; Klaksvik, J.; Foss, O. A.	30-day mortality in patients after hip fracture surgery: A comparison of the Charlson Comorbidity Index score and ASA score used in two prediction models	2021	Does not address question of interest - prognostic endpoints
Hayashi, H.; Nakashima, D.; Matsuoka, H.; Iwai, M.; Nakamura, S.; Kubo, A.; Tomiyama, N.	Upper-limb motor and sensory function in patients with hip fracture: Comparison with community-dwelling older adults	2017	Does not address question of interest - stratified by pt characteristics
Haywood, K. L.; Brett, J.; Tutton, E.; Staniszewska, S.	Patient-reported outcome measures in older people with hip fracture: a systematic review of quality and acceptability	2017	Systematic review
He, W.; Zhang, W.	The curative effect comparison between prolonged third generation of gamma nail and prolonged dynamic hip screw internal fixation in treating femoral intertrochanteric fracture and the effect on infection	2015	Incorrect patient population (includes age<50 yrs)
He, Y.; Xiao, J.; Shi, Z.; He, J.; Li, T.	Supplementation of enteral nutritional powder decreases surgical site infection, prosthetic joint infection, and readmission after hip arthroplasty in geriatric femoral neck fracture with hypoalbuminemia	2019	Does not address question of interest (not among specified interventions)
Hedbeck, C. J.; Inngul, C.; Blomfeldt, R.; Ponzer, S.; TÃ¶rnkvist, H.; Enocson, A.	Internal fixation versus cemented hemiarthroplasty for displaced femoral neck fractures in patients with severe cognitive dysfunction: A randomized controlled trial	2013	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
HelsÃ¸, I.; Jantzen, C.; Lauritzen, J. B.; JÃ¸rgensen, H. L.	Opioid Usage During Admission in Hip Fracture Patientsâ??The Effect of the Continuous Femoral Nerve Block	2016	not best available evidence
Henderson, C. Y.; Shanahan, E.; Butler, A.; Lenehan, B.; O'Connor, M.; Lyons, D.; Ryan, J. P.	Dedicated orthogeriatric service reduces hip fracture mortality	2017	Incorrect patient population (includes age<50 yrs)
Henzman, C.; Ong, K.; Lau, E.; Seligson, D.; Roberts, C. S.; Malkani, A. L.	Complication Risk After Treatment of Intertrochanteric Hip Fractures in the Medicare Population	2015	Does not meet inclusion criteria (non-RCT for cephalomedullary nail vs a sliding hip screw)
Herrera, A.; Domingo, L. J.; Calvo, A.; Martinez, A.; Cuenca, J.	A comparative study of trochanteric fractures treated with the Gamma nail or the proximal femoral nail	2002	Insufficient data - age range not provided
Herrera, R.; De Andres, J.; Estan, L.; Olivas, F. J.; Martinez-Mir, I.; Steinfeldt, T.	Hemodynamic impact of isobaric levobupivacaine versus hyperbaric bupivacaine for subarachnoid anesthesia in patients aged 65 and older undergoing hip surgery	2014	not best available evidence
Herrera-Perez, M.; Gutierrez-Morales, M. J.; Guerra-Ferraz, A.; Pais-Brito, J. L.; Boluda-Mengod, J.; Garces, G. L.	Locking versus non-locking one-third tubular plates for treating osteoporotic distal fibula fractures: a comparative study	2017	Incorrect patient population (<30 patients/group)
Herscovici, D., Jr.; Scaduto, J. M.	Assessing leg length after fixation of comminuted femur fractures	2014	Incorrect patient population (cohort includes <50 yrs)
Herzog, J.; Wendlandt, R.; Hillbricht, S.; Burgkart, R.; Schulz, A. P.	Optimising the tip-apex-distance in trochanteric femoral fracture fixation using the ADAPT-navigated technique, a longitudinal matched cohort study	2019	Incorrect patient population (includes age<50 yrs)
Hess, M. D.; Baker, E. A.; Salisbury, M. R.; Kaplan, L. M.; Greene, R. T.; Greene, P. W.	Effect of component design in retrieved bipolar hip hemiarthroplasty systems	2013	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Higashikawa, T.; Shigemoto, K.; Goshima, K.; Usuda, D.; Okuro, M.; Moriyama, M.; Inujima, H.; Hangyou, M.; Usuda, K.; Morimoto, S.; Matsumoto, T.; Takashima, S.; Kanda, T.; Sawaguchi, T.	Urinary retention as a postoperative complication associated with functional decline in elderly female patients with femoral neck and trochanteric fractures: A retrospective study of a patient cohort	2019	not best available evidence
Higashikawa, T.; Shigemoto, K.; Goshima, K.; Usuda, D.; Okuro, M.; Moriyama, M.; Inujima, H.; Hangyou, M.; Usuda, K.; Morimoto, S.; Matsumoto, T.; Takashima, S.; Kanda, T.; Sawaguchi, T.	Risk factors for the development of aspiration pneumonia in elderly patients with femoral neck and trochanteric fractures: A retrospective study of a patient cohort	2020	Does not address question of interest - prognostic endpoints
Higuchi, Y.; Hasegawa, Y.; Komatsu, D.; Seki, T.; Ishiguro, N.	Incidence of Ceramic Liner Malseating After Ceramic-on-Ceramic Total Hip Arthroplasty Associated With Osteolysis: A 5- to 15-Year Follow-Up Study	2017	Incorrect patient population (includes aged <50 yrs)
Higuchi, Y.; Hasegawa, Y.; Komatsu, D.; Seki, T.; Ishiguro, N.	Survivorship Between 2 Different Ceramic-on-Ceramic Total Hip Arthroplasty With or Without a Metal-Backed Titanium Sleeve Bearing: A 5- to 14-Year Follow-Up Study	2017	Incorrect pt population (includes aged<50 yrs)
Higuchi, Y.; Hasegawa, Y.; Seki, T.; Komatsu, D.; Ishiguro, N.	Significantly Lower Wear of Ceramic-on-Ceramic Bearings Than Metal-on-Highly Cross-Linked Polyethylene Bearings: A 10- to 14-Year Follow-Up Study	2016	Incorrect patient population (includes age<50 yrs)
Higuchi, Y.; Seki, T.; Takegami, Y.; Komatsu, D.; Morita, D.; Ishiguro, N.	Same survival but higher rate of osteolysis for metal-on-metal Ultamet versus ceramic-on-ceramic in patients undergoing primary total hip arthroplasty after 8 years of follow-up	2018	Incorrect patient population (includes aged <50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Hinman, R. S.; Crossley, K. M.	Patellofemoral joint osteoarthritis: an important subgroup of knee osteoarthritis	2007	Review
Hip Fracture Accelerated Surgical, Treatment; Care Track, Investigators	Accelerated care versus standard care among patients with hip fracture: the HIP ATTACK pilot trial	2014	Incorrect pt population (mean age 80 yrs, but includes pts <50 yrs)
Hitka, T.; O'Sullivan, J.; Szucs, S.; Iohom, G.	Determination of the initial minimum effective dose of 0.5% bupivacaine with 20mcg of fentanyl for an operative fixation of fractured neck of femur. A prospective, observational trial	2021	Incorrect patient population (<30 patients/group)
Ho, M.; Garau, G.; Walley, G.; Oliva, F.; Panni, A. S.; Longo, U. G.; Maffulli, N.	Minimally invasive dynamic hip screw for fixation of hip fractures	2009	Does not address question of interest (comparing fixation technique)
Hoang-Kim, A.; Beaton, D.; Bhandari, M.; Kulkarni, A. V.; Schemitsch, E.	The need to standardize functional outcome in randomized trials of hip fracture: a review using the ICF framework	2013	dropbox exclude
Hoenig, H.; Rubenstein, L. V.; Sloane, R.; Horner, R.; Kahn, K.	What is the role of timing in the surgical and rehabilitative care of community-dwelling older persons with acute hip fracture?	1997	Does not meet inclusion criteria (published before 2013)
Hoerlyck, C.; Ong, T.; Gregersen, M.; Damsgaard, E. M.; Borris, L.; Chia, J. K.; Yap, Y. Y. W.; Weerasuriya, N.; Sahota, O.	Do anticoagulants affect outcomes of hip fracture surgery? A cross-sectional analysis	2020	Does not meet inclusion criteria (non-post-operative for VTE)
Hofflich, H. L.; Oh, D. K.; Choe, C. H.; Clay, B.; Tibble, C.; Kulasa, K. M.; Shah, P. K.; Fink, E.; Girard, P. J.; Schwartz, A. K.; Maynard, G. A.	Using a triggered endocrinology service consultation to improve the evaluation, management, and follow-up of osteoporosis in hip-fracture patients	2014	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Hoffmeyer, P.; Simmen, H.; Jakob, M.; Sommer, C.; Platz, A.; Ilchmann, T.; Grossen, E.; Ryf, C.; Christofilopoulos, P.; Schueler, M.; Lassen, M. R.; Rimle, M.; Gasser, U. E.	Rivaroxaban for thromboprophylaxis after nonelective orthopedic trauma surgery in Switzerland	2017	Incorrect patient population (includes age<50 yrs)
Homma, Y.; Baba, T.; Kobayashi, H.; Desroches, A.; Ochi, H.; Ozaki, Y.; Matsumoto, M.; Yuasa, T.; Kaneko, K.	Benefit and risk in short term after total hip arthroplasty by direct anterior approach combined with dual mobility cup	2016	Does not address question of interest - both groups received DAA
Homma, Y.; Baba, T.; Ochi, H.; Ozaki, Y.; Kobayashi, H.; Matsumoto, M.; Yuasa, T.; Kaneko, K.	Greater trochanter chip fractures in the direct anterior approach for total hip arthroplasty	2016	Does not address question of interest
Hong, C. C.; Nashi, N.; Makandura, M. C.; Krishna, L.	Cemented hemiarthroplasty in traumatic displaced femoral neck fractures and deep vein thrombosis: is there really a link?	2016	not best available evidence
Hong, C. C.; Nashi, N.; Tan, J. H.; Manohara, R.; Lee, W. T.; Murphy, D. P.	Intraoperative periprosthetic femur fracture during bipolar hemiarthroplasty for displaced femoral neck fractures	2018	Incorrect patient population (<30 patients/group)
Hongisto, M. T.; Nuotio, M. S.; Luukkaala, T.; Vaisto, O.; Pihlajamaki, H. K.	Lateral and Posterior Approaches in Hemiarthroplasty	2018	not best available evidence
Hongku, N.; Woratanarat, P.; Nitiwarangkul, L.; Rattanasiri, S.; Thakkinstian, A.	Fracture fixation versus hemiarthroplasty for unstable intertrochanteric fractures in elderly patients: A systematic review and network meta-analysis of randomized controlled trials	2021	Meta-analysis
Honkonen, K.; Tarkkanen, L.; Julkunen, H.	Femoral neck fracture during and after surgery, with special reference to the type of anaesthesia used	1971	Age of included subjects ranged from 17 - 93 years (>50yrs)

Authors	Article Title	Year	Reason for Exclusion
Hoornenborg, D.; Sierevelt, I. N.; Spuijbroek, J. A.; Cheung, J.; van der Vis, H. M.; Beimers, L.; Haverkamp, D.	Does hydroxyapatite coating enhance ingrowth and improve longevity of a Zweymuller type stem? A double-blinded randomised RSA trial	2018	Incorrect patient population (<30 patients/group)
Hopp, S.; Wirbel, R.; Ojodu, I.; Pizanis, A.; Pohlemann, T.; Fleischer, J.	Does the implant make the difference ? - Prospective comparison of two different proximal femur nails	2016	Imperfect comparison group - confounding effects
Horikawa, A.; Miyakoshi, N.; Shimada, Y.; Kodama, H.	Comparison of activities of daily living after osteoporotic hip fracture surgery in patients admitted from home and from geriatric health service facilities	2014	Incorrect patient population (<30 patients/group)
Horner, N. S.; GrÃ¸nhaug Larsen, K. M.; Svantesson, E.; Samuelsson, K.; Ayeni, O. R.; Gjertsen, J. E.; Ã?stman, B.	Timing of hip hemiarthroplasty and the influence on prosthetic joint infection	2020	Incorrect patient population (includes age<50 yrs)
Hoshino, C. M.; Christian, M. W.; O'Toole, R. V.; Manson, T. T.	Fixation of displaced femoral neck fractures in young adults: Fixed-angle devices or Pauwel screws?	2016	Incorrect patient population (cohort includes age <50 yrs)
Hou, G.; Zhou, F.; Tian, Y.; Ji, H.; Zhang, Z.; Guo, Y.; Lv, Y.	Predicting the need for blood transfusions in elderly patients with pertrochanteric femoral fractures	2014	Does not address question of interest - prognostic endpoints
Hou, Z.; Bowen, T. R.; Irgit, K. S.; Matzko, M. E.; Andreychik, C. M.; Horwitz, D. S.; Smith, W. R.	Treatment of pertrochanteric fractures (OTA 31-A1 and A2): long versus short cephalomedullary nailing	2013	Incorrect patient population (includes age<50 yrs)
Hou, Z.; Shi, J.; Ye, H.; Pan, Z.	Treatment of unstable intertrochanteric fractures with percutaneous non-contact bridging plates	2014	Does not meet inclusion criteria (not RCT for unstable intertrochanteric fractures)

Authors	Article Title	Year	Reason for Exclusion
Hruslinski, J.; Menio, D. A.; Hymes, R. A.; Jaffe, J. D.; Langlois, C.; Ramsey, L.; Gaskins, L. J.; Neuman, M. D.	Engaging patients as partners in a multicentre trial of spinal versus general anaesthesia for older adults	2020	Narrative review
Hsu, K. H.; Tsai, S. W.; Chen, C. F.; Chang, M. C.; Chen, W. M.	The risk factors of early acetabular failure after bipolar hemiarthroplasty because of fracture of the femoral neck	2019	Incorrect patient population (<30 patients/group)
Hu, J.; Zhang, J.; Hu, C.	Comparative study on proximal femur locking plate and proximal femoral nail anti-rotation II in treating intertrochanteric fracture in the elderly	2017	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Hu, S.; Chen, S.; Chang, S.; Xiong, W.; Tuladhar, R.	Treatment of isolated posterolateral tibial plateau fracture with a horizontal belt plate through the anterolateral supra-fibular-head approach	2020	Incorrect patient population (includes age<50 yrs)
Huang, H. K.; Liu, P. P. S.; Hsu, J. Y.; Lin, S. M.; Peng, C. C. H.; Wang, J. H.; Loh, C. H.	Fracture risks among patients with atrial fibrillation receiving different oral anticoagulants: A real-world nationwide cohort study	2020	Incorrect patient population (includes age<50 yrs)
Huang, J.; Shi, Y.; Pan, W.; Wang, Z.; Dong, Y.; Bai, Y.; Wang, A.; Zhao, Y.; Zheng, J.; Lian, H.	Bipolar Hemiarthroplasty should not be selected as the primary option for intertrochanteric fractures in elderly patients	2020	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Huang, Q.; Xing, S. X.; Zeng, Y.; Si, H. B.; Zhou, Z. K.; Shen, B.	Comparison of the Efficacy and Safety of Aspirin and Rivaroxaban Following Enoxaparin Treatment for Prevention of Venous Thromboembolism after Hip Fracture Surgery	2019	Insufficient data - age range not provided
Huang, S. G.; Chen, B.; Zhang, Y.; Nie, F. F.; Ju, L.; Li, M.; Zhang, Y. H.	Comparison of the Clinical Effectiveness of PFNA, PFLCP, and DHS in Treatment of Unstable Intertrochanteric Femoral Fracture	2017	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Huang, T. W.; Chuang, P. Y.; Lin, S. J.; Lee, C. Y.; Huang, K. C.; Shih, H. N.; Lee, M. S.; Hsu, R. W.; Shen, W. J.	Teriparatide Improves Fracture Healing and Early Functional Recovery in Treatment of Osteoporotic Intertrochanteric Fractures	2016	Does not address question of interest (not among specified interventions)
Huang, T. W.; Huang, K. C.; Lin, S. J.; Chuang, P. Y.; Shih, H. N.; Lee, M. S.; Hsu, R. W.; Shen, W. J.	Effects of teriparatide on cementless bipolar hemiarthroplasty in patients with osteoporotic femoral neck fractures	2016	Does not address question of interest (not among specified interventions)
Huang, T. W.; Yang, T. Y.; Huang, K. C.; Peng, K. T.; Lee, M. S.; Hsu, R. W.	Effect of teriparatide on unstable pertrochanteric fractures	2015	Incorrect patient population (<30 pts/group)
Huang, X.; Leung, F.; Liu, M.; Chen, L.; Xu, Z.; Xiang, Z.	Is helical blade superior to screw design in terms of cut-out rate for elderly trochanteric fractures? A meta-analysis of randomized controlled trials	2014	Meta-analysis
Hughes, A. J.; Brent, L.; Biesma, R.; Kenny, P. J.; Hurson, C. J.	The effect of indirect admission via hospital transfer on hip fracture patients in Ireland	2019	Does not address question of interest
Hulet, D. A.; Whale, C. S.; Beebe, M. J.; Rothberg, D. L.; Gililland, J. M.; Zhang, C.; Presson, A. P.; Stuart, A. R.; Kubiak, E. N.	Short Versus Long Cephalomedullary Nails for Fixation of Stable Versus Unstable Intertrochanteric Femur Fractures at a Level 1 Trauma Center	2019	Incorrect patient population (includes age<50 yrs)
Huong, Q. B. T.; Luu, H. T.; Thanh, T. V.	Local infiltration analgesia with bupivacaine reduces postoperative pain and opioid consumption after joint replacements in a Vietnamese Hospital	2019	Incorrect patient population (not exclusive to hip)
Ikutomo, H.; Nagai, K.; Tagomori, K.; Miura, N.; Nakagawa, N.; Masuhara, K.	Incidence and Circumstances of Falls in Women Before and After Total Hip Arthroplasty: A Prospective Cohort Study	2018	Incorrect patient population (includes aged <50 yrs)
Ilango, S.; Pulle, R. C.; Bell, J.; Kuys, S. S.	General versus spinal anaesthesia and postoperative delirium in an orthogeriatric population	2016	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Iliopoulos, E.; Yousaf, S.; Watters, H.; Khaleel, A.	Hospital stay and blood transfusion in elderly patients with hip fractures	2017	Does not address question of interest - prognostic endpoints
Imam, M. A.; Shehata, M.; Abdallah, A. R.; Ahmed, H.; Kader, N.; Ernstbrunner, L.; Narvani, A. A.; Kambouroglou, G.; McNamara, I.; Sallam, A. A.	Unipolar versus bipolar hemiarthroplasty for displaced femoral neck fractures: A pooled analysis of 30,250 participants data	2019	Meta-analysis
Imbelloni, L. E.; Gomes, D.; Braga, R. L.; de Morais Filho, G. B.; da Silva, A.	Clinical strategies to accelerate recovery after surgery orthopedic femur in elderly patients	2014	Imperfect comparison group
Imerci, A.; Aydogan, N. H.; Tosun, K.	A comparison of the InterTan nail and proximal femoral fail antirotation in the treatment of reverse intertrochanteric femoral fractures	2018	Incorrect patient population (includes age<50 yrs)
Imerci, A.; Canbek, U.; Karatosun, V.; Karapinar, L.; Yesil, M.	Nailing or plating for subtrochanteric femoral fractures: a non-randomized comparative study	2015	Incorrect patient population (includes age<50 yrs)
Inoue, T.; Misu, S.; Tanaka, T.; Sakamoto, H.; Iwata, K.; Chuman, Y.; Ono, R.	Inadequate Postoperative Energy Intake Relative to Total Energy Requirements Diminishes Acute Phase Functional Recovery From Hip Fracture	2019	Does not address question of interest (not among specified interventions)
Invernizzi, M.; de Sire, A.; D'Andrea, F.; Carrera, D.; Reno, F.; Migliaccio, S.; Iolascon, G.; Cisari, C.	Effects of essential amino acid supplementation and rehabilitation on functioning in hip fracture patients: a pilot randomized controlled trial	2019	Incorrect patient population (<30 patients/group)
Issa, K.; Palich, A.; Tatevossian, T.; Kapadia, B. H.; Naziri, Q.; Mont, M. A.	The outcomes of hip resurfacing compared to standard primary total hip arthroplasty in Men	2013	Incorrect pt population (includes age <50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Iwata, T.; Nozawa, S.; Dohjima, T.; Yamamoto, T.; Ishimaru, D.; Tsugita, M.; Maeda, M.; Shimizu, K.	The value of T1-weighted coronal MRI scans in diagnosing occult fracture of the hip	2012	Advanced Imaging
Jacquot, L.; Bonnin, M. P.; Machenaud, A.; Chouteau, J.; Saffarini, M.; Vidalain, J. P.	Clinical and Radiographic Outcomes at 25-30 Years of a Hip Stem Fully Coated With Hydroxylapatite	2018	Retrospective case series; Incorrect pt population (includess <50 yrs of age)
Jameson, S. S.; Jensen, C. D.; Elson, D. W.; Johnson, A.; Nachtsheim, C.; Rangan, A.; Muller, S. D.; Reed, M. R.	Cemented versus cementless hemiarthroplasty for intracapsular neck of femur fracture--a comparison of 60,848 matched patients using national data	2013	not best available evidence
Jameson, S. S.; Lees, D.; James, P.; Johnson, A.; Nachtsheim, C.; McVie, J. L.; Rangan, A.; Muller, S. D.; Reed, M. R.	Cemented hemiarthroplasty or hip replacement for intracapsular neck of femur fracture? A comparison of 7732 matched patients using national data	2013	not best available evidence
Jang, C. Y.; Kwak, D. K.; Kim, D. H.; Lee, H. M.; Hwang, J. H.; Yoo, J. H.	Perioperative antiplatelet in elderly patients aged over 70 years treated with proximal femur fracture: continue or discontinue?	2019	Does not meet inclusion criteria (non-post-operative for VTE)
Jang, S. Y.; Cha, Y. H.; Kim, K. J.; Kim, H. Y.; Choy, W. S.	The effect of surgery type on mortality in elderly patients with pertrochanteric femoral fracture: A Korean nationwide cohort study	2019	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Jang, S. Y.; Cha, Y. H.; Mun, Y. S.; Kim, S. H.; Kim, H. Y.; Choy, W. S.	Acute Cholecystitis in Elderly Patients after Hip Fracture: a Nationwide Cohort Study	2019	Insufficient data - results not stratified by treatment

Authors	Article Title	Year	Reason for Exclusion
Janzing, H. M. J.; Houben, B. J. J.; Brandt, S. E.; Chhoeurn, V.; Lefever, S.; Broos, P.; Reynders, P.; Vanderschot, P.	The Gotfried PerCutaneous Compression Plate versus the Dynamic Hip Screw in the treatment of pertrochanteric hip fractures: Minimal invasive treatment reduces operative time and postoperative pain	2002	Imperfect comparison group (both groups receive sliding hip screw)
Jawad, Z.; Nemes, S.; Bulow, E.; Rogmark, C.; Cnudde, P.	Multi-state analysis of hemi- and total hip arthroplasty for hip fractures in the Swedish population-Results from a Swedish national database study of 38,912 patients	2019	not best available evidence
Jawed, A.; Ahmed, A.; Williams, M. R.	Intra-operative cell salvage in pelvic and acetabular fracture surgery: a retrospective comparative study	2019	Incorrect patient population (includes age<50 yrs)
Jeffcoate, W.; Game, F.; Turtle-Savage, V.; Musgrove, A.; Price, P.; Tan, W.; Bradshaw, L.; Montgomery, A.; Fitzsimmons, D.; Farr, A.; Winfield, T.; Phillips, C.	Evaluation of the effectiveness and cost-effectiveness of lightweight fibreglass heel casts in the management of ulcers of the heel in diabetes: A randomised controlled trial	2017	Incorrect patient population (includes age<50 yrs)
Jeffcote, B.; Li, M. G.; Barnet-Moorcroft, A.; Wood, D.; Nivbrant, B.	Roentgen stereophotogrammetric analysis and clinical assessment of unipolar versus bipolar hemiarthroplasty for subcapital femur fracture: a randomized prospective study	2010	Incorrect patient population (< 30 pts/group)
Jettoo, P.; James, P.	Dynamic hip screw fixation versus multiple screw fixation for intracapsular hip fracture	2016	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Jettoo, P.; Jeavons, R.; Siddiqui, B.; O'Brien, S.	Antibiotic prophylaxis for hip fracture surgery: three-dose cefuroxime versus single-dose gentamicin and amoxicillin	2013	Does not address question of interest - Antibiotic prophylaxis
Ji, H. M.; Han, J.; Jin, D. S.; Suh, H.; Chung, Y. S.; Won, Y. Y.	Sarcopenia and Sarcopenic Obesity in Patients Undergoing Orthopedic Surgery	2016	Incorrect patient population (not exclusive to hip)

Authors	Article Title	Year	Reason for Exclusion
Ji, W. P.; Wang, X. L.; Ma, M. Q.; Lan, J.; Li, H.	Prevention of early bone loss around the prosthesis by administration of anti-osteoporotic agents and influences of collared and non-collared femoral stem prostheses on early periprosthetic bone loss	2013	Incorrect patient population (<30 patients/group)
Jia, L.; Zhang, K.; Wang, Z. G.; Wang, L.; Yang, S. Y.; Zheng, Y. P.	Proximal femoral nail antirotation internal fixation in treating intertrochanteric femoral fractures of elderly subjects	2017	Does not meet inclusion criteria (non-RCT for sliding hip screw PICO)
Jiangtao, C.; Yijun, Z.; Chuanhui, X.; Jianjun, H.; Xinghua, S.; Zheng, T.; Yunus, A.; Li, C.	Unipolar versus bipolar hemiarthroplasty for elderly patients with femoral neck fractures: A meta-analysis	2014	Meta-analysis
Jin, J.; Wang, G.; Gong, M.; Zhang, H.; Liu, J.	Retrospective comparison of the effects of epidural anesthesia versus peripheral nerve block on postoperative outcomes in elderly Chinese patients with femoral neck fractures	2015	not best available evidence
Jo, W. L.; Lim, Y. W.; Im, J. H.; Kim, S. C.; Kwon, S. Y.; Kim, Y. S.	Comparative Study of Peripheral Rim Fixation Using Jumbo Cup in Revisional Hip Arthroplasty	2017	Incorrect patient population (includes age<50 yrs)
Jobory, A.; Rolfson, O.; Akesson, K. E.; Arvidsson, C.; Nilsson, I.; Rogmark, C.	Hip precautions not meaningful after hemiarthroplasty due to hip fracture. Cluster-randomized study of 394 patients operated with direct anterolateral approach	2019	Does not address question of interest - both groups received DAA
Johansen, J. S.; Havnes, K.; Halvorsen, K. H.; Haustreis, S.; Skaue, L. W.; Kamycheva, E.; Mathiesen, L.; Viktil, K. K.; GranÃ¥s, A. G.; Garcia, B. H.	Interdisciplinary collaboration across secondary and primary care to improve medication safety in the elderly (IMMENSE study): Study protocol for a randomised controlled trial	2018	Protocol
Johnson, A. L.; Smith, J. J.; Smith, J. M.; Sanzone, A. G.	Vitamin D insufficiency in patients with acute hip fractures of all ages and both sexes in a sunny climate	2013	dropbox exclude

Authors	Article Title	Year	Reason for Exclusion
Johnson, J. P.; Kleiner, J.; Goodman, A. D.; Gil, J. A.; Daniels, A. H.; Hayda, R. A.	Treatment of femoral neck fractures in patients 45-64 years of age	2019	Incorrect pt population (includes age <50 yrs)
Johnson, N. A.; Uzoigwe, C.; Venkatesan, M.; Burgula, V.; Kulkarni, A.; Davison, J. N.; Ashford, R. U.	Risk factors for intramedullary nail breakage in proximal femoral fractures: a 10-year retrospective review	2017	Incorrect patient population (<30 patients/group)
Jonas, S. C.; Shah, R.; Al-Hadithy, N.; Norton, M. R.; Sexton, S. A.; Middleton, R. G.	Displaced intracapsular neck of femur fractures in the elderly: bipolar hemiarthroplasty may be the treatment of choice; a case control study	2015	not best available evidence
Jones, J. K.; Evans, B. A.; Fegan, G.; Ford, S.; Guy, K.; Jones, S.; Keen, L.; Khanom, A.; Longo, M.; Pallister, I.; Rees, N.; Russell, I. T.; Seagrove, A. C.; Watkins, A.; Snooks, H. A.	Rapid Analgesia for Prehospital hip Disruption (RAPID): Findings from a randomised feasibility study	2019	Incorrect patient population (<30 patients/group)
Jonnes, C.; Sm, S.; Najimudeen, S.	Type II Intertrochanteric Fractures: Proximal Femoral Nailing (PFN) Versus Dynamic Hip Screw (DHS)	2016	Incorrect patient population (includes age<50 yrs)
Jónsson, B.; Sernbo, I.; Carlsson, A.; Fredin, H.; Johnell, O.	Social function after cervical hip fracture. A comparison of hook-pins and total hip replacement in 47 patients	1996	Sample Size too Small (n < 30 per group)

Authors	Article Title	Year	Reason for Exclusion
Jordan, M.; Aguilera, X.; Gonzalez, J. C.; Castillon, P.; Salomo, M.; Hernandez, J. A.; Ruiz, L.; Mora, J. M.; Camacho-Carrasco, P.; Prat-Fabregat, S.; Bosch, A.; Rodriguez-Arias, A.; Martinez-Zapata, M. J.; Tranexfer Group	Prevention of postoperative bleeding in hip fractures treated with prosthetic replacement: efficacy and safety of fibrin sealant and tranexamic acid. A randomised controlled clinical trial (TRANEXFER study)	2019	Incorrect patient population (includes age<50 yrs)
Ju, J. B.; Zhang, P. X.; Jiang, B. G.	Hip Replacement as Alternative to Intramedullary Nail in Elderly Patients with Unstable Intertrochanteric Fracture: A Systematic Review and Meta-Analysis	2019	Meta-analysis
Kacha, N. J.; Jadeja, C. A.; Patel, P. J.; Chaudhari, H. B.; Jivani, J. R.; Pithadia, V. S.	Comparative Study for Evaluating Efficacy of Fascia Iliaca Compartment Block for Alleviating Pain of Positioning for Spinal Anesthesia in Patients with Hip and Proximal Femur Fractures	2018	Incorrect patient population (includes age<50 yrs)
Kahloul, M.; Nakhli, M. S.; Chouchene, A.; Chebbi, N.; Mhamdi, S.; Naija, W.	Comparison of two doses of hypobaric bupivacaine in unilateral spinal anesthesia for hip fracture surgery: 5 mg versus 7.5 mg	2017	Does not meet inclusion criteria (comparing doses of same intervention))
Kalem, M.; Kocaoglu, H.; Sahin, E.; Kocaoglu, M. H.; Basarir, K.; Kinik, H.	Impact of echocardiography on one-month and one-year mortality of intertrochanteric fracture patients	2018	Incorrect patient population (includes age<50 yrs)
Kalland, K.; Aberg, H.; Berggren, A.; Ullman, M.; Snellman, G.; Jonsson, K. B.; Johansson, T.	Similar outcome of femoral neck fractures treated with Pinloc or Hansson Pins: 1-year data from a multicenter randomized clinical study on 439 patients	2019	Insufficient data - results not stratified by treatment
Kalmet, P. H. S.; de Joode, Sgcj; Fiddelers, A. A. A.; Ten Broeke, R. H. M.; Poeze, M.; Blokhuis, T.	Long-term Patient-reported Quality of Life and Pain After a Multidisciplinary Clinical Pathway for Elderly Patients With Hip Fracture: A Retrospective Comparative Cohort Study	2019	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Kalmet, P. H.; Koc, B. B.; Hemmes, B.; Ten Broeke, R. H.; Dekkers, G.; Hustinx, P.; Schotanus, M. G.; Tilman, P.; Janzing, H. M.; Verkeyn, J. M.; Brink, P. R.; Poeze, M.	Effectiveness of a Multidisciplinary Clinical Pathway for Elderly Patients With Hip Fracture: A Multicenter Comparative Cohort Study	2016	not best available evidence
Kalsbeek, J. H.; Roerdink, W. H.; Krijnen, P.; Van Den Akker-Van Marle, M. E.; Schipper, I. B.	Study protocol for the DEFENDD trial: An RCT on the Dynamic Locking Blade Plate (DLBP) versus the Dynamic Hip Screw (DHS) for displaced femoral neck fractures in patients 65 years and younger	2020	Incorrect patient population (includes age<50 yrs)
Kamara, E.; Berliner, Z. P.; Hepinstall, M. S.; Cooper, H. J.	Pin Site Complications Associated With Computer-Assisted Navigation in Hip and Knee Arthroplasty	2017	Incorrect patient population (not exclusive to hip)
Kamel, H. K.; Iqbal, M. A.; Mogallapu, R.; Maas, D.; Hoffmann, R. G.	Time to ambulation after hip fracture surgery: relation to hospitalization outcomes	2003	Incorrect pt population (includes pts <50 yrs)
Kammerlander, C.; Doshi, H.; Gebhard, F.; Scola, A.; Meier, C.; Linhart, W.; Garcia-Alonso, M.; Nistal, J.; Blauth, M.	Long-term results of the augmented PFNA: a prospective multicenter trial	2014	Case series
Kammerlander, C.; Hem, E. S.; Klopfer, T.; Gebhard, F.; Sermon, A.; Dietrich, M.; Bach, O.; Weil, Y.; Babst, R.; Blauth, M.	Cement augmentation of the Proximal Femoral Nail Antirotation (PFNA) - A multicentre randomized controlled trial	2018	Doesn't address question of interest;
Kammerlander, C.; Pfeufer, D.; Lisitano, L. A.; Mehaffey, S.; Bocker, W.; Neuerburg, C.	Inability of Older Adult Patients with Hip Fracture to Maintain Postoperative Weight-Bearing Restrictions	2018	Incorrect patient population (includes age<50 yrs)
Kanakaris, N. K.; West, R. M.; Giannoudis, P. V.	Enhancement of hip fracture healing in the elderly: Evidence deriving from a pilot randomized trial	2015	Incorrect patient population (<30 pts/group)

Authors	Article Title	Year	Reason for Exclusion
Kang, J. S.; Na, Y.; Ko, B. S.; Jeon, Y. S.	Clinical outcomes and survival rate of cementless modular distal fixation femoral stem for revision hip arthroplasty: A minimum 6-year follow-up	2018	Incorrect patient population (includes age<50 yrs)
Kang, S. H.; Han, S. K.; Kim, Y. S.; Kim, M. J.	Treatment of subtrochanteric nonunion of the femur: whether to leave or to exchange the previous hardware	2013	Incorrect patient population (<30 patients/group)
Kara, A.; Celik, H.; Seker, A.; Uzun, M.; Sonmez, M. M.; Erdil, M.	Procedural outcomes of double vs. single fluoroscopy for fixing intertrochanteric femur fractures	2016	Incorrect patient population (<30 patients/group)
Karaali, E.; Ciloglu, O.	Metaphyseal vs. diaphyseal fixed-stem hemiarthroplasty in treating unstable intertrochanteric fractures in elderly patients	2021	Imperfect comparison group (both groups receive hemiarthroplasty compared Metaphyseal vs. diaphyseal stems)
Karakus, O.; Ozdemir, G.; Karaca, S.; Cetin, M.; Saygi, B.	The relationship between the type of unstable intertrochanteric femur fracture and mobility in the elderly	2018	Incorrect patient population (<30 pts/group)
Karam, J.; Campbell, P.; Desai, S.; Hunter, M.	Periprosthetic proximal femoral fractures in cemented and uncemented stems according to Vancouver classification: observation of a new fracture pattern	2020	Incorrect patient population (includes age<50 yrs)
Karaman, O.; Ozkazanli, G.; Orak, M. M.; Mutlu, S.; Mutlu, H.; Caliskan, G.; Karakus, O.; Saygi, B.	Factors affecting postoperative mortality in patients older than 65 years undergoing surgery for hip fracture	2015	not best available evidence
Karlsson, A.; Berggren, M.; Gustafson, Y.; Olofsson, B.; Lindelof, N.; Stenvall, M.	Effects of Geriatric Interdisciplinary Home Rehabilitation on Walking Ability and Length of Hospital Stay After Hip Fracture: A Randomized Controlled Trial	2016	Doesn't address question of interest;

Authors	Article Title	Year	Reason for Exclusion
Karlsson, A.; Berggren, M.; Olofsson, B.; Stenvall, M.; Gustafson, Y.; Nordstrom, P.; Lindelof, N.	Geriatric Interdisciplinary Home Rehabilitation After Hip Fracture in People with Dementia - A Subgroup Analysis of a Randomized Controlled Trial	2020	Secondary analysis
Karlsson, A.; Lindelof, N.; Olofsson, B.; Berggren, M.; Gustafson, Y.; Nordstrom, P.; Stenvall, M.	Effects of Geriatric Interdisciplinary Home Rehabilitation on Independence in Activities of Daily Living in Older People With Hip Fracture: A Randomized Controlled Trial	2020	Doesn't address question of interest;
Kassam, A. M.; Gough, A. T.; Davies, J.; Yarlagadda, R.	Can we reduce morphine use in elderly, proximal femoral fracture patients using a fascia iliac block?	2018	Incorrect patient population (<30 patients/group)
Kataoka, M.; Fujita, H.; Hara, H.; Harada, H.; Okutani, Y.; Murotani, Y.	Influence of the knot position on the union of the greater trochanter after bipolar hip arthroplasty via the modified Dall approach: a prospective non-randomized study	2021	not best available evidence
Kawai, M.; Tanji, A.; Nishijima, T.; Tateyama, K.; Yoda, Y.; Iizuka, A.; Kamata, Y.; Urabe, T.	Association between time to surgery and 90-day mortality after hip fracture: A retrospective cohort study of 1734 cases	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Kawaji, H.; Uematsu, T.; Oba, R.; Hoshikawa, N.; Watanabe, H.; Takai, S.	Influence of femoral implant alignment in uncemented total hip replacement arthroplasty: Varus insertion and stress shielding	2016	Insufficient data - age range not provided
Kawaji, H.; Uematsu, T.; Oba, R.; Satake, Y.; Hoshikawa, N.; Takai, S.	Treatment for Trochanteric Fracture of the Femur with Short Femoral Nail: A Comparison between the Asian Intramedullary Hip Screw (IMHS) and the Conventional IMHS	2016	Incorrect patient population (<30 pts/group)
Kawaji, H.; Uematsu, T.; Oba, R.; Takai, S.	Conservative Treatment for Fracture of the Proximal Femur with Complications	2016	Incorrect patient population (<30 patients in conservative group)

Authors	Article Title	Year	Reason for Exclusion
Kawano, S.; Sonohata, M.; Shimazaki, T.; Kitajima, M.; Mawatari, M.; Hotokebuchi, T.	Failure analysis of alumina on alumina total hip arthroplasty with a layered acetabular component: minimum ten-year follow-up study	2013	Incorrect pt population (includes age<50 yrs)
Kazemian, G. H.; Emami, M.; Manafi, A.; Najafi, F.; Najafi, M. A.	External Fixation vs. Skeletal Traction for Treatment of Intertrochanteric Fractures in the Elderly	2016	Incorrect patient population (<30 patients/group during follow-up)
Kazemian, G. H.; Manafi, A. R.; Najafi, F.; Najafi, M. A.	Treatment of intertrochanteric fractures in elderly highrisk patients: dynamic hip screw vs. external fixation	2014	Not comparison of interest
Kelly-Pettersson, P.; Samuelsson, B.; Muren, O.; Unbeck, M.; Gordon, M.; Stark, A.; Skoldenberg, O.	Waiting time to surgery is correlated with an increased risk of serious adverse events during hospital stay in patients with hip-fracture: A cohort study	2017	Does not meet inclusion criteria (non-RCT for timing PICO)
Keren, Y.; Sailofsky, S.; Keshet, D.; Barak, M.	The effect of 'Out of hours surgery Service' in Israel on hip fracture fixation outcomes: a retrospective analysis	2017	Does not meet inclusion criteria
Kew, J.; Lee, Y. L.; Davey, I. C.; Ho, S. Y.; Fung, K. C.; Metreweli, C.	Deep vein thrombosis in elderly Hong Kong Chinese with hip fractures detected with compression ultrasound and Doppler imaging: incidence and effect of low molecular weight heparin	1999	<30 per group
Khaled, S. A.; Soliman, O.; Wahed, M. A.	Functional outcome of unstable pelvic ring injuries after iliosacral screw fixation: single versus two screw fixation	2015	Does not address question of interest
Khan, S. K.; Jameson, S. S.; Avery, P. J.; Gray, A. C.; Deehan, D. J.	Does the timing of presentation of neck of femur fractures affect the outcome of surgical intervention	2013	Incorrect patient population (includes age<50 yrs)
Khan, S. K.; Jameson, S. S.; Sims, A.; A'Court, J.; Reed, M. R.; Rangan, A.; Muller, S. D.	Cemented Thompson's hemiarthroplasty in patients with intracapsular neck of femur fractures: survival analysis of 1,670 procedures	2015	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Khemka, A.; Mograby, O.; Lord, S. J.; Doyle, Z.; Al Muderis, M.	Total Hip Arthroplasty by the Direct Anterior Approach Using a Neck-preserving Stem: Safety, efficacy and learning curve	2018	Incorrect patient population (includes age<50 yrs)
Khorami, M.; Arti, H.; Aghdam, A. A.	Cemented versus uncemented hemiarthroplasty in patients with displaced femoral neck fractures	2016	Incorrect patient population (<30 pts/group)
Khunda, A.; Jafari, M.; Alazzawi, S.; Mountain, A.; Hui, A. C.	Mortality and re-operation rate after proximal femoral fracture surgery by trainees	2013	Imperfect comparison
Khurana, S.; Nobel, T. B.; Merkow, J. S.; Walsh, M.; Egol, K. A.	Total Hip Arthroplasty for Posttraumatic Osteoarthritis of the Hip Fares Worse Than THA for Primary Osteoarthritis	2015	Incorrect patient population (includes age<50 yrs)
Kildow, B. J.; Agaba, P.; Moore, B. F.; Hallows, R. K.; Bolognesi, M. P.; Seyler, T. M.	Postoperative Impact of Diabetes, Chronic Kidney Disease, Hemodialysis, and Renal Transplant After Total Hip Arthroplasty	2017	Insufficient data - age range not provided
Killington, M.; Davies, O.; Crotty, M.; Crane, R.; Pratt, N.; Mills, K.; McInnes, A.; Kurrle, S.; Cameron, I. D.	People living in nursing care facilities who are ambulant and fracture their hips: description of usual care and an alternative rehabilitation pathway	2020	Secondary analysis
Kim, C. H.; Chang, J. S.; Kim, J. W.	Clinical outcomes of dynamic hip screw fixation of intertrochanteric fractures: comparison with additional anti-rotation screw use	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Kim, J. I.; Moon, N. H.; Shin, W. C.; Suh, K. T.; Jeong, J. Y.	Reliable anatomical landmarks for minimizing leg-length discrepancy during hip arthroplasty using the lateral transgluteal approach for femoral neck fracture	2017	Does not address question of interest - stratified by pt characteristics
Kim, J. T.; Ha, Y. C.; Park, C. H.; Yoo, J. I.; Kim, T. Y.	Single screw type of lag screw results higher reoperation rate in the osteosynthesis of basicervical hip fracture	2020	Incorrect patient population (<30 patients/group in subgroup analysis)

Authors	Article Title	Year	Reason for Exclusion
Kim, J. W.; Shon, H. C.; Song, S. H.; Lee, Y. K.; Koo, K. H.; Ha, Y. C.	Reoperation rate, mortality and ambulatory ability after internal fixation versus hemiarthroplasty for unstable intertrochanteric fractures in elderly patients: a study on Korean Hip Fracture Registry	2020	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Kim, K. H.; Han, K. Y.; Kim, K. W.; Lee, J. H.; Chung, M. K.	Local Postoperative Complications after Surgery for Intertrochanteric Fractures Using Cephalomedullary Nails	2018	Incorrect patient population (<30 patients/group)
Kim, K. H.; Kim, N. Y.	Can early surgery reduce the need to packed red blood cell transfusion in elderly patients with intertrochanteric femur fractures?	2021	Does not meet inclusion criteria (not RCT for timing PICO)
Kim, M.; Yang, Y. H.; Son, H. J.; Huh, J.; Cheong, Y.; Kang, S. S.; Hwang, B.	Effect of medications and epidural steroid injections on fractures in postmenopausal women with osteoporosis	2019	Incorrect patient population - osteoporosis
Kim, S. C.; Lim, Y. W.; Jo, W. L.; Park, H. W.; Han, S. B.; Kwon, S. Y.; Kim, Y. S.	Fourth-generation ceramic-on-ceramic THA results in improvements in midterm outcomes compared to third-generation THA but does not resolve noise problems: a cohort study of a single-hip system	2019	Incorrect patient population (includes age<50 yrs)
Kim, S. J.; Park, H. S.; Lee, D. W.; Kim, J. H.	Lower preoperative Hounsfield unit values are associated with intra-operative fractures in cementless bipolar hemiarthroplasty	2017	Incorrect patient population (<30 patients/group)
Kim, S. J.; Park, H. S.; Lee, D. W.; Lee, J. W.	Short-term daily teriparatide improve postoperative functional outcome and fracture healing in unstable intertrochanteric fractures	2019	Does not address question of interest (not among specified interventions)
Kim, S. M.; Han, S. B.; Rhyu, K. H.; Yoo, J. J.; Oh, K. J.; Yoo, J. H.; Lee, K. J.; Lim, S. J.	Periprosthetic femoral fracture as cause of early revision after short stem hip arthroplasty-a multicentric analysis	2018	Incorrect patient population (includes age<50 yrs)
Kim, S. M.; Rhyu, K. H.; Lim, S. J.	Salvage of failed osteosynthesis for an atypical subtrochanteric femoral fracture associated with long-term bisphosphonate treatment using a 95degree angled blade plate	2018	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Kim, T. H.; Yoon, Y. C.; Chung, J. Y.; Song, H. K.	Strategies for the management of hemodynamically unstable pelvic fractures: From preperitoneal pelvic packing to definitive internal fixation	2019	Incorrect patient population (includes age<50 yrs)
Kim, Y. H.; Park, J. W.; Kim, J. S.	Behaviour of the ultra-short anatomic cementless femoral stem in young and elderly patients	2013	Incorrect pt population (includes age<50 yrs)
Kim, Y. H.; Park, J. W.; Kim, J. S.	Clinical Performance of Ultra-Short Anatomic Cementless Versus Fourth-Generation Cemented Femoral Stems for Hip Replacement in Octogenarians	2018	not best available evidence
Kim, Y. H.; Park, J. W.; Kim, J. S.	Ultra-Short Versus Conventional Uncemented Stems for Hip Replacement in Octogenarians	2018	Does not address question of interest (not among specified interventions)
Kim, Y. S.; Hur, J. S.; Hwang, K. T.; Choi, I. Y.; Kim, Y. H.	The Comparison of Compression Hip Screw and Bipolar Hemiarthroplasty for the Treatment of AO Type A2 Intertrochanteric Fractures	2014	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Kim, Y. T.; Yoo, J. H.; Kim, M. K.; Kim, S.; Hwang, J.	Dual mobility hip arthroplasty provides better outcomes compared to hemiarthroplasty for displaced femoral neck fractures: a retrospective comparative clinical study	2018	not best available evidence
Kim, Y.; Moon, J. K.; Hwang, K. T.; Choi, I. Y.; Kim, Y. H.	Cementless bipolar hemiarthroplasty for unstable intertrochanteric fractures in octogenarians	2014	Does not address question of interest - stratified by pt characteristics
Kimmel, L. A.; Liew, S. M.; Sayer, J. M.; Holland, A. E.	HIP4Hips (High Intensity Physiotherapy for Hip fractures in the acute hospital setting): a randomised controlled trial	2016	Doesn't address question of interest;
Kirby, M. W.; Spritzer, C.	Radiographic detection of hip and pelvic fractures in the emergency department	2010	Advanced Imaging
Kizkapan, T. B.; Misir, A.; Uzun, E.; Ozcamdalli, M.; Yurdakul, E.; Argun, M.	Comparison Of Acetabulum Posterior Wall Fractures And Fracture Dislocations: Dislocation Does Not Affect Clinical And Radiological Outcomes	2017	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Klasan, A.; Neri, T.; Oberkircher, L.; Malcherczyk, D.; Heyse, T. J.; Bliemel, C.	Complications after direct anterior versus Watson-Jones approach in total hip arthroplasty: results from a matched pair analysis on 1408 patients	2019	not best available evidence
Klatte, T. O.; Kendoff, D.; Kamath, A. F.; Jonen, V.; Rueger, J. M.; Frommelt, L.; Gebauer, M.; Gehrke, T.	Single-stage revision for fungal peri-prosthetic joint infection: a single-centre experience	2014	Peri-prosthetic
Klement, M. R.; Bala, A.; Blizzard, D. J.; Wellman, S. S.; Bolognesi, M. P.; Seyler, T. M.	Should We Think Twice About Psychiatric Disease in Total Hip Arthroplasty?	2016	Does not address question of interest - prognostic indications
Klestil, T.; RÃ¶der, C.; Stotter, C.; Winkler, B.; Nehrer, S.; Lutz, M.; Klerings, I.; Wagner, G.; Gartlehner, G.; Nussbaumer-Streit, B.	Immediate versus delayed surgery for hip fractures in the elderly patients: A protocol for a systematic review and meta-analysis	2017	Systematic review
Klestil, T.; Roder, C.; Stotter, C.; Winkler, B.; Nehrer, S.; Lutz, M.; Klerings, I.; Wagner, G.; Gartlehner, G.; Nussbaumer-Streit, B.	Impact of timing of surgery in elderly hip fracture patients: a systematic review and meta-analysis	2018	Systematic review
Kleweno, C.; Morgan, J.; Redshaw, J.; Harris, M.; Rodriguez, E.; Zurakowski, D.; Vrahas, M.; Appleton, P.	Short versus long cephalomedullary nails for the treatment of intertrochanteric hip fractures in patients older than 65 years	2014	dropbox exclude

Authors	Article Title	Year	Reason for Exclusion
Klukowski, M.; Kowalczyk, R.; Gorniewski, G.; Legosz, P.; Janiak, M.; Trzebicki, J.	Iliac Fascia Compartment Block and Analgesic Consumption in Patients Operated on for Hip Fracture	2017	not best available evidence
Knobe, M.; Drescher, W.; Heussen, N.; Sellei, R. M.; Pape, H. C.	Is helical blade nailing superior to locked minimally invasive plating in unstable pertrochanteric fractures?	2012	not best available evidence
Knobe, M.; Gradl, G.; Buecking, B.; Gackstatter, S.; SÃ¶nmez, T. T.; Ghassemi, A.; Stromps, J. P.; Prescher, A.; Pape, H. C.	Locked minimally invasive plating versus fourth generation nailing in the treatment of AO/OTA 31A2.2 fractures: A biomechanical comparison of PCCPÂ® and Intertan nailÂ®	2015	Incorrect patient population (cadaver)
Ko, Y.; Lee, J.; Oh, E.; Choi, M.; Kim, C.; Sung, K.; Baek, S.	Older Adults With Hip Arthroplasty: An Individualized Transitional Care Program	2019	Incorrect patient population (<30 patients/group)
Kobayashi, H.; Homma, Y.; Baba, T.; Ochi, H.; Matsumoto, M.; Yuasa, T.; Kaneko, K.	Surgeons changing the approach for total hip arthroplasty from posterior to direct anterior with fluoroscopy should consider potential excessive cup anteversion and flexion implantation of the stem in their early experience	2016	not best available evidence
Kochai, A.; Uysal, M.; Ozalay, M.; Cinar, B. M.; Battal, V.; Avci, M. C.	Comparision of PFN and INTERTAN nail for unstable intertrochanteric femoral fracture in mobile patients	2019	Incorrect patient population (includes age<50 yrs)
Konda, S. R.; Pean, C. A.; Goch, A. M.; Fields, A. C.; Egol, K. A.	Comparison of Short-Term Outcomes of Geriatric Distal Femur and Femoral Neck Fractures: Results From the NSQIP Database	2015	Case series (comparing identical intervention stratified by 2 fracture types)
Kondo, A.; Zierler, B. K.; Isokawa, Y.; Hagino, H.; Ito, Y.	Comparison of outcomes and costs after hip fracture surgery in three hospitals that have different care systems in Japan	2009	Imperfect comparator (groups received some form of collaboration)
Kong, X.	Meta-analysis of the effect of cemented and uncemented hemiarthroplasty on displaced femoral neck fracture in the elderly	2020	Meta-analysis

Authors	Article Title	Year	Reason for Exclusion
Kos, N.; Burger, H.; Vidmar, G.	Association of cognitive status with mobility and functioning after femoral neck fracture surgery in elderly patients: Differences between hemiarthroplasty and internal fixation	2013	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Kosola, J.; Kaipia, A.; Laitinen, M. K.; Nieminen, J.	Complications after surgical treatment of femoral neck fractures in men with alcohol dependence syndrome: retrospective register analysis of 154 cases	2017	Incorrect patient population (includes age<50 yrs)
Koval, K. J.; Aharonoff, G. B.; Rosenberg, A. D.; Bernstein, R. L.; Zuckerman, J. D.	Functional outcome after hip fracture. Effect of general versus regional anesthesia	1998	not best available evidence
Koval, K. J.; Aharonoff, G. B.; Rosenberg, A. D.; Schmigelski, C.; Bernstein, R. L.; Zuckerman, J. D.	Hip fracture in the elderly: the effect of anesthetic technique	1999	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Kowark, A.; Adam, C.; Ahrens, J.; Bajbouj, M.; Bollheimer, C.; Borowski, M.; Dodel, R.; Dolch, M.; Hachenberg, T.; Henzler, D.; Hildebrand, F.; Hilgers, R. D.; Hoeft, A.; Isfort, S.; Kienbaum, P.; Knobe, M.; Knuefermann, P.; Kranke, P.; Laufenberg-Feldmann, R.; Nau, C.; Neuman, M. D.; Olotu, C.; Rex, C.; Rossaint, R.; Sanders, R. D.; Schmidt, R.; Schneider, F.; Siebert, H.; Skorning, M.; Spies, C.; Vicent, O.; Wappler, F.; Wirtz, D. C.; Wittmann, M.; Zacharowski, K.; Zarbock, A.; Coburn, M.	Improve hip fracture outcome in the elderly patient (iHOPE): A study protocol for a pragmatic, multicentre randomised controlled trial to test the efficacy of spinal versus general anaesthesia	2018	Protocol
Kozono, N.; Ikemura, S.; Yamashita, A.; Harada, T.; Watanabe, T.; Shirasawa, K.	Direct reduction may need to be considered to avoid postoperative subtype P in patients with an unstable trochanteric fracture: a retrospective study using a multivariate analysis	2014	Does not address question of interest - prognostic endpoints
Kragh, A. M.; WaldÃ©n, M.; Apelqvist, A.; Wagner, P.; Atroshi, I.	Bleeding and first-year mortality following hip fracture surgery and preoperative use of low-dose acetylsalicylic acid: An observational cohort study	2011	Does not meet inclusion criteria (non-post-operative for VTE)
Krastanova, M. S.; Vacheva, D.; Mircheva, A.	A comparative analysis between the recovery results of patients with hip joint replacement in the period of early rehabilitation at home (13-45 days after surgery)	2016	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Krebs, E. E.; Paudel, M.; Taylor, B. C.; Bauer, D. C.; Fink, H. A.; Lane, N. E.; Ensrud, K. E.; Osteoporotic Fractures in Men Study Research, Group	Association of Opioids with Falls, Fractures, and Physical Performance among Older Men with Persistent Musculoskeletal Pain	2016	Incorrect patient population (not exclusive to hip)
Kreutz, R.; Haas, S.; Holberg, G.; Lassen, M. R.; Mantovani, L. G.; Schmidt, A.; Turpie, A. G. G.	Rivaroxaban compared with standard thromboprophylaxis after major orthopaedic surgery: Co-medication interactions	2016	Incorrect patient population (includes age<50 yrs)
Krichbaum, K.	GAPN postacute care coordination improves hip fracture outcomes	2007	Sample Size too Small (n < 30 per group)
Kristensen, P. K.; Rock, N. D.; Christensen, H. C.; Pedersen, A. B.	The Danish Multidisciplinary Hip Fracture Registry 13-Year Results from a Population-Based Cohort of Hip Fracture Patients	2020	Does not address question of interest
Kristensen, P. K.; Thillemann, T. M.; Soballe, K.; Johnsen, S. P.	Can improved quality of care explain the success of orthogeriatric units? A population-based cohort study	2016	not best available evidence
Kristiansson, J.; Hagberg, E.; NellgÃ¥rd, B.	The influence of time-to-surgery on mortality after a hip fracture	2020	Does not meet inclusion criteria (not RCT for timing PICO)
Kronborg, L.; Bandholm, T.; Palm, H.; Kehlet, H.; Kristensen, M. T.	Effectiveness of acute in-hospital physiotherapy with knee-extension strength training in reducing strength deficits in patients with a hip fracture: A randomised controlled trial	2017	Does not address question of interest- not comparison of interest
Kruse, M.; Mohammed, J.; Sayed-Noor, A.; Wolf, O.; Holmgren, G.; Nordstrom, R.; Crnalic, S.; Skoldenberg, O.; Mukka, S.	Peri-implant femoral fractures in hip fracture patients treated with osteosynthesis: a retrospective cohort study of 1965 patients	2021	Imperfect comparison group

Authors	Article Title	Year	Reason for Exclusion
Kuhn, K. M.; Ali, A.; Boudreau, J. A.; Cannada, L. K.; Watson, J. T.	Antegrade versus retrograde intramedullary nailing of proximal third femur fractures	2013	Incorrect patient population (includes age<50 yrs)
Kuisma, R.	A randomized, controlled comparison of home versus institutional rehabilitation of patients with hip fracture	2002	Doesn't address question of interest;
Kulachote, N.; Sa-ngasoongsong, P.; Sirisreetreerux, N.; Chulsomlee, K.; Thamyongkit, S.; Wongsak, S.	Predicting Factors for Return to Prefracture Ambulatory Level in High Surgical Risk Elderly Patients Sustained Intertrochanteric Fracture and Treated With Proximal Femoral Nail Antirotation (PFNA) With and Without Cement Augmentation	2020	Does not address question of interest - prognostic endpoints
Kulkarni, S. G.; Babhulkar, S. S.; Kulkarni, S. M.; Kulkarni, G. S.; Kulkarni, M. S.; Patil, R.	Augmentation of intramedullary nailing in unstable intertrochanteric fractures using cerclage wire and lag screws: a comparative study	2017	Incorrect patient population (not exclusive to <50 yrs)
Kumar, C. N.; Srivastava, M. P. K.	Screw versus helical proximal femoral nail in the treatment of unstable trochanteric fractures in the elderly	2019	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Kumar, P.; Rajnish, R. K.; Neradi, D.; Kumar, V.; Agarwal, S.; Aggarwal, S.	Hemiarthroplasty for neck of femur fractures: to cement or not? A systematic review of literature and meta-analysis	2019	Meta-analysis
Kumar, P.; Rajnish, R. K.; Sharma, S.; Dhillon, M. S.	Proximal femoral nailing is superior to hemiarthroplasty in AO/OTA A2 and A3 intertrochanteric femur fractures in the elderly: a systematic literature review and meta-analysis	2019	Systematic review
Kumbaraci, M.; Karapinar, L.; Turgut, A.	Comparison of Second and Third-Generation Nails in the Treatment of Intertrochanteric Fracture: Screws versus Helical Blades	2017	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths

Authors	Article Title	Year	Reason for Exclusion
Kumin, M.; Deery, J.; Turney, S.; Price, C.; Vinayakam, P.; Smith, A.; Filippa, A.; Wilkinson-Guy, L.; Moore, F.; O'Sullivan, M.; Dunbar, M.; Gaylard, J.; Newman, J.; Harper, C. M.; Minney, D.; Parkin, C.; Mew, L.; Pearce, O.; Third, K.; Shirley, H.; Reed, M.; Jefferies, L.; Hewitt-Gray, J.; Scarborough, C.; Lambert, D.; Jones, C. I.; Bremner, S.; Fatz, D.; Perry, N.; Costa, M.; Scarborough, M.	Reducing Implant Infection in Orthopaedics (RIIiO): Results of a pilot study comparing the influence of forced air and resistive fabric warming technologies on postoperative infections following orthopaedic implant surgery	2019	Does not address question of interest (not among specified interventions)
Kupeli, I.; Unver, S.	The Correlation between Preoperative and Postoperative Hypoalbuminaemia and the Development of Acute Kidney Injury with Respect to the KDIGO Criteria in the Hip Fracture Surgery in Elderly Patients	2020	Does not address question of interest
Kurak, J.; Zajac, P.; Czyzewski, D.; Kucharski, R.; Grzanka, R.; Kasperska-Zajac, A.; Koczy, B.	Evaluation of platelet function using PFA-100 R in patients treated with Acetylsalicylic acid and qualified for Trauma and Orthopedic surgery procedures	2016	Incorrect patient population (includes age<50 yrs)
Kurtinaitis, J.; Porvaneckas, N.; Kvederas, G.; Butenas, T.; Uvarovas, V.	Revision rates after surgical treatment for femoral neck fractures: results of 2-year follow-up	2013	Incorrect pt population (inclusion of patients <50 yrs of age)
Kurtz, S. M.; Lau, E. C.; Ong, K. L.; Adler, E. M.; Kolisek, F. R.; Manley, M. T.	Hospital, Patient, and Clinical Factors Influence 30- and 90-Day Readmission After Primary Total Hip Arthroplasty	2016	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Kusen, J.; van der Vet, P.; Wijdicks, F. J.; Houwert, M.; Dijkgraaf, M.; Hamaker, M.; Geraghty, O.; Verleisdonk, E. J.; van der Velde, D.	Different approaches towards geriatric trauma care for hip fracture patients: an inter-hospital comparison	2019	not best available evidence
Kwo, P.; Gane, E. J.; Peng, C. Y.; Pearlman, B.; Vierling, J. M.; Serfaty, L.; Buti, M.; Shafran, S.; Stryszak, P.; Lin, L.; Gress, J.; Black, S.; Dutko, F. J.; Robertson, M.; Wahl, J.; Lupinacci, L.; Barr, E.; Haber, B.	Effectiveness of Elbasvir and Grazoprevir Combination, With or Without Ribavirin, for Treatment-Experienced Patients With Chronic Hepatitis C Infection	2017	Incorrect patient population (includes age<50 yrs)
Kwon, H. M.; Lim, S.; Yang, I. H.; Lee, W. S.; Jeon, B. H.; Park, K. K.	Impact of Renal Function on the Surgical Outcomes of Displaced Femoral Neck Fracture in Elderly Patients	2019	Does not address question of interest
Lafere, P.; Schubert, T.; De Bels, D.; Germonpre, P.; Balestra, C.	Can the normobaric oxygen paradox (NOP) increase reticulocyte count after traumatic hip surgery?	2013	Does not address question of interest (not among specified interventions)
Laflamme, M.; Angers, M.; Vachon, J.; Pomerleau, V.; Arteau, A.	High Incidence of Intraoperative Fractures With a Specific Cemented Stem Following Intracapsular Displaced Hip Fracture	2020	Incorrect patient population (<30 patients/group)
Lahnborg, G.	Effect of low-dose heparin and dihydroergotamine on frequency of postoperative deep-vein thrombosis in patients undergoing post-traumatic hip surgery	1980	Age of included subjects ranged from 39 - 97 years (>50yrs)
Laiz, A.; Malouf, J.; Marin, A.; Longobardi, V.; de Caso, J.; Farrerons, J.; Casademont, J.	Impact of 3-Monthly Vitamin D Supplementation Plus Exercise on Survival after Surgery for Osteoporotic Hip Fracture in Adult Patients over 50 Years: A Pragmatic Randomized, Partially Blinded, Controlled Trial	2017	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Lakstein, D.; Atoun, E.; Wissotzky, O.; Tan, Z.	Does restoration of leg length and femoral offset play a role in functional outcome one year after hip hemiarthroplasty?	2017	Retrospective case series
Lakstein, D.; Bachar, I.; Debi, R.; Lubovsky, O.; Cohen, O.; Tan, Z.; Atoun, E.	Radiographic templating of total hip arthroplasty for femoral neck fractures	2017	Incorrect patient population (<30 patients/group)
Lakstein, D.; Cohen, O.; Daglan, E.; Haimovich, Y.; Tan, Z.	Mortality and Function after Hip Fractures in Different Ethnic Populations in Israel	2018	Does not address question of interest - stratified by pt characteristics
Lamb, J. N.; Matharu, G. S.; Redmond, A.; Judge, A.; West, R. M.; Pandit, H. G.	Patient and implant survival following intraoperative periprosthetic femoral fractures during primary total hip arthroplasty: an analysis from the national joint registry for England, Wales, Northern Ireland and the Isle of Man	2019	Incorrect patient population (includes age<50 yrs)
Lamb, J. N.; Matharu, G. S.; Redmond, A.; Judge, A.; West, R. M.; Pandit, H. G.	Risk Factors for Intraoperative Periprosthetic Femoral Fractures During Primary Total Hip Arthroplasty. An Analysis From the National Joint Registry for England and Wales and the Isle of Man	2019	Does not address question of interest - prognostic endpoints
Lamb, L. C.; Montgomery, S. C.; Wong Won, B.; Harder, S.; Meter, J.; Feeney, J. M.	A multidisciplinary approach to improve the quality of care for patients with fragility fractures	2017	not best available evidence
Lamb, S. E.; Oldham, J. A.; Morse, R. E.; Evans, J. G.	Neuromuscular stimulation of the quadriceps muscle after hip fracture: a randomized controlled trial	2002	<30 per group
Lampley, A.; Huang, R. C.; Arnold, W. V.; Parvizi, J.	Total joint arthroplasty: should patients have preoperative dental clearance?	2014	Does not address question of interest
Lan, H.; Tan, Z.; Li, K. N.; Gao, J. H.; Liu, T. H.	Intramedullary Nail Fixation Assisted by Orthopaedic Robot Navigation for Intertrochanteric Fractures in Elderly Patients	2019	Incorrect patient population (<30 patients/group)
Lan, Y.; Huang, Y.; Zhou, J.; Yu, F.	The effect of nrs2002-guided nutrition interventions on health knowledge, nutrition, and fracture union in senior patients with hip fractures after surgery	2019	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Lander, S. T.; Mahmood, B.; Maceroli, M. A.; Byrd, J.; Elfar, J. C.; Ketz, J. P.; Nikkel, L. E.	Mortality Rates of Humerus Fractures in the Elderly: Does Surgical Treatment Matter?	2019	not best available evidence
Lang, N. W.; Arthold, C.; Joestl, J.; Gormasz, A.; Boesmueller, S.; Hajdu, S.; Sarahrudi, K.	Does an additional antirotation U-Blade (RC) lag screw improve treatment of AO/OTA 31 A1-3 fractures with gamma 3 nail?	2016	Incorrect patient population (includes age<50 yrs)
Lang, N. W.; Breuer, R.; Beiglboeck, H.; Munteanu, A.; Hajdu, S.; Windhager, R.; Widhalm, H. K.	Migration of the lag screw after intramedullary treatment of AO/OTA 31.A2.1-3 pertrochanteric fractures does not result in higher incidence of cut-outs, regardless of which implant was used: A comparison of gamma nail with and without U-blade (RC) lag screw and Proximal Femur Nail Antirotation (PFNA)	2019	Insufficient data - age range not provided
Lang, N. W.; Joestl, J.; Payr, S.; Platzer, P.; Sarahrudi, K.	Secondary femur shaft fracture following treatment with cephalomedullary nail: a retrospective single-center experience	2017	Insufficient data - age range not provided
Lange, J.; Troelsen, A.; Solgaard, S.; Otte, K. S.; Jensen, N. K.; Soballe, K.; Coriha Research Group	Cementless One-Stage Revision in Chronic Periprosthetic Hip Joint Infection. Ninety-One Percent Infection Free Survival in 56 Patients at Minimum 2-Year Follow-Up	2018	Incorrect patient population (<50 years age; <30 patients/group)
Langenhan, R.; Bushuven, S.; Reimers, N.; Probst, A.	Peri-operative antibiotic treatment of bacteriuria reduces early deep surgical site infections in geriatric patients with proximal femur fracture	2018	Does not address question of interest (not among specified interventions)
Langlois, J.; Delambre, J.; Klouche, S.; Faivre, B.; Hardy, P.	Direct anterior Hueter approach is a safe and effective approach to perform a bipolar hemiarthroplasty for femoral neck fracture: outcome in 82 patients	2015	not best available evidence
Larsson, G.; Stromberg, R. U.; Rogmark, C.; Nilsdotter, A.	Prehospital fast track care for patients with hip fracture: Impact on time to surgery, hospital stay, post-operative complications and mortality a randomised, controlled trial	2016	Incorrect patient population - comparison group included patients without fracture

Authors	Article Title	Year	Reason for Exclusion
Lassen, M. R.; Haas, S.; Kreutz, R.; Mantovani, L. G.; Holberg, G.; Turpie, A. G.	Rivaroxaban for Thromboprophylaxis After Fracture-Related Orthopedic Surgery in Routine Clinical Practice	2016	Incorrect patient population (includes age<50 yrs)
Latif, A.; Mukherjee, K.; Ranjan, A. K.; Mukhopadhyay, K. K.	The concept of valgus under reduction in fixation of displaced trochanteric femoral fractures with sliding hip screw	2013	Incorrect patient population (includes age<50 yrs)
Lau, T. W.; Fang, C.; Leung, F.	The effectiveness of a geriatric hip fracture clinical pathway in reducing hospital and rehabilitation length of stay and improving short-term mortality rates	2013	not best available evidence
Lau, W. C.; Chan, E. W.; Cheung, C. L.; Sing, C. W.; Man, K. K.; Lip, G. Y.; Siu, C. W.; Lam, J. K.; Lee, A. C.; Wong, I. C.	Association Between Dabigatran vs Warfarin and Risk of Osteoporotic Fractures Among Patients With Nonvalvular Atrial Fibrillation	2017	Incorrect patient population (includes age<50 yrs)
Lawrence, J. E.; Fountain, D. M.; Cundall-Curry, D. J.; Carrothers, A. D.	Do Patients Taking Warfarin Experience Delays to Theatre, Longer Hospital Stay, and Poorer Survival After Hip Fracture?	2017	Does not address question of interest - prognostic endpoints
Le Quang, H.; Schmoelz, W.; Lindtner, R. A.; Dammerer, D.; Schwendinger, P.; Krappinger, D.	Single column plate plus other column lag screw fixation vs. both column plate fixation for anterior column with posterior hemitransverse acetabular fractures – a biomechanical analysis using different loading protocols	2021	Incorrect patient population (<30 patients/group)
Lebanon, O. T.; Netzer, D.; Yaacobi, E.; Berner, Y.; Spiegel, D.; Bacharach, R.; Nabriski, D.; Nyska, M.; Brin, Y.; Rotman-Pikielny, P.	Virtual orthopedic-rehabilitation-metabolic collaboration for treating osteoporotic hip fractures	2020	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Leblanc, D.; Conte, M.; Masson, G.; Richard, F.; Jeanneteau, A.; Bouhours, G.; Chretien, J. M.; Rony, L.; Rineau, E.; Lasocki, S.	SmartPilot R view-guided anaesthesia improves postoperative outcomes in hip fracture surgery: a randomized blinded controlled study	2017	Does not address question of interest - both groups received general anesthesia
LeBoff, M. S.; Yue, A. Y.; Copeland, T.; Cook, N. R.; Buring, J. E.; Manson, J. E.	VITAL-Bone Health: rationale and design of two ancillary studies evaluating the effects of vitamin D and/or omega-3 fatty acid supplements on incident fractures and bone health outcomes in the VITamin D and OmegA-3 TriaL (VITAL)	2015	Does not address question of interest
Lebwohl, M. G.; Kircik, L.; Callis Duffin, K.; Pariser, D.; Hooper, M.; Wenkert, D.; Thompson, E. H. Z.; Yang, J.; Kricorian, G.; Koo, J.	A randomized study to evaluate the efficacy and safety of adding topical therapy to etanercept in patients with moderate to severe plaque psoriasis	2013	Incorrect patient population (includes age<50 yrs)
Leder, B. Z.; Tsai, J. N.; Uihlein, A. V.; Wallace, P. M.; Lee, H.; Neer, R. M.; Burnett-Bowie, S. A. M.	Denosumab and teriparatide transitions in postmenopausal osteoporosis (the DATA-Switch study): Extension of a randomised controlled trial	2015	Incorrect patient population (includes age<50 yrs)
Lee, H. K.; Kang, B. S.; Kim, C. S.; Choi, H. J.	Ultrasound-guided regional anesthesia for the pain management of elderly patients with hip fractures in the emergency department	2014	Incorrect patient population (<30 patients/group)
Lee, H.; Cook, J. A.; Lamb, S. E.; Parsons, N.; Keene, D. J.; Sims, A. L.; Costa, M. L.; Griffin, X. L.	The findings of a surgical hip fracture trial were generalizable to the UK national hip fracture database	2021	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Lee, K. H.; Kim, H. M.; Kim, Y. S.; Jeong, C.; Moon, C. W.; Lee, S. U.; Park, I. J.	Isolated fractures of the greater trochanter with occult intertrochanteric extension	2010	Advanced Imaging

Authors	Article Title	Year	Reason for Exclusion
Lee, M. W. H.; Chui, K. H.; Tsang, K. K.; Lee, K. B.; Li, W.	A unified multidisciplinary fragility hip fracture pilot pathway in a trauma centre in Hong Kong: One-year outcome in the acute phase	2019	not best available evidence
Lee, S. Y.; Beom, J.; Kim, B. R.; Lim, S. K.; Lim, J. Y.	Comparative effectiveness of fragility fracture integrated rehabilitation management for elderly individuals after hip fracture surgery: A study protocol for a multicenter randomized controlled trial	2018	Protocol
Lee, S. Y.; Yoon, B. H.; Beom, J.; Ha, Y. C.; Lim, J. Y.	Effect of Lower-Limb Progressive Resistance Exercise After Hip Fracture Surgery: A Systematic Review and Meta-Analysis of Randomized Controlled Studies	2017	Systematic review
Lee, Y. K.; Kim, J. T.; Alkitaini, A. A.; Kim, K. C.; Ha, Y. C.; Koo, K. H.	Conversion Hip Arthroplasty in Failed Fixation of Intertrochanteric Fracture: A Propensity Score Matching Study	2017	Incorrect patient population (includes aged <50 yrs)
Lee, Y. K.; Kim, K. C.; Kim, J. W.; Ha, J. H.; Yoon, B. H.; Ha, Y. C.; Koo, K. H.	Use of ceramic-on-ceramic bearing in total hip arthroplasty for posttraumatic arthritis of the hip	2019	Incorrect patient population (includes age<50 yrs)
Lee, Y. K.; Kim, T. Y.; Ha, Y. C.; Koo, K. H.	To withhold or to implement bisphosphonate after cementless hip arthroplasty: a dilemma in elderly hip fracture patients	2019	Does not address question of interest (not among specified interventions)
Leegwater, N. C.; Bloemers, F. W.; de Korte, N.; Heetveld, M. J.; Kalisvaart, K. J.; Schonhuth, C. P.; Pijnenburg, Bacm; Burger, B. J.; Ponsen, K. J.; Maier, A. B.; van Royen, B. J.; Nolte, P. A.	Postoperative continuous-flow cryocompression therapy in the acute recovery phase of hip fracture surgery-A randomized controlled clinical trial	2017	Incorrect pt population (<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Leegwater, N. C.; Nolte, P. A.; de Korte, N.; Heetveld, M. J.; Kalisvaart, K. J.; Schonhuth, C. P.; Pijnenburg, B.; Burger, B. J.; Ponsen, K. J.; Bloemers, F. W.; Maier, A. B.; van Royen, B. J.	The efficacy of continuous-flow cryo and cyclic compression therapy after hip fracture surgery on postoperative pain: design of a prospective, open-label, parallel, multicenter, randomized controlled, clinical trial	2016	Incorrect patient population (includes age<50 yrs)
Leer-Salvesen, S.; Dybvik, E.; Ranhoff, A. H.; Husebo, B. L.; Dahl, O. E.; Engesaeter, L. B.; Gjertsen, J. E.	Do direct oral anticoagulants (DOACs) cause delayed surgery, longer length of hospital stay, and poorer outcome for hip fracture patients?	2020	Does not meet inclusion criteria (non-post-operative for VTE)
Leer-Salvesen, S.; Engesaeter, L. B.; Dybvik, E.; Furnes, O.; Kristensen, T. B.; Gjertsen, J. E.	Does time from fracture to surgery affect mortality and intraoperative medical complications for hip fracture patients? An observational study of 73 557 patients reported to the Norwegian Hip Fracture Register	2019	Does not meet inclusion criteria (not RCT for timing PICO)
Lees, D.; Harrison, W. D.; Ankers, T.; A'Court, J.; Marriott, A.; Shipsey, D.; Chaplin, A.; Reed, M. R.	Fascia iliaca compartment block for hip fractures: Experience of integrating a new protocol across two hospital sites	2016	Incorrect patient population (includes age<50 yrs)
Lennox, I. A.; McLauchlan, J.	Comparing the mortality and morbidity of cemented and uncemented hemiarthroplasties	1993	not best available evidence
Leonardsson, O.; Rolfson, O.; Rogmark, C.	The surgical approach for hemiarthroplasty does not influence patient-reported outcome: A national survey of 2118 patients with one-year follow-up	2016	not best available evidence
Leonidou, A.; Rallan, R.; Cox, N.; Pagkalos, J.; Luscombe, J.	Comparison of different warfarin reversal protocols on surgical delay and complication rate in hip fracture patients	2013	Incorrect patient population (<30 pts/group)

Authors	Article Title	Year	Reason for Exclusion
Lewis, D. P.; WÃ¦ver, D.; Thorninger, R.; Donnelly, W. J.	Erratum to â??Hemiarthroplasty Versus Total Hip Arthroplasty for the Management of Displaced Neck of Femur Fractures: A Systematic Review and Meta-Analysisâ?? [The Journal of Arthroplasty 34 (2019) 1837â??1843](S0883540319303262)(10.1016/j.arth.2019.03.070)	2019	Systematic review
Lewis, D. P.; Waever, D.; Thorninger, R.; Donnelly, W. J.	Hemiarthroplasty vs Total Hip Arthroplasty for the Management of Displaced Neck of Femur Fractures: A Systematic Review and Meta-Analysis	2019	Systematic review
Li, A. B.; Zhang, W. J.; Wang, J. Q.; Zhao, Y. M.; Guo, W. J.	Learning Curve and Clinical Outcomes of Performing Surgery with the InterTan Intramedullary Nail in Treating Femoral Intertrochanteric Fractures	2017	Incorrect patient population (<30 patients/group)
Li, A. B.; Zhang, W. J.; Wang, J.; Guo, W. J.; Wang, X. H.; Zhao, Y. M.	Intramedullary and extramedullary fixations for the treatment of unstable femoral intertrochanteric fractures: a meta-analysis of prospective randomized controlled trials	2017	Meta-analysis
Li, C. T.; Hung, G. K.; Fong, K. N.; Gonzalez, P. C.; Wah, S. H.; Tsang, H. W.	Effects of a home-based occupational therapy telerehabilitation via smartphone for outpatients after hip fracture surgery: A feasibility randomised controlled study	2020	Incorrect patient population (<30 patients/group)
Li, H. J.; Cheng, H. S.; Liang, J.; Wu, C. C.; Shyu, Y. I.	Functional recovery of older people with hip fracture: does malnutrition make a difference?	2013	Does not address question of interest (not among specified interventions)
Li, H.; Liu, Y.; Li, Q.; Fan, J.; Gan, L.; Wang, Y.	Effects of a fast track surgery nursing program in perioperative care of older patients with a hip fracture	2020	not intervention of interest;
Li, H.; Zhang, G.; Cui, J.; Liu, W.; Dilxat, D.; Liu, L.	A Modified Preauricular Approach for Treating Intracapsular Condylar Fractures to Prevent Facial Nerve Injury: The Supratemporalis Approach	2016	Incorrect patient population (includes age<50 yrs)
Li, H.; Zhang, W.; Yan, J.; Han, L. R.; Han, S. Z.; Yang, X. F.; Zhao, B.	Greater trochanter of the femur (GTF) vs. proximal femoral nail anti-rotation (PFNA) for unstable intertrochanteric femoral fracture	2018	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)

Authors	Article Title	Year	Reason for Exclusion
Li, J.; Cheng, L.; Jing, J.	The Asia proximal femoral nail antirotation versus the standard proximal femoral antirotation nail for unstable intertrochanteric fractures in elderly Chinese patients	2015	Imperfect comparison
Li, J.; Xu, X. Z.; You, T.; Li, H.; Jing, J. H.	Early results of the proximal femoral nail antirotation-Asia for intertrochanteric fractures in elderly Chinese patients	2014	Does not address question of interest - stratified by pt characteristics
Li, K.; Zheng, Y.	Internal fixation versus conservative treatment for elderly patients with a trochanteric hip fracture in conjunction with post-stroke hemiplegia	2016	not best available evidence
Li, L.; Setoguchi, S.; Cabral, H.; Jick, S.	Opioid use for noncancer pain and risk of fracture in adults: a nested case-control study using the general practice research database	2013	Incorrect patient population (includes age<50 yrs)
Li, L.; Zhao, X.; Yang, X.; Yang, L.; Xing, F.; Tang, X.	Cemented versus uncemented hemiarthroplasty for the management of femoral neck fractures in the elderly: a meta-analysis and systematic review	2021	Systematic review
Li, M.; Xu, C.; Xie, J.; Hu, Y.; Liu, H.	Comparison of collum femoris-preserving stems and ribbed stems in primary total hip arthroplasty	2018	Incorrect patient population (includes aged <50 years)
Li, N.; Zhong, L.; Wang, C.; Xu, M.; Li, W.	Cemented versus uncemented hemi-arthroplasty for femoral neck fractures in elderly patients: A systematic review and meta-analysis of randomized controlled trials	2020	Systematic review
Li, Q.; Dai, B.; Xu, J.; Yao, Y.; Song, K.; Zhang, H.; Chen, D.; Jiang, Q.	Can patients with femoral neck fracture benefit from preoperative thromboprophylaxis?: A prospective randomized controlled trial	2017	Does not meet inclusion criteria (non-post-operative for VTE)
Li, S.; Chang, S. M.; Niu, W. X.; Ma, H.	Comparison of tip apex distance and cut-out complications between helical blades and lag screws in intertrochanteric fractures among the elderly: a meta-analysis	2015	Systematic review
Li, T.; Yeung, J.; Li, J.; Zhang, Y.; Melody, T.; Gao, Y.; Wang, Y.; Lian, Q.; Gao, F.	Comparison of regional with general anaesthesia on postoperative delirium (RAGA-delirium) in the older patients undergoing hip fracture surgery: Study protocol for a multicentre randomised controlled trial	2017	Protocol

Authors	Article Title	Year	Reason for Exclusion
Li, T.; Zhuang, Q.; Weng, X.; Zhou, L.; Bian, Y.	Cemented versus uncemented hemiarthroplasty for femoral neck fractures in elderly patients: a meta-analysis	2013	Meta-analysis
Li, X.; Zhang, L.; Hou, Z.; Meng, Z.; Chen, W.; Wang, P.; Zhang, Y.	Distal locked and unlocked nailing for perthrochanteric fractures--a prospective comparative randomized study	2015	Incorrect patient population (<30 patients/group) at analysis
Li, Y. H.; Zhu, D.; Li, Y.; Zhao, T.; Cao, Z.; Tan, L.	Comparison of internal fixation with Gamma3 Long nails and INTERTAN nails in the treatment of Seinsheimer type V subtrochanteric femoral fractures in elderly patients	2019	Incorrect patient population (<30 pts/group)
Li, Y. T.; Cai, H. F.; Zhang, Z. L.	Timing of the initiation of bisphosphonates after surgery for fracture healing: a systematic review and meta-analysis of randomized controlled trials	2015	Meta-analysis
Li, Y.; Lin, J.; Wang, P.; Yao, X.; Yu, H.; Zhuang, H.; Zhang, L.; Zeng, Y.	Effect of time factors on the mortality in brittle hip fracture	2014	Does not meet inclusion criteria (not RCT for timing PICO)
Li, Y.; Zhao, W. B.; Wang, D. L.; He, Q.; Li, Q.; Pei, F. X.; Liu, L.	Treatment of osteoporotic intertrochanteric fractures by zoledronic acid injection combined with proximal femoral nail anti-rotation	2016	not intervention of interest;
Li, Z.; Chen, W.; Su, Y.; Zhang, Q.; Hou, Z.; Pan, J.; Zhang, Y.	The application of closed reduction internal fixation and iliac bone block grafting in the treatment of acute displaced femoral neck fractures	2013	Incorrect patient population (includes age<50 yrs)
Liang, C.; Yang, F.; Lin, W.; Fan, Y.	Efficacies of surgical treatments based on Harris hip score in elderly patients with femoral neck fracture	2015	Meta-analysis
Liao, E. Y.; Zhang, Z. L.; Xia, W. B.; Lin, H.; Cheng, Q.; Wang, L.; Hao, Y. Q.; Chen, D. C.; Tang, H.; Peng, Y. D.; You, L.; He, L.; Hu, Z. H.; Song, C. L.; Wei, F.; Wang, J.; Zhang, L.	Clinical characteristics associated with bone mineral density improvement after 1-year alendronate/vitamin d3 or calcitriol treatment: Exploratory results from a phase 3, randomized, controlled trial on postmenopausal osteoporotic women in China	2018	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Lieberman, D.; Friger, M.; Lieberman, D.	Inpatient rehabilitation outcome after hip fracture surgery in elderly patients: a prospective cohort study of 946 patients	2006	Excluded PICO
Lilly, R. J.; Koueiter, D. M.; Graner, K. C.; Nowinski, G. P.; Sadowski, J.; Grant, K. D.	Computer-assisted navigation for intramedullary nail fixation of intertrochanteric femur fractures: A randomized, controlled trial	2018	Incorrect patient population (<30 patients/group)
Lilot, M.; Meuret, P.; Bouvet, L.; Caruso, L.; Dabouz, R.; Deleat-Besson, R.; Rousselet, B.; Thouverez, B.; Zadam, A.; Allaouchiche, B.; Boselli, E.	Hypobaric spinal anesthesia with ropivacaine plus sufentanil for traumatic femoral neck surgery in the elderly: a dose-response study	2013	Incorrect pt population (<30 pts/group)
Lim, A. H.; Lane, S.; Page, R.	The effect of surgical timing on the outcome of patients with neck of femur fracture	2015	Does not meet inclusion criteria (not RCT for timing PICO)
Lim, H. A.; Song, E. K.; Seon, J. K.; Park, K. S.; Shin, Y. J.; Yang, H. Y.	Causes of Aseptic Persistent Pain after Total Knee Arthroplasty	2017	Incorrect patient population
Lim, J. Y.; Park, H. J.; Lee, Y. K.; Ha, Y. C.; Koo, K. H.	Comparison of Bone Preservation in Elderly Patients with Femoral Neck Fracture After Bipolar Hemiarthroplasty Using Shorter Femoral Stem and Standard Femoral Stem	2020	Imperfect comparison of stems (arthroplasty)
Lim, K. B.; Eng, A. K.; Chng, S. M.; Tan, A. G.; Thoo, F. L.; Low, C. O.	Limited magnetic resonance imaging (MRI) and the occult hip fracture	2002	Advanced Imaging
Lim, S. J.; Choi, K. H.; Lee, J. H.; Jung, J. Y.; Han, W.; Lee, B. H.	Different Kinetics of Perioperative CRP after Hip Arthroplasty for Elderly Femoral Neck Fracture with Elevated Preoperative CRP	2018	Does not meet inclusion criteria (non-RCT for Hg PICO)
Lima, C. A.; Sherrington, C.; Guaraldo, A.; Moraes, S. A.; Varanda, R. D.; Melo, J. A.; Kojima, K. E.; Perracini, M.	Effectiveness of a physical exercise intervention program in improving functional mobility in older adults after hip fracture in later stage rehabilitation: protocol of a randomized clinical trial (REATIVE Study)	2016	Protocol

Authors	Article Title	Year	Reason for Exclusion
Lin, C. C.; Yang, C. C.; Yu, T. C.	Comparison of Mid-term Survivorship and Clinical Outcomes between Bipolar Hemiarthroplasty and Total Hip Arthroplasty with Cementless Stem: A Multicenter Retrospective Study	2019	Incorrect patient population (includes age<50 yrs)
Lin, F. F.; Chen, Y. F.; Chen, B.; Lin, C. H.; Zheng, K.	Cemented versus uncemented hemiarthroplasty for displaced femoral neck fractures: A meta-analysis of randomized controlled trails	2019	Meta-analysis
Lin, J. C.; Liang, W. M.	Outcomes after fixation for undisplaced femoral neck fracture compared to hemiarthroplasty for displaced femoral neck fracture among the elderly	2015	Does not address question of interest - comparison of stable/unstable fractures
Lin, S. N.; Su, S. F.; Yeh, W. T.	Meta-analysis: Effectiveness of Comprehensive Geriatric Care for Elderly Following Hip Fracture Surgery	2020	Systematic review
Lin, S. Y.; Huang, H. T.; Chou, S. H.; Ho, C. J.; Liu, Z. M.; Chen, C. H.; Lu, C. C.	The Safety of Continuing Antiplatelet Medication Among Elderly Patients Undergoing Urgent Hip Fracture Surgery	2019	Does not meet inclusion criteria (non-post-operative for VTE)
Lin, T. C.; Lee, C. H.; Yang, C. Y.; Yang, Y. H.; Lin, S. J.	Incidence and risk of venous thromboembolism among Taiwan osteoporotic fracture population under osteoporosis pharmacological treatments	2014	Incorrect patient population
Lindberg-Larsen, M.; Petersen, P. B.; JÃ¸rgensen, C. C.; Overgaard, S.; Kehlet, H.	Postoperative 30-day complications after cemented/hybrid versus cementless total hip arthroplasty in osteoarthritis patients > 70 years: A multicenter study from the Lundbeck Foundation Centre for Fast-track Hip and Knee replacement database and the Danish Hip Arthroplasty Register	2020	Does not address question of interest
Lindestrand, A. G.; Christiansen, M. L.; Jantzen, C.; van der Mark, S.; Andersen, S. E.	Opioids in hip fracture patients: an analysis of mortality and post hospital opioid use	2015	Does not address question of interest - prognostic endpoints
Lindvall, E.; Davis, J.; Martirosian, A.; Garcia, G.; Husak, L.	Bilateral internal iliac artery embolization results in an unacceptably high rate of complications in patients requiring pelvic/acetabular surgery	2018	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Ling, S. N.; Kleimeyer, C.; Lynch, G.; Burmeister, E.; Kennedy, D.; Bell, K.; Watkins, L.; Cooke, C.	Can geriatric hip fractures be managed effectively within a level 1 trauma center?	2015	Incorrect patient population (includes age<50 yrs)
Lintula, E.; Tiihonen, M.; Taipale, H.; Tolppanen, A. M.; Tanskanen, A.; Tiihonen, J.; Hartikainen, S.; Hamina, A.	Opioid Use After Hospital Care due to Hip Fracture Among Community-Dwelling Persons With and Without Alzheimer's Disease	2020	Does not address question of interest - prognostic endpoints
Liu, B.; Li, A.; Wang, J.; Wang, H.; Zhai, G.; Ma, H.; Lian, X.; Zhang, B.; Liu, L.; Gao, Y.	Cemented versus uncemented hemiarthroplasty for elderly patients with displaced fracture of the femoral neck: A PRISMA-compliant meta-analysis of randomized controlled trial	2020	Meta-analysis
Liu, H. Y.; Tseng, M. Y.; Li, H. J.; Wu, C. C.; Cheng, H. S.; Yang, C. T.; Chou, S. W.; Chen, C. Y.; Shyu, Y. I.	Comprehensive care improves physical recovery of hip-fractured elderly Taiwanese patients with poor nutritional status	2014	Does not address question of interest - prognostic endpoints
Liu, H.; Li, N.; Zhang, X.; He, L.; Li, D.; Li, Y.; Zhao, G.; Wu, X.	Internal fixation versus hemiarthroplasty for displaced femoral neck fractures in the elderly: A cost-effectiveness analysis	2020	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Liu, J. L.; Wang, X. L.; Gong, M. W.; Mai, H. X.; Pei, S. J.; Yuan, W. X.; Zhang, H.	Comparative outcomes of peripheral nerve blocks versus general anesthesia for hip fractures in geriatric Chinese patients	2014	not best available evidence
Liu, J.; Wang, J.; Zhang, J.; Guo, X.; Xu, Q.; Zhao, Q.	Effects of comprehensive nursing on joint function and psychological rehabilitation of elderly type II diabetes mellitus patients with femoral neck fracture undergoing total hip arthroplasty	2019	Does not address question of interest (not among specified interventions)
Liu, L.; Gao, F.; Liu, Y.; Xing, Q.; Li, S.; Li, W.; Wang, L.	Association of surgery time and early curative effect for elderly patients with femoral neck fracture in China	2017	Does not meet inclusion criteria (not RCT for timing PICO)
Liu, M.; Yang, J.; Yu, X.; Huang, X.; Vaidya,	The role of perioperative oral nutritional supplementation in elderly patients after hip surgery	2015	Systematic review

Authors	Article Title	Year	Reason for Exclusion
S.; Huang, F.; Xiang, Z.			
Liu, P.; Wu, X.; Shi, H.; Liu, R.; Shu, H.; Gong, J.; Yang, Y.; Sun, Q.; Wu, J.; Nie, X.; Cai, M.	Intramedullary versus extramedullary fixation in the management of subtrochanteric femur fractures: a meta-analysis	2015	Meta-analysis
Liu, S. K.; Ho, A. W.; Wong, S. H.	Early surgery for Hong Kong Chinese elderly patients with hip fracture reduces short-term and long-term mortality	2017	Does not meet inclusion criteria (non-RCT for timing PICO)
Liu, T.; Hua, X.; Yu, W.; Lin, J.; Zhao, M.; Liu, J.; Zeng, X.	Long-term follow-up outcomes for patients undergoing primary total hip arthroplasty with uncemented versus cemented femoral components: a retrospective observational study with a 5-year minimum follow-up	2019	not best available evidence
Liu, W.; Liu, J.; Ji, G.	Comparison of clinical outcomes with proximal femoral nail anti-rotation versus InterTAN nail for intertrochanteric femoral fractures: a meta-analysis	2020	Meta-analysis
Liu, Y.; Long, X.	Value of rapid rehabilitation nursing in patients with hip fracture and its influence on patientsâ?? pain	2019	Does not address question of interest
Liu, Y.; Sun, Y.; Fan, L.; Hao, J.	Perioperative factors associated with hidden blood loss in intertrochanteric fracture patients	2017	Does not address question of interest - prognostic endpoints
Liu, Y.; Tao, X.; Wang, P.; Zhang, Z.; Zhang, W.; Qi, Q.	Meta-analysis of randomised controlled trials comparing unipolar with bipolar hemiarthroplasty for displaced femoral-neck fractures	2014	Meta-analysis
Liu, Y.; Zhang, C. W.; Zhao, X. D.	Long-term survival of femoral neck fracture patients aged over ninety years: Arthroplasty compared with nonoperative treatment	2020	not best available evidence
Liu, Z.; Han, N.; Xu, H.; Fu, Z.; Zhang, D.; Wang, T.; Jiang, B.	Incidence of venous thromboembolism and hemorrhage related safety studies of preoperative anticoagulation therapy in hip fracture patients undergoing surgical treatment: a case-control study	2016	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Liu, Z.; Li, C. W.; Mao, Y. F.; Liu, K.; Liang, B. C.; Wu, L. G.; Shi, X. L.	Study on Zoledronic Acid Reducing Acute Bone Loss and Fracture Rates in Elderly Postoperative Patients with Intertrochanteric Fractures	2019	Incorrect patient population (not exclusive to hip)
Lizano-Diez, X.; Keel, M. J. B.; Siebenrock, K. A.; Tey, M.; Bastian, J. D.	Rehabilitation protocols in unstable trochanteric fractures treated with cephalomedullary nails in elderly: current practices and outcome	2020	Systematic review
Lizaur-Utrilla, A.; Gonzalez-Navarro, B.; Vizcaya-Moreno, M. F.; Miralles Munoz, F. A.; Gonzalez-Parreno, S.; Lopez-Prats, F. A.	Reasons for delaying surgery following hip fractures and its impact on one year mortality	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Lizaur-Utrilla, A.; Martinez-Mendez, D.; Collados-Maestre, I.; Miralles-Munoz, F. A.; Marco-Gomez, L.; Lopez-Prats, F. A.	Early surgery within 2 days for hip fracture is not reliable as healthcare quality indicator	2016	Does not address question of interest - prognostic indications
Lofgren, S.; Hedstrom, M.; Ekstrom, W.; Lindberg, L.; Flodin, L.; Ryd, L.	Power to the patient: care tracks and empowerment a recipe for improving rehabilitation for hip fracture patients	2015	not best available evidence
Lombardi, B.; Paci, M.; Nannetti, L.; Moretti, S.; Maritato, M.; Benelli, G.	Total hip arthroplasty after hip fracture or osteoarthritis: are there differences in characteristics and outcomes in the early rehabilitative stage?	2014	Incorrect patient population (not exclusive to hip fracture)
LonÄ첵ariÄ?-KatuÅ¡in, M.; MiÅ¡koviÄ?, P.; Lavrnja-Skolan, V.; KatuÅ¡in, J.; Bakota, B.; Å½uniÄ?, J.	General versus spinal anaesthesia in proximal femoral fracture surgery â?? treatment outcomes	2017	Duplicate of 1523
Loncaric-Katusin, M.; Miskovic, P.; Lavrnja-Skolan, V.; Katusin, J.; Bakota, B.; Zunic, J.	General versus spinal anaesthesia in proximal femoral fracture surgery - treatment outcomes	2017	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Long, A.; Zhang, L.; Zhang, Y.; Jiang, B.; Mao, Z.; Li, H.; Zhang, S.; Xie, Z.; Tang, P.	Efficacy and safety of rivaroxaban versus low-molecular-weight heparin therapy in patients with lower limb fractures	2014	Incorrect patient population (includes age<50 yrs)
Lonnbro, J.; Wallerstedt, S. M.	Clinical relevance of the STOPP/START criteria in hip fracture patients	2017	Does not address question of interest - prognostic endpoints
Lott, A.; Haglin, J.; Belayneh, R.; Konda, S. R.; Egol, K. A.	Admitting Service Affects Cost and Length of Stay of Hip Fracture Patients	2018	Does not address question of interest for multidisciplinary care pathway
Lott, A.; Haglin, J.; Belayneh, R.; Konda, S. R.; Leucht, P.; Egol, K. A.	Does Use of Oral Anticoagulants at the Time of Admission Affect Outcomes Following Hip Fracture	2018	Does not meet inclusion criteria (non-post-operative for VTE)
Lott, A.; Haglin, J.; Belayneh, R.; Konda, S. R.; Leucht, P.; Egol, K. A.	Surgical Delay Is Not Warranted for Patients With Hip Fractures Receiving Non-Warfarin Anticoagulants	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Lotti, F.; Elizondo, C. M.; Barla, J.; Carabelli, G.; Soruco, M. L.; Boietti, B. R.; Benchimol, J. A.	Impact of anticoagulants in elderly patients who suffer a hip fracture. Should we have a different approach?	2020	Does not meet inclusion criteria (non-post-operative for VTE)
Lowe, J.; Mitchell, S. M.; Agarwal, S.; Jones, C. B.	Traumatic hip fracture and primary elective total hip patients are not the same: A comparison of comorbidity burden, hospital course, postoperative complications and cost of care analysis	2020	Insufficient data - age range not provided
Luger, T. J.; Kammerlander, C.; Luger, M. F.; Kammerlander-Knauer, U.; Gosch, M.	Mode of anesthesia, mortality and outcome in geriatric patients	2014	Systematic review
Luo, W. H.; Wang, Y. X.; Wu, J. R.; Wang, X. J.; Jing, X. M.; Jing, J. Y.	Effects of early rehabilitation nursing on the treatment compliance of and therapeutic effect to elderly patients with fracture of the lower limbs	2018	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Luo, X.; He, S.; Zeng, D.; Lin, L.; Li, Q.	Proximal femoral nail antirotation versus hemiarthroplasty in the treatment of senile intertrochanteric fractures: Case report	2017	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Luo, X.; Huang, H.; Tang, X.	Efficacy and safety of tranexamic acid for reducing blood loss in elderly patients with intertrochanteric fracture treated with intramedullary fixation surgery: A meta-analysis of randomized controlled trials	2020	Meta-analysis
Luo, Z.; Chen, M.; Hu, F.; Ni, Z.; Ji, X.; Zhang, X.; Cheng, P.; Shang, X.	Cementless total hip arthroplasty with extended sliding trochanteric osteotomy for high congenital hip dislocation: A retrospective study	2017	Incorrect patient population (<30 pts/group)
Luthringer, T. A.; Elbuluk, A. M.; Behery, O. A.; Cizmic, Z.; Deshmukh, A. J.	Salvage of failed internal fixation of intertrochanteric hip fractures: clinical and functional outcomes of total hip arthroplasty versus hemiarthroplasty	2018	Systematic review
Lv, F.; Guan, Y.; Ma, D.; Xu, X.; Song, Y.; Li, L.; Jiang, Y.; Wang, O.; Xia, W.; Xing, X.; Li, M.	Effects of alendronate and alfacalcidol on bone in patients with myasthenia gravis initiating glucocorticoids treatment	2018	Incorrect patient population (includes age<50 yrs)
Lyles, K. W.; Colón-Emeric, C. S.; Magaziner, J. S.; Adachi, J. D.; Pieper, C. F.; Mautalen, C.; Hyldstrup, L.; Recknor, C.; Nordsletten, L.; Moore, K. A.; Lavecchia, C.; Zhang, J.; Mesenbrink, P.; Hodgson, P. K.; Abrams, K.; Orloff, J. J.; Horowitz, Z.; Eriksen, E. F.; Boonen, S.	Zoledronic acid and clinical fractures and mortality after hip fracture	2007	Excluded PICO
Lynch, G.; Shaban, R. Z.; Massey, D.	Evaluating the orthogeriatric model of care at an Australian tertiary hospital	2015	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Ma, H. H.; Chou, T. A.; Pai, F. Y.; Tsai, S. W.; Chen, C. F.; Wu, P. K.; Chen, W. M.	Outcomes of dual-mobility total hip arthroplasty versus bipolar hemiarthroplasty for patients with femoral neck fractures: a systematic review and meta-analysis	2021	Systematic review
Ma, H. H.; Chou, T. A.; Tsai, S. W.; Chen, C. F.; Wu, P. K.; Chen, W. M.	Outcomes of internal fixation versus hemiarthroplasty for elderly patients with an undisplaced femoral neck fracture: a systematic review and meta-analysis	2019	Meta-analysis
Ma, J. X.; Kuang, M. J.; Fan, Z. R.; Xing, F.; Zhao, Y. L.; Zhang, L. K.; Chen, H. T.; Han, C.; Ma, X. L.	Comparison of clinical outcomes with InterTan vs Gamma nail or PFNA in the treatment of intertrochanteric fractures: A meta-analysis	2017	meta-analysis
Ma, J. X.; Kuang, M. J.; Xing, F.; Zhao, Y. L.; Chen, H. T.; Zhang, L. K.; Fan, Z. R.; Han, C.; Ma, X. L.	Sliding hip screw versus cannulated cancellous screws for fixation of femoral neck fracture in adults: A systematic review	2018	Systematic review
Ma, J.; Xing, D.; Ma, X.; Xu, W.; Wang, J.; Chen, Y.; Song, D.	The percutaneous compression plate versus the dynamic hip screw for treatment of intertrochanteric hip fractures: a systematic review and meta-analysis of comparative studies	2012	meta-analysis
Ma, K.; Luan, F.; Wang, X.; Ao, Y.; Liang, Y.; Fang, Y.; Tu, C.; Yang, T.; Min, J.	Randomized, controlled trial of the modified stoppa versus the ilioinguinal approach for acetabular fractures	2013	Incorrect patient population (includes age<50 yrs)
Macaulay, W.; Nellans, K. W.; Iorio, R.; Garvin, K. L.; Healy, W. L.; Rosenwasser, M. P.	Total hip arthroplasty is less painful at 12 months compared with hemiarthroplasty in treatment of displaced femoral neck fracture	2008	<30 per group
MacCormick, L. M.; Lin, C. A.; Westberg, J. R.; Schmidt, A. H.; Templeman, D. C.	Acute total hip arthroplasty versus open reduction internal fixation for posterior wall acetabular fractures in middle-aged patients	2019	Incorrect patient population (includes age<50 yrs)
Maceroli, M. A.; Nikkel, L. E.; Mahmood, B.; Elfar, J. C.	Operative Mortality After Arthroplasty for Femoral Neck Fracture and Hospital Volume	2015	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Machado-Duque, M. E.; Castano-Montoya, J. P.; Medina-Morales, D. A.; Castro-Rodriguez, A.; Gonzalez-Montoya, A.; Machado-Alba, J. E.	Association between the use of benzodiazepines and opioids with the risk of falls and hip fractures in older adults	2018	Does not address question of interest - prognostic endpoints
MacKinlay, K.; Falls, T.; Lau, E.; Day, J.; Kurtz, S.; Ong, K.; Malkani, A.	Decreasing incidence of femoral neck fractures in the Medicare population	2014	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Maderbacher, G.; Schaumburger, J.; Keshmiri, A.; Barthel, M.; Springorum, H. R.; Craiovan, B.; Grifka, J.; Baier, C.	Pinless navigation in total knee arthroplasty: navigation reduced by the maximum?	2015	Incorrect patient population (not exclusive to hip)
Magaziner, J. S.; Orwig, D. L.; Lyles, K. W.; Nordsletten, L.; Boonen, S.; Adachi, J. D.; Recknor, C.; Colon-Emeric, C. S.; Mesenbrink, P.; Bucci-Rechtweg, C.; Su, G.; Johnson, R.; Pieper, C. F.	Subgroup variations in bone mineral density response to zoledronic acid after hip fracture	2014	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Magaziner, J.; Mangione, K. K.; Orwig, D.; Baumgarten, M.; Magder, L.; Terrin, M.; Fortinsky, R. H.; Gruber-Baldini, A. L.; Beamer, B. A.; Tosteson, A. N. A.; Kenny, A. M.; Shardell, M.; Binder, E. F.; Koval, K.; Resnick, B.; Miller, R.; Forman, S.; McBride, R.; Craik, R. L.	Effect of a Multicomponent Home-Based Physical Therapy Intervention on Ambulation after Hip Fracture in Older Adults: The CAP Randomized Clinical Trial	2019	Does not address question of interest for multidisciplinary care pathway
Magill, P.; Blaney, J.; Hill, J. C.; Bonnin, M. P.; Beverland, D. E.	Impact of a learning curve on the survivorship of 4802 cementless total hip arthroplasties	2016	Does not address question of interest
Maheshwari, A. V.; Pivec, R.; Abraham, R.; Naziri, Q.	Reconstruction Plate-Based Antibiotic Cement Spacers: Clinical Outcomes and Description of Technique	2018	Incorrect patient population (includes age<50 yrs)
Maheshwari, K.; Planchard, J.; You, J.; Sakr, W. A.; George, J.; Higuera-Rueda, C. A.; Saager, L.; Turan, A.; Kurz, A.	Early Surgery Confers 1-Year Mortality Benefit in Hip-Fracture Patients	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Mahran, D. G.; Farouk, O.; Ismail, M. A.; Alaa, M. M.; Eisa, A.; Ragab,, II	Effectiveness of home based intervention program in reducing mortality of hip fracture patients: A non-randomized controlled trial	2019	Does not address question of interest (not among specified interventions)
Mak, J. C. S.; Klein, L.; Mason, R. S.; Cameron, I. D.	Contemporary Pain Management in Elderly Patients After Hip Fracture Surgery: Cross-sectional Analyses at Baseline of a Randomized Controlled Trial	2015	Secondary analysis
Mak, J. C.; Klein, L. A.; Finnegan, T.; Mason, R. S.; Cameron, I. D.	An initial loading-dose vitamin D versus placebo after hip fracture surgery: baseline characteristics of a randomized controlled trial (REVITAHIP)	2014	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Mak, J. C.; Mason, R. S.; Klein, L.; Cameron, I. D.	An initial loading-dose vitamin D versus placebo after hip fracture surgery: randomized trial	2016	Does not address question of interest (not among specified interventions)
Makki, D.; Matar, H. E.; Jacob, N.; Lipscombe, S.; Gudena, R.	Comparison of the reconstruction trochanteric antigrade nail (TAN) with the proximal femoral nail antirotation (PFNA) in the management of reverse oblique intertrochanteric hip fractures	2015	Incorrect patient population (<30 patients/group)
Makki, D.; Mohamed, A. M.; Gadiyar, R.; Patterson, M.	Addition of an anti-rotation screw to the dynamic hip screw for femoral neck fractures	2013	Incorrect pt population (includes pts <50 yrs)
Malek, I. A.; Royce, G.; Bhatti, S. U.; Whittaker, J. P.; Phillips, S. P.; Wilson, I. R.; Wootton, J. R.; Starks, I.	A comparison between the direct anterior and posterior approaches for total hip arthroplasty: the role of an 'Enhanced Recovery' pathway	2016	not best available evidence
Malhas, L.; Perlas, A.; Tierney, S.; Chan, V. W. S.; Beattie, S.	The effect of anesthetic technique on mortality and major morbidity after hip fracture surgery: A retrospective, propensity-score matched-pairs cohort study	2019	Incorrect patient population (includes age<50 yrs)
Malik, A. T.; Quatman-Yates, C.; Phieffer, L. S.; Ly, T. V.; Khan, S. N.; Quatman, C. E.	Factors Associated With Inability to Bear Weight Following Hip Fracture Surgery: An Analysis of the ACS-NSQIP Hip Fracture Procedure Targeted Database	2019	Does not address question of interest - prognostic endpoints
MalkoÃ§, M.; Korkmaz, O.; Sever, C.; Oltulu, I.; GenÃ§, Y.	Blood transfusion after hip fracture surgery in elderly patients	2013	Foreign language
Mallinson, T.; Deutsch, A.; Bateman, J.; Tseng, H. Y.; Manheim, L.; Almagor, O.; Heinemann, A. W.	Comparison of discharge functional status after rehabilitation in skilled nursing, home health, and medical rehabilitation settings for patients after hip fracture repair	2014	Does not address question of interest - prognostic endpoints
Mallya, S.; Kamath, S. U.; Madegowda, A.; Krishnamurthy, S.	Comparison of radiological and functional outcome of unstable intertrochanteric femur fractures treated using PFN and PFNA-2 in patients with osteoporosis	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)

Authors	Article Title	Year	Reason for Exclusion
L.; Jain, M. K.; Holla, R.			
Malouf-Sierra, J.; Tarantino, U.; Garcia-Hernandez, P. A.; Corradini, C.; Overgaard, S.; Stepan, J. J.; Borris, L.; Lespessailles, E.; Frihagen, F.; Papavasiliou, K.; Petto, H.; Aspenberg, P.; Caeiro, J. R.; Marin, F.	Effect of Teriparatide or Risedronate in Elderly Patients With a Recent Pertrochanteric Hip Fracture: Final Results of a 78-Week Randomized Clinical Trial	2017	not intervention of interest;
Manafi Rasi, A.; Amoozadeh, F.; Khani, S.; Rad, A. K.; Sazegar, A.	The effect of skin traction on preoperative pain and need for analgesics in patients with intertrochanteric fractures: A randomized clinical trial	2015	Incorrect patient population (<30 patients/group)
Mandelli, F.; Tiziani, S.; Schmitt, J.; Werner, C. M. L.; Simmen, H. P.; Osterhoff, G.	Medial acetabular wall breach in total hip arthroplasty â?? is full-weight-bearing possible?	2018	Incorrect patient population (includes age<50 yrs)
Mangione, K. K.; Craik, R. L.; Palombaro, K. M.; Tomlinson, S. S.; Hofmann, M. T.	Home-based leg-strengthening exercise improves function 1 year after hip fracture: a randomized controlled study	2010	Excluded PICO
Mangram, A. J.; Oguntodu, O. F.; Hollingworth, A. K.; Prokuski, L.; Steinstra, A.; Collins, M.; Sucher, J. F.; Ali-Osman, F.; Dzandu, J. K.	Geriatric trauma G-60 falls with hip fractures: A pilot study of acute pain management using femoral nerve fascia iliac blocks	2015	Does not meet inclusion criteria

Authors	Article Title	Year	Reason for Exclusion
Manson, J. E.; Aragaki, A. K.; Bassuk, S. S.; Chlebowski, R. T.; Anderson, G. L.; Rossouw, J. E.; Howard, B. V.; Thomson, C. A.; Stefanick, M. L.; Kaunitz, A. M.; Crandall, C. J.; Eaton, C. B.; Henderson, V. W.; Liu, S.; Luo, J.; Rohan, T.; Shadyab, A. H.; Wells, G.; Wactawski-Wende, J.; Prentice, R. L.; W. H. I. Investigators	Menopausal Estrogen-Alone Therapy and Health Outcomes in Women With and Without Bilateral Oophorectomy: A Randomized Trial	2019	Incorrect patient population (not exclusive to hip)
Mao, S.; Chen, B.; Zhu, Y.; Qian, L.; Lin, J.; Zhang, X.; Yu, W.; Han, G.	Cemented versus uncemented total hip replacement for femoral neck fractures in elderly patients: a retrospective, multicentre study with a mean 5-year follow-up	2020	not best available evidence
Maratt, J. D.; Gagnier, J. J.; Butler, P. D.; Hallstrom, B. R.; Urquhart, A. G.; Roberts, K. C.	No Difference in Dislocation Seen in Anterior Vs Posterior Approach Total Hip Arthroplasty	2016	not best available evidence
Mardani-Kivi, M.; Mirbolook, A.; Jahromi, S. K.; Rad, M. R.	Fixation of intertrochanteric fractures: Dynamic hip screw versus locking compression plate	2013	Cross-sectional study
Mariani, P.; Buttaro, M. A.; Slullitel, P. A.; Comba, F. M.; Zanotti, G.; Ali, P.; Piccaluga, F.	Transfusion rate using intravenous tranexamic acid in hip revision surgery	2018	Incorrect patient population - hip revision
Mariconda, M.; Costa, G.; Misasi, M.; Recano, P.; Balato, G.; Rizzo, M.	Ambulatory Ability and Personal Independence After Hemiarthroplasty and Total Arthroplasty for Intracapsular Hip Fracture: A Prospective Comparative Study	2017	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Marjoribanks, J.; Farquhar, C.; Roberts, H.; Lethaby, A.; Lee, J.	Long-term hormone therapy for perimenopausal and postmenopausal women	2017	Systematic review
Martz, P.; Bourredjem, A.; Laroche, D.; Arcens, M.; Labattut, L.; Binquet, C.; Maillefert, J. F.; Baulot, E.; Ornetti, P.	RÃ¶ttinger approach with dual-mobility cup to improve functional recovery in hip osteoarthritis patients: biomechanical and clinical follow-up	2017	Incorrect patient population (includes age<50 yrs)
Marufu, T. C.; Elphick, H. L.; Ahmed, F. B.; Moppett, I. K.	Short-term morbidity factors associated with length of hospital stay (LOS): Development and validation of a Hip Fracture specific postoperative morbidity survey (HF-POMS)	2019	Does not address question of interest
Mas, M. A.; Closa, C.; Santaeugenia, S. J.; Inzitari, M.; Ribera, A.; Gallofre, M.	Hospital-at-home integrated care programme for older patients with orthopaedic conditions: Early community reintegration maximising physical function	2016	not best available evidence
Masters, J.; Metcalfe, D.; Parsons, N. R.; Achten, J.; Griffin, X. L.; Costa, M. L.; W. HiTE Collaborative Investigators	Interpreting and reporting fracture classification and operation type in hip fracture: implications for research studies and routine national audits	2019	Does not address question of interest
Matassi, F.; Carulli, C.; Munz, G.; Lualdi, C.; Civinini, R.; Innocenti, M.	Preliminary results of an early vs delayed timing of surgery in the management of proximal femur fragility fractures	2015	Does not meet inclusion criteria (non-RCT for timing PICO)
Matre, K.; Havelin, L. I.; Gjertsen, J. E.; Vinje, T.; Espehaug, B.; Fevang, J. M.	Sliding hip screw versus IM nail in reverse oblique trochanteric and subtrochanteric fractures. A study of 2716 patients in the Norwegian Hip Fracture Register	2013	Incorrect patient population (not exclusive to ages>50)
Matre, K.; Vinje, T.; Havelin, L. I.; Gjertsen, J. E.; Furnes, O.; Espehaug, B.; Kjellevold, S. H.; Fevang, J. M.	TRIGEN INTERTAN intramedullary nail versus sliding hip screw: a prospective, randomized multicenter study on pain, function, and complications in 684 patients with an intertrochanteric or subtrochanteric fracture and one year of follow-up	2013	BOTH UNSTABLE AND STABLE FRACTURES COMPARING SLIDING HIP SCREW VS Cephalomedullary device

Authors	Article Title	Year	Reason for Exclusion
Mattesi, L.; Noailles, T.; Rosencher, N.; Rouvillain, J. L.	Discontinuation of Plavix R (clopidogrel) for hip fracture surgery. A systematic review of the literature	2016	Systematic review
Mattisson, L.; Lapidus, L. J.; Enocson, A.	Is fast reversal and early surgery (within 24 h) in patients on warfarin medication with trochanteric hip fractures safe? A case-control study	2018	Does not meet inclusion criteria (non-post-operative for VTE)
Mattisson, L.; Lapidus, L. J.; Enocson, A.	What Is the Influence of a Delay to Surgery >24 Hours on the Rate of Red Blood Cell Transfusion in Elderly Patients With Intertrochanteric or Subtrochanteric Hip Fractures Treated With Cephalomedullary Nails?	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Mattsson, P.; Larsson, S.	Calcium phosphate cement for augmentation did not improve results after internal fixation of displaced femoral neck fractures: A randomized study of 118 patients	2006	Does not meet inclusion criteria (pre-2013 for non-new PICO)
Mayor, D.; Patel, S.; Perry, C.; Walter, N.; Burton, S.; Atkinson, T.	Nine year follow-up of a ceramic-on-ceramic bearing total hip arthroplasty utilizing a layered monoblock acetabular component	2014	Incorrect patient population (includes age<50 yrs)
Mazzocato, P.; Unbeck, M.; Elg, M.; Skoldenberg, O. G.; Thor, J.	Unpacking the key components of a programme to improve the timeliness of hip-fracture care: a mixed-methods case study	2015	Does not address question of interest - observational mixed-methods single case study
Mazzola, P.; Bellelli, G.; Broggini, V.; Anzuini, A.; Corsi, M.; Berruti, D.; De Filippi, F.; Zatti, G.; Annoni, G.	Postoperative delirium and pre-fracture disability predict 6-month mortality among the oldest old hip fracture patients	2015	Does not address question of interest - stratified by pt characteristics
Mazzola, P.; De Filippi, F.; Castoldi, G.; Galetti, P.; Zatti, G.; Annoni, G.	A comparison between two co-managed geriatric programmes for hip fractured elderly patients	2011	Imperfect comparison
Mazzola, P.; Rea, F.; Merlino, L.; Bellelli, G.; Dubner, L.; Corrao, G.; Pasinetti, G. M.; Annoni, G.	Hip Fracture Surgery and Survival in Centenarians	2016	Does not address question of interest - stratified by pt characteristics

Authors	Article Title	Year	Reason for Exclusion
McCormack, R.; Apostle, K.; Boyer, D.; Moola, F.; Perey, B.; Stone, T.; Viskontas, D.; Michael Lemke, H.; Zomar, M.; Moon, K.; Moon, R.; Oatt, A.; Buckley, R. E.; Duffy, P.; Korley, R.; Puloski, S.; Johnston, K.; Powell, J.; Carcary, K.; Sanders, D.; Lawendy, A.; Tieszer, C.; Stephen, D.; Kreder, H.; Jenkinson, R.; Nousiainen, M.; Axelrod, T.; Murnaghan, J.; Nam, D.; Wadey, V.; Yee, A.; Milner, K.; Kunz, M.; Schemitsch, E. H.; Ahn, H.; Hall, J. A.; McKee, M. D.; Whelan, D. B.; Nauth, A.; Vicente	Fixation using alternative implants for the treatment of hip fractures (FAITH): Design and rationale for a multi-centre randomized trial comparing sliding hip screws and cancellous screws on revision surgery rates and quality of life in the treatment of femoral neck fractures	2014	Protocol
McCormack, R.; Panagiotopolous, K.; Buckley, R.; Penner, M.; Perey, B.; Pate, G.; Goetz, T.; Piper, M.	A multicentre, prospective, randomised comparison of the sliding hip screw with the Medoff sliding screw and side plate for unstable intertrochanteric hip fractures	2013	Imperfect comparison group (both groups receive sliding hip screw)
McGilton, K. S.; Davis, A. M.; Naglie, G.; Mahomed, N.; Flannery, J.; Jaglal, S.; Cott, C.; Stewart, S.	Evaluation of patient-centered rehabilitation model targeting older persons with a hip fracture, including those with cognitive impairment	2013	not best available evidence
McGraw, I. W.; Spence, S. C.; Baird, E. J.; Eckhardt, S. M.; Ayana, G. E.	Incidence of periprosthetic fractures after hip hemiarthroplasty: Are uncemented prostheses unsafe?	2013	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
McIsaac, D. I.; Wijeysundera, D. N.; Bryson, G. L.; Huang, A.; McCartney, C. J. L.; van Walraven, C.	Hospital-, Anesthesiologist-, and Patient-level Variation in Primary Anesthesia Type for Hip Fracture Surgery: A Population-based Cross-sectional Analysis	2018	Does not address question of interest - prognostic outcome measures
McMurdo, M. E. T.; Sumukadas, D.; Donnan, P. T.; Cvoro, V.; Rauchhaus, P.; Argo, I.; Waldie, H.; Littleford, R.; Struthers, A. D.; Witham, M. D.	Spironolactone for People Age 70 Years and Older with Osteoarthritic Knee Pain: A Proof-of-Concept Trial	2016	Incorrect patient population (not exclusive to hip)
McRae, P. J.; Bendall, J. C.; Madigan, V.; Middleton, P. M.	Paramedic-performed Fascia Iliaca Compartment Block for Femoral Fractures: A Controlled Trial	2015	Incorrect patient population (<30 patients/group)
Meding, J. B.; Ritter, M. A.; Keating, E. M.; Berend, M. E.	Twenty-year followup of an uncemented stem in primary THA	2015	Incorrect pt population (includes age <50 years)
Mellstrand Navarro, C.; Ahrengart, L.; Tornqvist, H.; Ponzer, S.	Volar Locking Plate or External Fixation With Optional Addition of K-Wires for Dorsally Displaced Distal Radius Fractures: A Randomized Controlled Study	2016	Incorrect patient population (not exclusive to hip)
Memon, K.; Heer, R. S.; Raza, N.; Moiz, M.	Reducing surgical site infections in fractured neck of femur patients: A closed loop audit and literature review	2019	Does not address question of interest
Menendez, M. E.; Ring, D.	Does the timing of surgery for proximal humeral fracture affect inpatient outcomes?	2014	Does not address question of interest - regression analyses
Merle, B.; Chapurlat, R.; Vignot, E.; Thomas, T.; Haesebaert, J.; Schott, A. M.	Post-fracture care: do we need to educate patients rather than doctors? The PREVOST randomized controlled trial	2017	Incorrect patient population (not exclusive to hip)
Messina, A.; Frassanito, L.; Colombo, D.; Vergari, A.; Draisci, G.; Della Corte, F.; Antonelli, M.	Hemodynamic changes associated with spinal and general anesthesia for hip fracture surgery in severe ASA III elderly population: a pilot trial	2013	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Metcalfe, D.; Judge, A.; Perry, D. C.; Gabbe, B.; Zogg, C. K.; Costa, M. L.	Total hip arthroplasty versus hemiarthroplasty for independently mobile older adults with intracapsular hip fractures	2019	Systematic review
Meuret, P.; Bouvet, L.; Villet, B.; Hafez, M.; Allaouchiche, B.; Boselli, E.	Hypobaric Unilateral Spinal Anaesthesia versus General Anaesthesia in Elderly Patients Undergoing Hip Fracture Surgical Repair: A Prospective Randomised Open Trial	2018	Incorrect pt population (<30 pts/group)
Michael, D.; Yaniv, W.; Tal, F. R.; Kessler Evan, G.; Eyal, A.; Nimrod, S.; Ehud, R.; Gilad, E.; Ely, S. L.	Expandable proximal femoral nail versus gamma proximal femoral nail for the treatment of AO/OTA 31A1-3 fractures	2016	Incorrect patient population (includes age<50 yrs)
Micicoi, G.; Bernard de Dompsure, R.; Tran, L.; Carles, M.; Boileau, P.; Bronsard, N.; Trojani, C.	Early morbidity and mortality after one-stage bilateral THA: Anterior versus posterior approach	2019	Incorrect patient population (includes age<50 yrs)
Middleton, M.; Wan, B.; da Assuncao, R.	Improving hip fracture outcomes with integrated orthogeriatric care: a comparison between two accepted orthogeriatric models	2017	Incorrect patient population (Age range SD indicates < 50 years)
Middleton, R. G.; Uzoigwe, C. E.; Young, P. S.; Smith, R.; Gosal, H. S.; Holt, G.	Peri-operative mortality after hemiarthroplasty for fracture of the hip: does cement make a difference?	2014	Incorrect patient population (includes age<50 yrs)
Migliorini, F.; Trivellas, A.; Driessen, A.; Quack, V.; El Mansy, Y.; Schenker, H.; Tingart, M.; Eschweiler, J.	Hemiarthroplasty versus total arthroplasty for displaced femoral neck fractures in the elderly: meta-analysis of randomized clinical trials	2020	Meta-analysis
Mingo-Robinet, J.; Torres-Torres, M.; Martinez-Cervell, C.; Alonso Del Olmo, J. A.; Rivas Laso, J. A.; Aguado-Hernandez, H.; Buron-Alvarez, I.	Comparative study of the second and third generation of gamma nail for trochanteric fractures: review of 218 cases	2015	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)

Authors	Article Title	Year	Reason for Exclusion
Mioc, M. L.; Prejbeanu, R.; Vermesan, D.; Haragus, H.; Niculescu, M.; Pop, D. L.; Balanescu, A. D.; Malita, D.; Deleanu, B.	Deep vein thrombosis following the treatment of lower limb pathologic bone fractures - a comparative study	2018	Incorrect patient population (includes age<50 yrs)
Mishra, A. K.; Chalise, P. K.; Shah, S. B.; Adhikari, V.; Singh, R. P.	Comparative study in surgical outcome of intracapsular fracture neck of femur in active elderly patients treated with hemiarthroplasty with Austin Moore's and bipolar prosthesis	2013	Incorrect patient population (<30 patients/group)
Mitchell, M. D.; Betesh, J. S.; Ahn, J.; Hume, E. L.; Mehta, S.; Umscheid, C. A.	Transfusion Thresholds for Major Orthopedic Surgery: A Systematic Review and Meta-analysis	2017	Meta-analysis
Mittal, C.; Lee, H. C. D.; Goh, K. S.; Lau, C. K. A.; Tay, L.; Siau, C.; Loh, Y. H.; Goh, T. K. E.; Sandi, C. L.; Lee, C. E.	ValuedCare program: a population health model for the delivery of evidence-based care across care continuum for hip fracture patients in Eastern Singapore	2018	not best available evidence
Miyamoto, S.; Nakamura, J.; Iida, S.; Shigemura, T.; Kishida, S.; Abe, I.; Takeshita, M.; Harada, Y.; Orita, S.; Ohtori, S.	Intraoperative blood pressure changes during cemented versus uncemented bipolar hemiarthroplasty for displaced femoral neck fracture: a multi-center cohort study : The effect of bone cement for bipolar hemiarthroplasty in elderly patients	2017	Incorrect patient population (includes age<50 yrs)
Miyamoto, S.; Nakamura, J.; Iida, S.; Shigemura, T.; Kishida, S.; Abe, I.; Takeshita, M.; Otsuka, M.; Harada, Y.; Orita, S.; Ohtori, S.	The influence of bone cement and American Society of Anesthesiologists (ASA) class on cardiovascular status during bipolar hemiarthroplasty for displaced femoral-neck fracture: A multicenter, prospective, case-control study	2018	not best available evidence
Mjaaland, K. E.; Kivle, K.; Svenningsen, S.; Nordsletten, L.	Do Postoperative Results Differ in a Randomized Trial Between a Direct Anterior and a Direct Lateral Approach in THA?	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Mjaaland, K. E.; Svenningsen, S.; Fenstad, A. M.; Havelin, L. I.; Furnes, O.; Nordsletten, L.	Implant survival after minimally invasive anterior or anterolateral vs. conventional posterior or direct lateral approach	2017	Insufficient data - age range not provided
Mohamed, A. M.; Makki, D.; Gibbs, J.	Effect of surgical approach on the early outcome of total hip replacement for femoral neck fractures	2013	not best available evidence
Mok, C. C.; Ho, L. Y.; Ma, K. M.	Switching of oral bisphosphonates to denosumab in chronic glucocorticoid users: a 12-month randomized controlled trial	2015	Incorrect patient population (includes age<50 yrs)
Molliex, S.; Passot, S.; Futier, E.; Bonnefoi, M.; Rancon, F.; Lemanach, Y.; Pereira, B.	Stepped wedge cluster randomised controlled trial to assess the effectiveness of an optimisation strategy for general anaesthesia on postoperative morbidity and mortality in elderly patients (the OPTI-AGED study): A study protocol	2018	Protocol
Monacelli, F.; Pizzonia, M.; Signori, A.; Nencioni, A.; Giannotti, C.; Minaglia, C.; Granello di Casaleto, T.; Podesta, S.; Santolini, F.; Odetti, P.	The In-Hospital Length of Stay after Hip Fracture in Octogenarians: Do Delirium and Dementia Shape a New Care Process?	2018	Does not address question of interest - prognostic endpoints
Monaco, L.; Biagi, C.; Conti, V.; Melis, M.; Donati, M.; Venegoni, M.; Vaccheri, A.; Motola, D.	Safety profile of the direct oral anticoagulants: an analysis of the WHO database of adverse drug reactions	2017	Incorrect patient population (includes age<50 yrs)
Monroy, A.; Urruela, A.; Singh, P.; Tornetta, P., 3rd; Egol, K. A.	Distal femur nonunion patients can expect good outcomes	2014	Incorrect patient population (includes age<50 yrs)
Moon, N. H.; Shin, W. C.; Jang, J. H.; Seo, H. U.; Bae, J. Y.; Suh, K. T.	Surgical Outcomes of Internal Fixation Using Multiple Screws in Femoral Neck Fractures with Valgus Impaction: When Should We Consider Hip Arthroplasty? A Retrospective, Multicenter Study	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Moon, N. H.; Shin, W. C.; Kim, J. S.; Woo, S. H.; Son, S. M.; Suh, K. T.	Cementless total hip arthroplasty following failed internal fixation for femoral neck and intertrochanteric fractures: A comparative study with 3-13 years' follow-up of 96 consecutive patients	2019	Incorrect patient population (includes aged <50 years)
Moore, A. B.; Krupp, J. E.; Dufour, A. B.; Sircar, M.; Travison, T. G.; Abrams, A.; Farris, G.; Mattison, M. L. P.; Lipsitz, L. A.	Improving Transitions to Postacute Care for Elderly Patients Using a Novel Video-Conferencing Program: ECHO-Care Transitions	2017	Insufficient data - age range not provided
Moores, T. S.; Chatterton, B. D.; Walker, M. J.; Roberts, P. J.	Standardised Warfarin Reversal Expedites Time to Theatre for Fractured Neck of Femur Surgery and Improves Mortality Rates: A Matched Cohort Study	2018	Does not meet inclusion criteria (non-post-operative for VTE)
Moppett, I. K.; Rowlands, M.; Mannings, A. M.; Marufu, T. C.; Sahota, O.; Yeung, J.	The effect of intravenous iron on erythropoiesis in older people with hip fracture	2019	Does not address question of interest (not among specified interventions)
Moppett, I. K.; White, S.; Griffiths, R.; Buggy, D.	Tight intra-operative blood pressure control versus standard care for patients undergoing hip fracture repair - Hip Fracture Intervention Study for Prevention of Hypotension (HIP-HOP) trial: Study protocol for a randomised controlled trial	2017	Protocol
Morales de Cano, J. J.; Gordo, C.; Canosa Areste, J.	Short femoral stem in total hip arthroplasty: stable fixation and low complication rates in elderly patients	2017	Incorrect patient population (includes age<50 yrs)
Moreta, J.; Uriarte, I.; Bidea, I.; Foruria, X.; Legarreta, M. J.; Etxebarria-Foronda, I.	High mortality rate following periprosthetic femoral fractures after total hip arthroplasty. A multicenter retrospective study	2021	Imperfect comparison groups - Comparing arthroplasty vs. revision (not applicable) vs. conservative (<30 pts).
Morgan, L.; McKeever, T. M.; Nightingale, J.; Deakin, D. E.; Moppett, I. K.	Spinal or general anaesthesia for surgical repair of hip fracture and subsequent risk of mortality and morbidity: a database analysis using propensity score-matching	2020	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Morri, M.; Ambrosi, E.; Chiari, P.; Orlandi Magli, A.; Gazineo, D.; D' Alessandro F; Forni, C.	One-year mortality after hip fracture surgery and prognostic factors: a prospective cohort study	2019	Does not address question of interest - prognostic study
Morris, J. C.; Moore, A.; Kahan, J.; Shapiro, M.; Li, J.; Spadaccino, B.; Baumgaertner, M.; O'Connor, M. I.	Integrated Fragility Hip Fracture Program: A Model for High Quality Care	2020	not best available evidence
Morse, K. W.; Su, E. P.	Hip resurfacing arthroplasty for patients with inflammatory arthritis: a systematic review	2018	Systematic review
Mosfeldt, M.; Pedersen, O. B.; Riis, T.; Worm, H. O.; Mark, Sv; Jørgensen, H. L.; Duus, B. R.; Lauritzen, J. B.	Value of routine blood tests for prediction of mortality risk in hip fracture patients	2012	Excluded PICO
Moskovitz, P. A.; Ellenberg, S. S.; Feffer, H. L.; Kenmore, P. I.; Neviaser, R. J.; Rubin, B. E.; Varma, V. M.	Low-dose heparin for prevention of venous thromboembolism in total hip arthroplasty and surgical repair of hip fractures	1978	<30 per group (only 52 patients had hip fracture)
Mosseri, J.; Trinquart, L.; Nizard, R.; Ravaud, P.	Meta-Analysis of a Complex Network of Non-Pharmacological Interventions: The Example of Femoral Neck Fracture	2016	Meta-analysis
Moulton, L. S.; Green, N. L.; Sudahar, T.; Makwana, N. K.; Whittaker, J. P.	Outcome after conservatively managed intracapsular fractures of the femoral neck	2015	Incorrect patient population (<30 pts/group)
Mounsey, E. J.; Williams, D. H.; Howell, J. R.; Hubble, M. J.	Revision of hemiarthroplasty to total hip arthroplasty using the cement-in-cement technique	2015	Incorrect patient population (includes age<50 yrs)
Mow, T. C.; Lukeis, J.; Sutherland, A. G.	The Benefits of Streamlined Hip Fracture Management in a Regional Hospital	2017	Insufficient data - age range not provided

Authors	Article Title	Year	Reason for Exclusion
Moyet, J.; Deschasse, G.; Marquant, B.; Mertl, P.; Bloch, F.	Which is the optimal orthogeriatric care model to prevent mortality of elderly subjects post hip fractures? A systematic review and meta-analysis based on current clinical practice	2019	Meta-analysis
Mu, W. Q.; Huang, X. Y.; Zhang, J.; Liu, X. C.; Huang, M. M.	Effect of Tai Chi for the prevention or treatment of osteoporosis in elderly adults: Protocol for a systematic review and meta-analysis	2018	Systematic review
Mukherjee, K.; Brooks, S. E.; Barraco, R. D.; Como, J. J.; Hwang, F.; Robinson, B. R. H.; Crandall, M. L.	Elderly adults with isolated hip fractures-orthogeriatric care versus standard care: A practice management guideline from the Eastern Association for the Surgery of Trauma	2020	Systematic review
Mukka, S.; Hassany, H. H.; Sayed-Noor, A. S.	Geometrical restoration and component positioning after hip arthroplasty for femoral neck fracture	2016	not best available evidence
Mukka, S.; Knutsson, B.; Krupic, F.; Sayed-Noor, A. S.	The influence of cognitive status on outcome and walking ability after hemiarthroplasty for femoral neck fracture: a prospective cohort study	2017	Insufficient data - age range not provided
Mukka, S.; Mahmood, S.; Kadum, B.; Skoldenberg, O.; Sayed-Noor, A.	Direct lateral vs posterolateral approach to hemiarthroplasty for femoral neck fractures	2016	not best available evidence
Mukka, S.; Sjoholm, P.; Aziz, A.; Eisler, T.; Kadum, B.; Krupic, F.; Morberg, P.; Sayed-Noor, A.	A cohort study comparing internal fixation for undisplaced versus hip arthroplasty for displaced femoral neck fracture in the elderly: a pilot study for a clinical trial	2020	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Mukka, S.; Sjoholm, P.; Chammout, G.; Kelly-Pettersson, P.; Sayed-Noor, A. S.; Skoldenberg, O.	External Validity of the HOPE-Trial: Hemiarthroplasty Compared with Total Hip Arthroplasty for Displaced Femoral Neck Fractures in Octogenarians	2019	Secondary analysis
Muller, F.; Doblinger, M.; Kottmann, T.; Fuchtmeier, B.	PFNA and DHS for AO/OTA 31-A2 fractures: radiographic measurements, morbidity and mortality	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)

Authors	Article Title	Year	Reason for Exclusion
Muller, F.; Galler, M.; Zellner, M.; Bauml, C.; Fuchtmeier, B.	Total hip arthroplasty after failed osteosynthesis of proximal femoral fractures: Revision and mortality of 80 patients	2017	Incorrect patient population (includes age<50 years)
Mullins, B.; Akehurst, H.; Slattery, D.; Chesser, T.	Should surgery be delayed in patients taking direct oral anticoagulants who suffer a hip fracture? A retrospective, case-controlled observational study at a UK major trauma centre	2018	Does not meet inclusion criteria (non-post-operative for VTE)
Murphy, C.; Mullen, E.; Hogan, K.; O'Toole, R.; Teeling, S. P.	Streamlining an existing hip fracture patient pathway in an acute tertiary adult Irish hospital to improve patient experience and outcomes	2019	Does not address question of interest
Murphy, D. K.; Randell, T.; Brennan, K. L.; Probe, R. A.; Brennan, M. L.	Treatment and displacement affect the reoperation rate for femoral neck fracture	2013	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Murphy, S.; Conway, C.; McGrath, N. B.; O'Leary, B.; O'Sullivan, M. P.; O'Sullivan, D.	An intervention study exploring the effects of providing older adult hip fracture patients with an information booklet in the early postoperative period	2011	Incorrect pt population (<30 pts/group)
Murray, C. E.; Fuchs, A.; Grunewald, H.; Godkin, O.; Sudkamp, N. P.; Konstantinidis, L.	Identifying Disparities in the Management of Hip Fractures Within Europe: A Comparison of 3 Health-Care Systems	2019	Does not address question of interest
Muschitz, C.; Kocijan, R.; Fahrleitner-Pammer, A.; Pavo, I.; Haschka, J.; Schima, W.; Kapiotis, S.; Resch, H.	Overlapping and continued alendronate or raloxifene administration in patients on teriparatide: effects on areal and volumetric bone mineral density--the CONFORS Study	2014	Insufficient data - age range not provided
Mutlu, H.; Bilgili, F.; Mutlu, S.; Karaman, O.; Cakal, B.; Ozkaya, U.	The effects of preoperative non-invasive cardiac tests on delay to surgery and subsequent mortality in elderly patients with hip fracture	2016	Incorrect patient population (<30 patients/group)
Mutlu, T.; DaÅ?ar, U.	Early blood transfusion may prevent postoperative cognitive dysfunction after hip arthroplasty in elderly patients	2018	inadequate description of group 2 transfusion trigger to answer the pico question

Authors	Article Title	Year	Reason for Exclusion
Myint, M. W.; Wu, J.; Wong, E.; Chan, S. P.; To, T. S.; Chau, M. W.; Ting, K. H.; Fung, P. M.; Au, K. S.	Clinical benefits of oral nutritional supplementation for elderly hip fracture patients: a single blind randomised controlled trial	2013	Does not address question of interest (not among specified interventions)
Nahm, E. S.; Resnick, B.; Plummer, L.; Park, B. K.	Use of discussion boards in an online hip fracture resource center for caregivers	2013	Does not address question of interest
Naik, A. A.; Lietman, S. A.	Complications With Long Cemented Stems in Proximal Femoral Replacement	2016	Incorrect patient population (includes age<50 yrs)
Nakai, T.; Liu, N.; Fudo, K.; Mohri, T.; Kakiuchi, M.	Early complications of primary total hip arthroplasty in the supine position with a modified Watson-Jones anterolateral approach	2014	not best available evidence
Nakamura, J.; Hagiwara, S.; Orita, S.; Akagi, R.; Suzuki, T.; Suzuki, M.; Takahashi, K.; Ohtori, S.	Direct anterior approach for total hip arthroplasty with a novel mobile traction table -a prospective cohort study	2017	Does not address question of interest - comparison of cohorts receiving identical intervention
Nam, J. H.; Kim, D. H.; Yoo, J. H.; Hwang, J. H.; Chang, J. D.	Does preoperative mechanical prophylaxis have additional effectiveness in preventing postoperative venous thromboembolism in elderly patients with hip fracture?-Retrospective case-control study	2017	Does not meet inclusion criteria (non-post-operative for VTE)
Namdari, S.; Rabinovich, R.; Scolaro, J.; Baldwin, K.; Bhandari, M.; Mehta, S.	Absorbable and non-absorbable cement augmentation in fixation of intertrochanteric femur fractures: systematic review of the literature	2013	Systematic review
Naqvi, Z. G.; Markhand, J. A.; Ahmed, S. K.; Chinoy, A.; Khan, M. A.	Intra-operative implantation errors during Austin Moore Hemiarthroplasty	2016	Case series

Authors	Article Title	Year	Reason for Exclusion
Naranjo, A.; Fernandez-Conde, S.; Ojeda, S.; Torres-Hernandez, L.; Hernandez-Carballo, C.; Bernardos, I.; Rodriguez, S.; Laynez, P.	Preventing future fractures: effectiveness of an orthogeriatric fracture liaison service compared to an outpatient fracture liaison service and the standard management in patients with hip fracture	2017	Does not meet inclusion criteria
Nasab, S. A. M.; Khorramdin, E.	The assessment of mortality and quality of life after intertrochanteric fracture of femur in patients older than 60 at Emam Khomeini Hospital of Ahvaz	2017	Retrospective case series
Nash, W.; Harris, A.	The Dorr type and cortical thickness index of the proximal femur for predicting peri-operative complications during hemiarthroplasty	2014	Retrospective case series
Nave, S.; Doody, R. S.; Boada, M.; Grimmer, T.; Savola, J. M.; Delmar, P.; Pauly-Evers, M.; Nikolcheva, T.; Czech, C.; Borroni, E.; Ricci, B.; Dukart, J.; Mannino, M.; Carey, T.; Moran, E.; Gilaberte, I.; Muelhardt, N. M.; Gerlach, I.; Santarelli, L.; Ostrowitzki, S.; Fontoura, P.; LanctÃ´t, K.	Sembragiline in Moderate Alzheimer's Disease: Results of a Randomized, Double-Blind, Placebo-Controlled Phase II Trial (MAyflOwer RoAD)	2017	Incorrect patient population (not exclusive to hip)
Nawaz, S. Z.; Keightley, A. J.; Desai, A.; Granville-Chapman, J.; Elliott, D.; Newman, K.; Khaleel, A.	Displaced intracapsular neck of femur fractures: Outcome of 810 hydroxyapetite coated (HAC) uncemented hemiarthroplasties	2017	Retrospective case series

Authors	Article Title	Year	Reason for Exclusion
Neander, G.; Adolphson, P.; von Sivers, K.; Dahlborn, M.; Dalén, N.	Bone and muscle mass after femoral neck fracture. A controlled quantitative computed tomography study of osteosynthesis versus primary total hip arthroplasty	1997	Incorrect patient population (< 30 pts/group)
Nemes, S.; Lind, D.; Cnudde, P.; BÃ¼low, E.; Rolfson, O.; Rogmark, C.	Relative survival following hemi-and total hip arthroplasty for hip fractures in Sweden 11 Medical and Health Sciences 1103 Clinical Sciences	2018	Does not address question of interest - prognostic endpoints
Nemes, S.; Lind, D.; Cnudde, P.; Bulow, E.; Rolfson, O.; Rogmark, C.	Relative survival following hemi-and total hip arthroplasty for hip fractures in Sweden	2018	Insufficient data - age range not provided
Neuerburg, C.; Forch, S.; Gleich, J.; Bocker, W.; Gosch, M.; Kammerlander, C.; Mayr, E.	Improved outcome in hip fracture patients in the aging population following co-managed care compared to conventional surgical treatment: a retrospective, dual-center cohort study	2019	not best available evidence
Neufeld, M. E.; O'Hara, N. N.; Zhan, M.; Zhai, Y.; Broekhuyse, H. M.; Lefaivre, K. A.; Abzug, J. M.; Slobogean, G. P.	Timing of Hip Fracture Surgery and 30-Day Outcomes	2016	Does not address question of interest - prognostic endpoints
Neuman, M. D.; Donegan, D. J.; Mehta, S.	Comparative effectiveness of joint reconstruction and fixation for femoral neck fracture: inpatient and 30-day mortality	2013	Incorrect patient population
Neuman, M. D.; Rosenbaum, P. R.; Ludwig, J. M.; Zubizarreta, J. R.; Silber, J. H.	Anesthesia technique, mortality, and length of stay after hip fracture surgery	2014	not best available evidence
Neyisci, C.; Erdem, Y.; Bilekli, A. B.; Bek, D.	Direct Anterior Approach Versus Posterolateral Approach for Hemiarthroplasty in the Treatment of Displaced Femoral Neck Fractures in Geriatric Patients	2020	not best available evidence
Ng, D. Z.; Lee, K. B.	Unipolar versus Bipolar Hemiarthroplasty for Displaced Femoral Neck Fractures in the Elderly: Is There a Difference?	2015	Does not meet inclusion criteria (non-RCT for unipolar vs bipolar PICO)

Authors	Article Title	Year	Reason for Exclusion
Ng, R.; Shabani-Rad, M. T.	Results of Octaplex for reversal of warfarin anticoagulation in patients with hip fracture	2019	Incorrect patient population (<30 patients/group)
Ng, Z. D.; Krishna, L.	Cemented versus cementless hemiarthroplasty for femoral neck fractures in the elderly	2014	not best available evidence
Nherera, L. M.; Trueman, P.; Horner, A.; Johnstone, A. J.; Watson, T. J.; Fatoye, F. A.	Comparing the costs and outcomes of an integrated twin compression screw (ITCS) nail with standard of care using a single lag screw or a single helical blade cephalomedullary nail in patients with intertrochanteric hip fractures	2018	Meta-analysis
Nherera, L.; Trueman, P.; Horner, A.; Watson, T.; Johnstone, A. J.	Comparison of a twin interlocking derotation and compression screw cephalomedullary nail (InterTAN) with a single screw derotation cephalomedullary nail (proximal femoral nail antirotation): a systematic review and meta-analysis for intertrochanteric fractures	2018	Systematic review
Nie, B.; Wu, D.; Yang, Z.; Liu, Q.	Comparison of intramedullary fixation and arthroplasty for the treatment of intertrochanteric hip fractures in the elderly: A meta-analysis	2017	Meta-analysis
Niemeijer, G. C.; Flikweert, E.; Trip, A.; Does, R. J.; Ahaus, K. T.; Boot, A. F.; Wendt, K. W.	The usefulness of lean six sigma to the development of a clinical pathway for hip fractures	2013	Insufficient data - age range not provided
Nightingale, E. J.; Sturnieks, D.; Sherrington, C.; Moseley, A. M.; Cameron, I. D.; Lord, S. R.	Impaired weight transfer persists at least four months after hip fracture and rehabilitation	2010	Secondary analysis
Nishi, T.; Maeda, T.; Babazono, A.	Association Between Financial Incentives for Regional Care Coordination and Health Care Resource Utilization Among Older Patients after Femoral Neck Fracture Surgery: A Retrospective Cohort Study Using a Claims Database	2018	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Nishi, T.; Maeda, T.; Imatoh, T.; Babazono, A.	Comparison of regional with general anesthesia on mortality and perioperative length of stay in older patients after hip fracture surgery	2018	Imperfect comparasion
Nizam, I.; Alva, A.; Gogos, S.	The bikini incision anterior cemented total hip arthroplasty: Assessment of radiological and clinical outcomes - A mid-term review	2021	not best available evidence
Noailles, T.; Brulefert, K.; Chalopin, A.; Longis, P. M.; Gouin, F.	What are the risk factors for post-operative infection after hip hemiarthroplasty? Systematic review of literature	2016	Systematic review
Nonne, D.; Sanna, F.; Bardelli, A.; Milano, P.; Rivera, F.	Use of a Dual mobility cup to prevent hip early arthroplasty dislocation in patients at high falls risk	2019	not best available evidence
Noordin, S.; Shahbano,; Ahmad, T.; Shah, I.	Intertrochanteric hip fractures in octogenarian patients: Do we need to rethink fixation strategy?	2015	Does not address question of interest - stratified by pt characteristics
Norambuena, G. A.; Wyles, C. C.; Van Demark, R. E., 3rd; Trousdale, R. T.	Effect of dislocation timing following primary total hip arthroplasty on the risk of redislocation and revision	2019	Does not address question of interest - prognostic endpoints
Nordstrom, P.; Thorngren, K. G.; Hommel, A.; Ziden, L.; Anttila, S.	Effects of Geriatric Team Rehabilitation After Hip Fracture: Meta-Analysis of Randomized Controlled Trials	2018	Meta-analysis
Noticewala, M. S.; Swart, E.; Shah, R. P.; Macaulay, W.; Geller, J. A.	First Place Award Multidisciplinary care of the hip fracture patient: A case control analysis of differing treatment protocols	2016	not best available evidence
Nyholm, A. M.; Gromov, K.; Palm, H.; Brix, M.; Kallemose, T.; Troelsen, A.; Danish Fracture Database, Collaborators	Time to Surgery Is Associated with Thirty-Day and Ninety-Day Mortality After Proximal Femoral Fracture: A Retrospective Observational Study on Prospectively Collected Data from the Danish Fracture Database Collaborators	2015	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Oberai, T.; Oosterhoff, J. H. F.; Woodman, R.; Doornberg, J. N.; Kerkhoffs, G.; Jaarsma, R.	Development of a postoperative delirium risk scoring tool using data from the Australian and New Zealand Hip Fracture Registry: an analysis of 6672 patients 2017-2018	2021	Does not address question of interest - stratified by pt characteristics
Oberkircher, L.; Schubert, N.; Eschbach, D. A.; Bliemel, C.; Krueger, A.; Ruchholtz, S.; Buecking, B.	Prehospital Pain and Analgesic Therapy in Elderly Patients with Hip Fractures	2016	Does not meet inclusion criteria (outcomes assessed before hospital pain regimen)
Odor, P. M.; Chis Ster, I.; Wilkinson, I.; Sage, F.	Effect of admission fascia iliaca compartment blocks on post-operative abbreviated mental test scores in elderly fractured neck of femur patients: a retrospective cohort study	2017	Does not address question of interest - prognostic indications
Oe, K.; Iida, H.; Kobayashi, F.; Ueda, N.; Nakamura, T.; Okamoto, N.; Saito, T.	Reattachment of an osteotomized greater trochanter in total hip arthroplasty using an ultra-high molecular weight polyethylene fiber cable	2018	Incorrect patient population (includes age<50 yrs)
Ogawa, T.; Aoki, T.; Shirasawa, S.	Effect of hip fracture surgery within 24 hours on short-term mobility	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Ogilvie-Harris, D. J.; Botsford, D. J.; Hawker, R. W.	Elderly patients with hip fractures: improved outcome with the use of care maps with high-quality medical and nursing protocols	1993	not best available evidence
Oh, C. S.; Rhee, K. Y.; Yoon, T. G.; Woo, N. S.; Hong, S. W.; Kim, S. H.	Postoperative Delirium in Elderly Patients Undergoing Hip Fracture Surgery in the Sugammadex Era: A Retrospective Study	2016	not best available evidence
Ohmori, T.; Toda, K.; Kanazawa, T.; Tada, K.; Yagata, Y.; Ito, Y.	Retrospective high volume comparative study suggests that patients on aspirin could have immediate surgery for hip fractures without significant blood loss	2021	Does not meet inclusion criteria (non-post-operative for VTE)
Okike, K.; Udogwu, U. N.; Isaac, M.; Sprague, S.; Swiontkowski, M. F.; Bhandari, M.; Slobogean, G. P.; Faith Investigators	Not All Garden-I and II Femoral Neck Fractures in the Elderly Should Be Fixed: Effect of Posterior Tilt on Rates of Subsequent Arthroplasty	2019	Secondary analysis

Authors	Article Title	Year	Reason for Exclusion
Okitsu, K.; Iritakenishi, T.; Imada, T.; Kuri, M.; Shibata, S. C.; Fujino, Y.	Choice of desflurane or propofol for the maintenance of general anesthesia does not affect the risk of periprocedural myocardial damage in patients undergoing transfemoral transcatheter aortic valve implantation	2018	Incorrect patient population (not exclusive to hip)
Olenginski, T. P.; Maloney-Saxon, G.; Matzko, C. K.; Mackiewicz, K.; Kirchner, H. L.; Bengier, A.; Newman, E. D.	High-risk osteoporosis clinic (HiROC): improving osteoporosis and postfracture care with an organized, programmatic approach	2015	Incorrect patient population (not exclusive to hip)
Onativia, I. J.; Slullitel, P. A.; Diaz Dilernia, F.; Gonzales Viezcas, J. M.; Vietto, V.; Ramkumar, P. N.; Buttaro, M. A.; Piuzzi, N. S.	Outcomes of nondisplaced intracapsular femoral neck fractures with internal screw fixation in elderly patients: a systematic review	2018	Systematic review
Ong, B. C.; Maurer, S. G.; Aharonoff, G. B.; Zuckerman, J. D.; Koval, K. J.	Unipolar versus bipolar hemiarthroplasty: Functional outcome after femoral neck fracture at a minimum of thirty-six months of follow-up	2002	Does not meet inclusion criteria (non-RCT for unipolar vs bipolar PICO)
Ong, J. C. Y.; Gill, J. R.; Parker, M. J.	Mobility after intertrochanteric hip fracture fixation with either a sliding hip screw or a cephalomedullary nail: Sub group analysis of a randomised trial of 1000 patients	2019	Secondary analysis
Ooi, L. H.; Wong, T. H.; Toh, C. L.; Wong, H. P.	Hip fractures in nonagenarians - A study on operative and non-operative management	2005	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Ortiz-PiÃ±a, M.; Salas-FariÃ±a, Z.; Mora-Traverso, M.; MartÃn-MartÃn, L.; Galiano-Castillo, N.; GarcÃa-Montes, I.; Cantarero-Villanueva, I.; FernÃ¡ndez-Lao, C.; Arroyo-Morales, M.; Mesa-RuÃz, A.; Castellote-Caballero, Y.; Salazar-GravÃ¡n, S.; Kronborg, L.; MartÃn-Matillas, M.; Ariza-Vega, P.	A home-based tele-rehabilitation protocol for patients with hip fracture called @ctivehip	2019	Protocol
Ossendorf, C.; Scheyerer, M. J.; Wanner, G. A.; Simmen, H. P.; Werner, C. M.	Treatment of femoral neck fractures in elderly patients over 60 years of age - which is the ideal modality of primary joint replacement?	2010	Background article
Overmann, A. L.; Richards, J. T.; O'Hara, N. N.; D'Alleyrand, J. C.; Slobogean, G. P.	Outcomes of elderly patients with nondisplaced or minimally displaced femoral neck fractures treated with internal fixation: A systematic review and meta-analysis	2019	Meta-analysis
Ovesen, O.; Andersen, M.; Poulsen, T.; Nymark, T.; Overgaard, S.; RÃ¶ck, N. D.	The trochanteric gamma nail versus the dynamic hip screw: A prospective randomised study. One-year follow-up of 146 intertrochanteric fractures	2006	Does not meet inclusion criteria (pre-2013 for non-new PICO)
Ozan, F.; Oncel, E. S.; Koyuncu, S; Gurbuz, K.; Dogar, F.; Vatansever, F.; Duygulu, F.	Effects of Hardinge versus Moore approach on postoperative outcomes in elderly patients with hip fracture	2016	not best available evidence
Ozan, F.; Pekedis, M.; Koyuncu, S.; Altay, T.; Yildiz, H.; Kayali, C.	Micro-computed tomography and mechanical evaluation of trabecular bone structure in osteopenic and osteoporotic fractures	2017	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Ozturk, A.; Iltar, S.; Alemdaroglu, K. B.; Dincel, V. E.; Ozmeric, A.; Gokgoz, B.	Is Functional Outcome Better after Arthroplasty for Trochanteric Fractures in Older Adults?	2018	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Ozturk, A.; Ozkan, Y.; Akgoz, S.; Yalcin, N.; Aykut, S.; Ozdemir, M. R.	The effect of blood albumin and total lymphocyte count on short-term results in elderly patients with hip fractures	2009	Does not address question of interest; (Excluded PICO from 2014)
Pablos-HernÃ¡ndez, C.; GonzÃ¡lez-RamÃ-rez, A.; da Casa, C.; Luis, M. M.; GarcÃa-Iglesias, M. A.; JuliÃ¡n-Enriquez, J. M.; RodrÃguez-SÃ¡nchez, E.; Blanco, J. F.	Time to Surgery Reduction in Hip Fracture Patients on an Integrated Orthogeriatric Unit: A Comparative Study of Three Healthcare Models	2020	not best available evidence
Padhye, K. P.; Kulkarni, V. S.; Kulkarni, G. S.; Kulkarni, M. G.; Kulkarni, S.; Kulkarni, R.; Patil, M. D.; Ravi, P. Y.	Plating, nailing, external fixation, and fibular strut grafting for non-union of humeral shaft fractures	2013	Incorrect patient population (includes age<50 yrs)
Page, P. R. J.; Poole, W. E. C.; Shah, K.; Upadhyay, P. K.	Short or long intramedullary devices for hip fracture? A systematic review of the evidence	2020	Systematic review
Pailhe, R.; Reina, N.; Cavaignac, E.; Sharma, A.; Lafontan, V.; Laffosse, J. M.; Chiron, P.	Prospective study comparing functional outcomes and revision rates between hip resurfacing and total hip arthroplasty: Preliminary results for 2 years	2013	Incorrect patient population (includes age<50 yrs)
Pailleret, C.; Ait Hamou, Z.; Rosencher, N.; Samama, C. M.; Eyraud, V.; Chilot, F.; Baillard, C.	A retrospective comparison between delayed and early hip fracture surgery in patients taking clopidogrel: same total bleeding but different timing of blood transfusion	2017	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Palan, J.; Smith, M. C.; Gregg, P.; Mellon, S.; Kulkarni, A.; Tucker, K.; Blom, A. W.; Murray, D. W.; Pandit, H.	The influence of cemented femoral stem choice on the incidence of revision for periprosthetic fracture after primary total hip arthroplasty: an analysis of national joint registry data	2016	Does not address question of interest - prognostic endpoints
Palanisamy, A. M.; Doshi, H. K.; Selvaraj, D.; Chan, W.; Naidu, G.; Ramason, R.	Fixation Versus Replacement in Geriatric Hip Fractures: Does Functional Outcome and Independence in Self-Care Differ?	2015	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Palm, H.; Teixidor, J.	Proximal femoral fractures: Can we improve further surgical treatment pathways?	2015	Systematic review
Pan, S.; Lou, C. G.; Liu, C. C.; Liu, X. H.; Feng, T.; Kang, H. J.; Lou, C. S.	A novel modified trochanteric entry portal and percutaneous technique for asian patients: A prospective randomized study of the PFNA-II in China	2017	Doesn't address question of interest; not arthroplasty
Pandarinath, R.; Amdur, R.; DeBritz, J. N.; Rao, R. D.	Comparison of Short-term Complication Rates Between Cephalomedullary Hip Screw Devices and Sliding Hip Screws: An Analysis of the National Surgical Quality Improvement Program Database	2018	Insufficient data - age range not provided
Pandey, R.; McNally, E.; Ali, A.; Bulstrode, C.	The role of MRI in the diagnosis of occult hip fractures	1998	Advanced Imaging
Panella, M.; Seys, D.; Sermeus, W.; Bruyneel, L.; Lodewijckx, C.; Deneckere, S.; Sermon, A.; Nijs, S.; Boto, P.; Vanhaecht, K.	Minimal impact of a care pathway for geriatric hip fracture patients	2018	Doesn't address question of interest;
Panichkul, P.; Parks, N. L.; Ho, H.; Hopper, R. H., Jr.; Hamilton, W. G.	New Approach and Stem Increased Femoral Revision Rate in Total Hip Arthroplasty	2016	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Papadopoulos, G.; Pouangare, M.; Papathanakos, G.; Arnaoutoglou, E.; Petrou, A.; Tzimas, P.	The effect of ondansetron on postoperative delirium and cognitive function in aged orthopedic patients	2014	Incorrect patient population (includes age<50 yrs)
Park, B. J.; Cho, H. M.; Min, W. B.	A Comparison of Internal Fixation and Bipolar Hemiarthroplasty for the Treatment of Reverse Oblique Intertrochanteric Femoral Fractures in Elderly Patients	2015	Incorrect patient population (<30 pts/group)
Park, C. H.; Ha, Y. C.; Lee, Y. K.; Koo, K. H.	Using Ceramic-on-Ceramic Bearings in Total Hip Arthroplasty Necessitating 44- or 46-mm Metal Shells	2018	Does not address question of interest - stratified by pt characteristics
Park, C. W.; Eun, H. J.; Oh, S. H.; Kim, H. J.; Lim, S. J.; Park, Y. S.	Femoral Stem Survivorship in Dorr Type A Femurs After Total Hip Arthroplasty Using a Cementless Tapered Wedge Stem: A Matched Comparative Study With Type B Femurs	2019	Incorrect patient population (includes aged <50 years)
Park, K. S.; Oh, C. S.; Yoon, T. R.	Comparison of Minimally Invasive Total Hip Arthroplasty versus Conventional Hemiarthroplasty for Displaced Femoral Neck Fractures in Active Elderly Patients	2013	not best available evidence
Park, M. H.; Youn, Y. H.; Kang, J. S.; Moon, K. H.	Long-Term Results of Hip Arthroplasty Using Extensive Porous-Coated Stem-A Minimum Follow-Up of 15 Years	2019	Incorrect patient population (includes age<50 yrs)
Park, S. R.; Kang, J. S.; Kim, H. S.; Lee, W. H.; Kim, Y. H.	Treatment of intertrochanteric fracture with the Gamma AP locking nail or by a compression hip screw - A randomised prospective trial	1998	Does not meet inclusion criteria (pre-2013 for non-new PICO)
Parker, M. I.; Pryor, G.; Gurusamy, K.	Cemented versus uncemented hemiarthroplasty for intracapsular hip fractures: A randomised controlled trial in 400 patients	2010	Not comparison of interest
Parker, M. J.	Internal fixation or arthroplasty for displaced subcapital fractures in the elderly?	1992	not best available evidence
Parker, M. J.	Hemiarthroplasty versus internal fixation for displaced intracapsular fractures of the hip in elderly men: a pilot randomised trial	2015	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Parker, M. J.	Sliding hip screw versus intramedullary nail for trochanteric hip fractures; a randomised trial of 1000 patients with presentation of results related to fracture stability	2017	Incorrect patient population (includes age<50 yrs)
Parker, M. J.; Cawley, S.	Short (175 mm) versus standard (220 mm) length intramedullary nail for trochanteric hip fractures: A randomized trial of 229 patients	2020	Incorrect patient population (includes age<50 yrs)
Parker, M. J.; Cawley, S.	Sliding hip screw versus the Targon PFT nail for trochanteric hip fractures: a randomised trial of 400 patients	2017	Incorrect patient population (includes age<50 yrs)
Parry, J. A.; Barrett, I.; Schoch, B.; Yuan, B.; Cass, J.; Cross, W.	Does the Angle of the Nail Matter for Pertrochanteric Fracture Reduction? Matching Nail Angle and Native Neck-Shaft Angle	2018	Insufficient data - age range not provided
Parsons, M.; Parsons, J.; Pillai, A.; Rouse, P.; Mathieson, S.; Bregmen, R.; Smith, C.; Kenealy, T.	Post-Acute Care for Older People Following Injury: A Randomized Controlled Trial	2020	Doesn't address question of interest;
Pascarella, R.; Fantasia, R.; Maresca, A.; Bettuzzi, C.; Amendola, L.; Violini, S.; Cuoghi, F.; Sangiovanni, P.; Cerbasi, S.; Boriani, S.; Tigani, D. S.	How evolution of the nailing system improves results and reduces orthopedic complications: more than 2000 cases of trochanteric fractures treated with the Gamma Nail System	2016	Incorrect patient population (includes age<50 yrs)
Pasquier, M.; Taffe, P.; Hugli, O.; Borens, O.; Kirkham, K. R.; Albrecht, E.	Fascia iliaca block in the emergency department for hip fracture: a randomized, controlled, double-blind trial	2019	Incorrect pt population (<30 pts/group)
Patel, J. N.; Klein, D. S.; Sreekumar, S.; Liporace, F. A.; Yoon, R. S.	Outcomes in Multidisciplinary Team-based Approach in Geriatric Hip Fracture Care: A Systematic Review	2020	Systematic review
Patel, N. K.; Ko, C. Y.; Meng, X.; Cohen, M. E.; Hall, B. L.; Kates, S.	Does Comanagement of Patients With Hip Fracture Influence 30-Day Outcomes	2020	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Patel, V.; Champaneria, R.; Dretzke, J.; Yeung, J.	Effect of regional versus general anaesthesia on postoperative delirium in elderly patients undergoing surgery for hip fracture: a systematic review	2018	Systematic review - to screen
Patil, T.; Hobson, J.	Risk of new-onset osteoporosis in single-center veteran population receiving direct oral anticoagulants versus warfarin	2021	Incorrect patient population (includes age<50 yrs)
Patorno, E.; Neuman, M. D.; Schneeweiss, S.; Mogun, H.; Bateman, B. T.	Comparative safety of anesthetic type for hip fracture surgery in adults: retrospective cohort study	2014	Incorrect patient population (includes age<50 yrs)
Patrick, P. A.; Rosenthal, B. M.; Iezzi, C. A.; Brand, D. A.	Timely pain management in the emergency department	2015	Incorrect patient population (<30 patients/group)
Patterson, J. T.; Ishii, K.; Tornetta, P., 3rd; Leighton, R. K.; Friess, D. M.; Jones, C. B.; Levine, A.; Maclean, J. J.; Miclau, T., 3rd; Mullis, B. H.; Obremskey, W. T.; Ostrum, R. F.; Reid, J. S.; Ruder, J. A.; Saleh, A.; Schmidt, A. H.; Teague, D. C.; Tsismenakis, A.; Westberg, J. R.; Morshed, S.	Open Reduction is Associated with Greater Hazard of Early Reoperation after Internal Fixation of Displaced Femoral Neck Fractures in Adults 18-65 Years	2020	Incorrect patient population (includes age<50 yrs)
Paula Fde, L.; da Cunha, G. M.; Leite Ida, C.; Pinheiro, R. S.; Valente, J. G.	Elderly readmission and death after discharge from treatment of hip fracture, occurred in public hospitals from 2008 to 2010, Rio de Janeiro	2015	Does not address question of interest
Pauser, J.; Nordmeyer, M.; Biber, R.; Jantsch, J.; Kopschina, C.; Bail, H. J.; Brem, M. H.	Incisional negative pressure wound therapy after hemiarthroplasty for femoral neck fractures - reduction of wound complications	2016	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Peeters, C. M.; Visser, E.; Van de Ree, C. L.; Gosens, T.; Den Oudsten, B. L.; De Vries, J.	Quality of life after hip fracture in the elderly: A systematic literature review	2016	Systematic review - to review
Peng, K.; Yang, M.; Tian, M.; Chen, M.; Zhang, J.; Wu, X.; Ivers, R.; Si, L.	Cost-effectiveness of a multidisciplinary co-management program for the older hip fracture patients in Beijing	2020	not best available evidence
Peng, L. N.; Chen, W. M.; Chen, C. F.; Huang, C. K.; Lee, W. J.; Chen, L. K.	Survival benefits of post-acute care for older patients with hip fractures in Taiwan: A 5-year prospective cohort study	2016	not best available evidence
Peng, W.; Bi, N.; Zheng, J.; Xi, N.	Does total hip arthroplasty provide better outcomes than hemiarthroplasty for the femoral neck fracture? A systematic review and meta-analysis	2020	Meta-analysis
Pepe, J.; Madhani, N. B.	Ultrasound-guided Fascia Iliaca Compartment Block	2019	Background article
Persiani, P.; Ranaldi, F. M.; GurzÃ¬, M.; Formica, A.; Graci, J.; De Cristo, C.; Grasso, R.; Villani, C.	Choice of three different intramedullary nails in the treatment of trochanteric fractures: Outcome, analysis and consideration in midterm	2019	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Pesce, V.; Maccagnano, G.; Vicenti, G.; Notarnicola, A.; Moretti, L.; Tafuri, S.; Vanni, D.; Salini, V.; Moretti, B.	The effect of hydroxyapatite coated screw in the lateral fragility fractures of the femur. A prospective randomized clinical study	2014	Incorrect patient population (<30 patients/group)
Petitti, D. B.; Teutsch, S. M.; Barton, M. B.; Sawaya, G. F.; Ockene, J. K.; DeWitt, T.	Update on the methods of the U.S. Preventive Services Task Force: insufficient evidence	2009	Review

Authors	Article Title	Year	Reason for Exclusion
Petrie, M. J.; Harrison, T. P.; Buckley, S. C.; Gordon, A.; Kerry, R. M.; Hamer, A. J.	Stay Short or Go Long? Can a Standard Cemented Femoral Prosthesis Be Used at Second-Stage Total Hip Arthroplasty Revision for Infection Following an Extended Trochanteric Osteotomy?	2017	Incorrect patient population (includes aged<50 years)
Pfeufer, D.; Grabmann, C.; Mehaffey, S.; Keppler, A.; Bocker, W.; Kammerlander, C.; Neuerburg, C.	Weight bearing in patients with femoral neck fractures compared to pertrochanteric fractures: A postoperative gait analysis	2019	Incorrect patient population (<30 patients/group)
Pfeufer, D.; Kammerlander, C.; Stadler, C.; Roth, T.; Blauth, M.; Neuerburg, C.; Bocker, W.; Zeckey, C.; Lechleitner, M.; Gosch, M.	Multidisciplinary inpatient rehabilitation improves the long-term functional status of geriatric hip-fracture patients	2020	not best available evidence
Pfeufer, D.; Zeller, A.; Mehaffey, S.; Bocker, W.; Kammerlander, C.; Neuerburg, C.	Weight-bearing restrictions reduce postoperative mobility in elderly hip fracture patients	2019	Incorrect patient population (<30 patients/group)
Pincus, D.; Wasserstein, D.; Ravi, B.; Byrne, J. P.; Huang, A.; Paterson, J. M.; Nathens, A. B.; Kreder, H. J.; Jenkinson, R. J.; Wodchis, W. P.	Reporting and evaluating wait times for urgent hip fracture surgery in Ontario, Canada	2018	Does not meet inclusion criteria (non-RCT for surgical timing)
Pinto, I. P.; Ferres, L. F. B.; Boni, G.; Falotico, G. G.; Moraes, M.; Puertas, E. B.	Does Early Surgical Fixation of Proximal Femoral Fractures in Elderly Patients Affect Mortality Rates?	2019	Foreign language

Authors	Article Title	Year	Reason for Exclusion
Pioli, G.; Bendini, C.; Giusti, A.; Pignedoli, P.; Cappa, M.; Iotti, E.; Ferri, M. A.; Bergonzini, E.; Sabetta, E.	Surgical delay is a risk factor of delirium in hip fracture patients with mild-moderate cognitive impairment	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Pivec, R.; Issa, K.; Kapadia, B. H.; Cherian, J. J.; Maheshwari, A. V.; Bonutti, P. M.; Mont, M. A.	Incidence and Future Projections of Periprosthetic Femoral Fracture Following Primary Total Hip Arthroplasty: An Analysis of International Registry Data	2015	Does not address question of interest - imperfect comparison group
Pogliacomi, F.; Schiavi, P.; Grappiolo, G.; Ceccarelli, F.; Vaienti, E.	Outcome of short versus conventional stem for total hip arthroplasty in the femur with a high cortical index: a five year follow-up prospective multicentre comparative study	2020	Imperfect comparison group
Poh, K. S.; Lingaraj, K.	Complications and their risk factors following hip fracture surgery	2013	Incorrect patient population (<30 pts/group)
Polat, A.; Fidan, F.; Kilic, F.; Mutlu, H.; Kazdal, C.; Ozkaya, U.	Cementless rectangular stems yield satisfactory results in osteoporotic bones	2021	Imperfect comparator (groups received uncemented stems)
Polat, M.; Arslan, A.; Utkan, A.	External Fixation Versus Hemiartroplasty In Unstable Intertrochanteric Hip Fractures Of The Elderly	2017	Incorrect patient population (<30 patients/group)
Polischuk, M. D.; Kattar, N.; Rajesh, A.; Gergis, T.; King, K.; Sriselvakumar, S.; Shelfoon, C.; Lynch, G.; Campbell, K.; Cooke, C.	Emergency Department Femoral Nerve Blocks and 1-Year Mortality in Fragility Hip Fractures	2019	not best available evidence
Pollmann, C. T.; Rotterud, J. H.; Gjertsen, J. E.; Dahl, F. A.; Lenvik, O.; Aroen, A.	Fast track hip fracture care and mortality - an observational study of 2230 patients	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Pongkunakorn, A.; Palawong, P.; Chatmaitri, S.; Phetpangnga, N.	Use of a digital protractor and a spirit level to determine the intraoperative anteversion of femoral component during cemented hip hemiarthroplasty: A prospective clinical trial	2019	not best available evidence
Ponten, J. B.; Krug, E.; van Baardewijk, L. J.; van der Linden, E. H.; Haas, R.; Krijnen, P.; Schipper, I. B.	Intensive rehabilitation in selected hip fracture patients may optimize care efficiency: A retrospective comparison study	2015	Incorrect patient population (<30 patients/group)
Ponzio, D. Y.; Shahi, A.; Park, A. G.; Purtill, J. J.	Intraoperative Proximal Femoral Fracture in Primary Cementless Total Hip Arthroplasty	2015	Retrospective review
Portegijs, E.; Rantakokko, M.; Edgren, J.; Salpakoski, A.; Heinonen, A.; Arkela, M.; Kallinen, M.; Rantanen, T.; Sipila, S.	Effects of a rehabilitation program on perceived environmental barriers in older patients recovering from hip fracture: a randomized controlled trial	2013	Secondary analysis of RCT
Potter, L. J.; Doleman, B.; Moppett, I. K.	A systematic review of pre-operative anaemia and blood transfusion in patients with fractured hips	2015	Systematic review
Poyanli, O. S.; Soylemez, S.; Ozkut, A. T.; Uygur, E.; Kemah, B.; Unal, O. K.	Precise placement of lag screws in operative treatment of trochanteric femoral fractures with a new guide system	2015	Incorrect patient population (<30 patients/group)
Prashanth, Y. S.; Niranjan, M.	Comparative Study of Surgical Management of Fracture Neck of Femur with Cemented Versus Uncemented Bipolar Hemiarthroplasty	2017	Does not meet inclusion criteria (<30 pts/group)
Prat, D.; Maoz, O.; Myerson, C. L.; Zabtani, A.; Afek, A.; Tenenbaum, S.	Orthopaedic residents' autonomy in hip fracture surgery: what is the effect on patient outcomes?	2021	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Prestmo, A.; Saltvedt, I.; Helbostad, J. L.; Taraldsen, K.; Thingstad, P.;	Who benefits from orthogeriatric treatment? Results from the Trondheim hip-fracture trial	2016	Secondary analysis

Authors	Article Title	Year	Reason for Exclusion
Lydersen, S.; Sletvold, O.			
Prieto-Alhambra, D.; Javaid, M. K.; Judge, A.; Maskell, J.; Cooper, C.; Arden, N. K.; C. OASt Study Group	Hormone replacement therapy and mid-term implant survival following knee or hip arthroplasty for osteoarthritis: a population-based cohort study	2015	Incorrect patient population (not exclusive to hip)
Prince, R. L.; Devine, A.; Dhaliwal, S. S.; Dick, I. M.	Effects of calcium supplementation on clinical fracture and bone structure: results of a 5-year, double-blind, placebo-controlled trial in elderly women	2006	Excluded PICO
Prudhon, J. L.; Desmarchelier, R.; Hamadouche, M.; Delaunay, C.; Verdier, R.; SoFcot,	Causes for revision of dual-mobility and standard primary total hip arthroplasty : Matched case-control study based on a prospective multicenter study of two thousand and forty four implants	2017	Incorrect patient population (includes age<50 yrs)
Pu, H.; Jiang, H.; Leng, Z.; Yang, X.	Investigation on the early-stage nursing intervention for deep venous thrombosis in traumatic fracture senile patients in perioperative period	2017	Does not address question of interest (not among specified interventions)
Pui, C. M.; Bostrom, M. P.; Westrich, G. H.; Della Valle, C. J.; Macaulay, W.; Mont, M. A.; Padgett, D. E.	Increased complication rate following conversion total hip arthroplasty after cephalomedullary fixation for intertrochanteric hip fractures: a multi-center study	2013	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Puram, C.; Pradhan, C.; Patil, A.; Sodhai, V.; Sancheti, P.; Shyam, A.	Outcomes of dynamic hip screw augmented with trochanteric wiring for treatment of unstable type A2 intertrochanteric femur fractures	2017	Incorrect patient population (includes age<50 yrs)
Putnam, J. G.; Nowak, L.; Sanders, D.; MacNevin, M.; Lawendy, A. R.; Jones, C.; McKee, M.; Schemitsch, E.	Early post-operative outcomes of plate versus nail fixation for humeral shaft fractures	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Qiu, C.; Chan, P. H.; Zohman, G. L.; Prentice, H. A.; Hunt, J. J.; LaPlace, D. C.; Nguyen, V. T.; Diekmann, G. R.; Maletis, G. B.; Desai, V.	Impact of Anesthesia on Hospital Mortality and Morbidities in Geriatric Patients Following Emergency Hip Fracture Surgery	2018	not best available evidence
Qiu, M.; Zhang, X.; Cai, H.; Xu, Z.; Lin, H.	The impact of hemocoagulase for improvement of coagulation and reduction of bleeding in fracture-related hip hemiarthroplasty geriatric patients: A prospective, single-blinded, randomized, controlled study	2017	Does not meet inclusion criteria (includes pre-operative for VTE)
Qiu, S.; Ma, T.; Liu, H.; Wan, J.	Timing of tranexamic acid administration in elderly patients with intertrochanteric fracture	2020	Does not address question of interest (comparing administration of tranexamic acid administration at different time points)
Qu, B.; Chen, L.; Zhang, Y.; Jiang, M.; Wu, C.; Ma, W.; Li, Y.	Landmark-guided versus modified ultrasound-assisted Paramedian techniques in combined spinal-epidural anesthesia for elderly patients with hip fractures: a randomized controlled trial	2020	Imperfect comparison group
Queally, J. M.; Harris, E.; Handoll, H. H.; Parker, M. J.	Intramedullary nails for extracapsular hip fractures in adults	2014	Systematic review
Quinn, S. F.; McCarthy, J. L.	Prospective evaluation of patients with suspected hip fracture and indeterminate radiographs: use of T1-weighted MR images	1993	Advanced Imaging
Raaben, M.; Redzwan, S.; Augustine, R.; Blokhuis, T. J.	COMplex Fracture Orthopedic Rehabilitation (COMFORT) - Real-time visual biofeedback on weight bearing versus standard training methods in the treatment of proximal femur fractures in the elderly: Study protocol for a multicenter randomized controlled trial	2018	Protocol

Authors	Article Title	Year	Reason for Exclusion
Radinovic, K.; Markovic Denic, L.; Milan, Z.; Cirkovic, A.; Baralic, M.; Bumbasirevic, V.	Impact of intraoperative blood pressure, blood pressure fluctuation, and pulse pressure on postoperative delirium in elderly patients with hip fracture: A prospective cohort study	2019	Does not address question of interest - prognostic endpoints
Radoicic, D.; Dasic, Z; Mitkovic, M.; Starcevic, S.	Total hip arthroplasty for femoral neck fractures as an urgent procedure	2017	Does not meet inclusion criteria (non-RCT for timing PICO)
Rahe-Meyer, N.; Fennema, H.; Schulman, S.; Klimscha, W.; Przemeck, M.; Blobner, M.; Wulf, H.; Speek, M.; McCrary Sisk, C.; Williams-Herman, D.; Woo, T.; Szegedi, A.	Effect of reversal of neuromuscular blockade with sugammadex versus usual care on bleeding risk in a randomized study of surgical patients	2014	Incorrect pt population - not exclusive to hip
Rahimzadeh, P.; Imani, F.; Faiz, S. H. R.; Nikoubakht, N.; Sayarifard, A.	Effect of intravenous methylprednisolone on pain after intertrochanteric femoral fracture surgery	2014	Incorrect patient population (includes age<50 yrs)
Rai, A. K.; Goel, R.; Bhatia, C.; Singh, S.; Thalanki, S.; Gondane, A.	Cement Augmentation of Dynamic Hip Screw to Prevent Screw Cut Out in Osteoporotic Patients with Intertrochanteric Fractures: A Case Series	2018	Does not meet inclusion criteria (<30 pts/group)
Rai, S. K.; Vikas, R.; Sharma, V.; Wani, S. S.; Varma, R.	Cemented Vs Uncemented modular Bipolar hemiarthroplasty treatment for femoral neck fracture in elderly patients	2017	not best available evidence
Raiger, L. K.; Gehlot, R. K.; Bedi, V.; Betkeker, S. A.	Comparison of levobupivacaine and bupivacaine in fascia iliaca compartment block (FICB) for postoperative pain management in surgeries for fractures of neck of femur	2019	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Raittio, L.; Launonen, A.; Hevonkorpi, T.; Luokkala, T.; Kukkonen, J.; Reito, A.; Sumrein, B.; Laitinen, M.; Mattila, V. M.	Comparison of volar-flexion, ulnar-deviation and functional position cast immobilization in the non-operative treatment of distal radius fracture in elderly patients: A pragmatic randomized controlled trial study protocol	2017	Protocol
Ramos, L.; Piedra, M.; Munoz, P.; Vazquez, L. A.; Garcia-Unzueta, M. T.; Montalban, C.; Amado, J. A.	Bone mineral density evolution and incidence of fractures in a cohort of patients with primary hyperparathyroidism treated with parathyroid surgery vs active surveillance during 6 years of follow-up	2019	Incorrect patient population (includes age<50 yrs)
Rashed, R. A. M.; Sevenoaks, H.; Choudry, Q. A.; Kasem, M. S.; Elkhadrawe, T. A.; Eldakhakhny, M. M.	Comparison of functional outcome of cemented total hip replacement versus cemented dual-mobility cup total hip replacement for the management of displaced femoral neck fractures in the active elderly patients	2020	Imperfect comparison
Rashid, R. H.; Shah, A. A.; Shakoor, A.; Noordin, S.	Hip fracture surgery: does type of anesthesia matter?	2013	Incorrect patient population (includes age<50 yrs)
Rashid, R. H.; Zubairi, A. J.; Slote, M. U.; Noordin, S.	Hip fracture surgery: does time of the day matter? A case-controlled study	2013	Does not address question of interest - comparing daytime vs. evening surgery
Rathod, P. A.; Bhalla, S.; Deshmukh, A. J.; Rodriguez, J. A.	Does fluoroscopy with anterior hip arthroplasty decrease acetabular cup variability compared with a nonguided posterior approach?	2014	Incorrect patient population (includes age<50 yrs)
Ravi, B.; Pincus, D.; Khan, H.; Wasserstein, D.; Jenkinson, R.; Kreder, H. J.	Comparing Complications and Costs of Total Hip Arthroplasty and Hemiarthroplasty for Femoral Neck Fractures: A Propensity Score-Matched, Population-Based Study	2019	not best available evidence
Reavley, P.; Montgomery, A. A.; Smith, J. E.; Binks, S.; Edwards, J.; Elder, G.; Benger, J.	Randomised trial of the fascia iliaca block versus the '3-in-1' block for femoral neck fractures in the emergency department	2015	Incorrect patient population (inclusion criteria aged >18 yrs)

Authors	Article Title	Year	Reason for Exclusion
Reguant, F.; Arnau, A.; Lorente, J. V.; Maestro, L.; Bosch, J.	Efficacy of a multidisciplinary approach on postoperative morbidity and mortality of elderly patients with hip fracture	2019	not best available evidence
Reilev, M.; Hallas, J.; Thomsen Ernst, M.; Nielsen, G. L.; Bonderup, O. K.	Long-term oral budesonide treatment and risk of osteoporotic fractures in patients with microscopic colitis	2020	Does not address question of interest - prognostic endpoints
Reina, N.; Bonnevialle, P.; Rubens Duval, B.; Adam, P.; Loubignac, F.; Favier, T.; Massin, P.; SoFcot,	Internal fixation of intra-capsular proximal femoral fractures in patients older than 80 years: Still relevant? Multivariate analysis of a prospective multicentre cohort	2017	Does not address question of interest
Reina, N.; Geiss, L.; Pailhe, R.; Maubisson, L.; Laffosse, J. M.; Chiron, P.	Traumax screw plate vs. Gamma nail. Blood loss in pertrochanteric fractures treated by minimally invasive osteosynthesis	2014	Insufficient data - age range not provided
Ren, K. W.; Shen, N.; Tang, J. L.; Nong, L. M.; Gu, Y. Q.	Effects of ulinastatin on inflammatory response and cognitive function after hip arthroplasty for the elderly patients with femoral neck fracture	2018	Incorrect patient population (includes age<50 yrs)
Renerts, K.; Fischer, K.; Dawson-Hughes, B.; Orav, E. J.; Freystaetter, G.; Simmen, H. P.; Pape, H. C.; Egli, A.; Theiler, R.; Bischoff-Ferrari, H. A.	Effects of a simple home exercise program and vitamin D supplementation on health-related quality of life after a hip fracture: a randomized controlled trial	2019	Does not address question of interest - prognostic endpoints
Resnick, B.; Beaupre, L.; McGilton, K. S.; Galik, E.; Liu, W.; Neuman, M. D.; Gruber-Baldini, A. L.; Orwig, D.; Magaziner, J.	Rehabilitation Interventions for Older Individuals With Cognitive Impairment Post-Hip Fracture: A Systematic Review	2016	Systematic review
Rezaie, W.; Wei, W.; Cleffken, B. I.; van der Vlies, C. H.;	Internal Fixation Versus Hemiarthroplasty for Displaced Intra-Capsular Femoral Neck Fractures in ASA 3-5 Geriatric Patients	2016	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Cleffken, B. I.; Roukema, G. R.			
Richards, J. T.; Overmann, A. L.; O'Hara, N. N.; D'Alleyrand, J. C.; Slobogean, G. P.	Internal Fixation Versus Arthroplasty for the Treatment of Nondisplaced Femoral Neck Fractures in the Elderly: A Systematic Review and Meta-Analysis	2020	Systematic review
Richardson, C. G.; Lethbridge, L. N.; Dunbar, M. J.	Increased Mortality with the Use of Cementless Fixation for Femoral Neck Fractures: Analysis of 5883 Hip Arthroplasty Cases	2020	not best available evidence
Riddell, M.; Ospina, M.; Holroyd-Leduc, J. M.	Use of Femoral Nerve Blocks to Manage Hip Fracture Pain among Older Adults in the Emergency Department: A Systematic Review	2016	Systematic review
Rincon Gomez, M.; Hernandez Quiles, C.; Garcia Gutierrez, M.; Galindo Ocana, J.; Parra Alcaraz, R.; Alfaro Lara, V.; Gonzalez Leon, R.; Bernabeu Wittel, M.; Ollero Baturone, M.	Hip fracture co-management in the elderly in a tertiary referral hospital: A cohorts study	2020	Foreign language
Ritcey, B.; Pageau, P.; Woo, M. Y.; Perry, J. J.	Regional Nerve Blocks For Hip and Femoral Neck Fractures in the Emergency Department: A Systematic Review	2016	Systematic review - to review
Rivera, F.; Leonardi, F.; Maniscalco, P.; Caforio, M.; Capelli, R.; Molinari, G.; Esopi, P.	Uncemented fully hydroxyapatite-coated hip stem for intracapsular femoral neck fractures in osteoporotic elderly patients: a multicenter study	2015	not best available evidence
Rizzo, P. F.; Gould, E. S.; Lyden, J. P.; Asnis, S. E.	Diagnosis of occult fractures about the hip. Magnetic resonance imaging compared with bone-scanning	1993	Advanced Imaging

Authors	Article Title	Year	Reason for Exclusion
Roberts, H. C.; Pickering, R. M.; Onslow, E.; Clancy, M.; Powell, J.; Roberts, A.; Hughes, K.; Coulson, D.; Bray, J.	The effectiveness of implementing a care pathway for femoral neck fracture in older people: A prospective controlled before and after study	2004	not best available evidence
Roberts, J. L.; Pritchard, A. W.; Williams, M.; Totton, N.; Morrison, V.; Din, N. U.; Williams, N. H.	Mixed methods process evaluation of an enhanced community-based rehabilitation intervention for elderly patients with hip fracture	2018	Does not address question of interest
Rocca, G.; Spina, M.; Mazzi, M.	Anterior Combined Endopelvic (ACE) approach for the treatment of acetabular and pelvic ring fractures: A new proposal	2014	Incorrect patient population (includes age<50 yrs)
Rogmark, C.	CORR insights: randomized trial of hemiarthroplasty versus internal fixation for femoral neck fractures: no differences at 6 years	2014	Commentary
Rogmark, C.; Jobory, A.; Unger, O.; Nilsson, I.; Dahlqvist, L.	Post-discharge use of assistive devices following hemiarthroplasty: comparison of fracture patients with or without hip precautions	2019	Insufficient data - age range not provided
Roll, C.; Tittel, S.; Schafer, M.; Burkhardt, J.; Kinner, B.	Continuous improvement process: ortho-geriatric co-management of proximal femoral fractures	2019	Does not address question of interest
Rollo, G.; Tartaglia, N.; Falzarano, G.; Pichierri, P.; Stasi, A.; Medici, A.; Meccariello, L.	The challenge of non-union in subtrochanteric fractures with breakage of intramedullary nail: evaluation of outcomes in surgery revision with angled blade plate and allograft bone strut	2017	Incorrect patient population (<30 patients/group)
Ronga, M.; Bonzini, D.; Valoroso, M.; La Barbera, G.; Tamini, J.; Cherubino, M.; Cherubino, P.	Blood loss in trochanteric fractures: multivariate analysis comparing dynamic hip screw and Gamma nail	2017	Does not address question of interest - prognostic endpoints

Authors	Article Title	Year	Reason for Exclusion
Rosas, S.; Marquez-Lara, A.; Jinnah, A. H.; Roche, M. W.; Willey, J. S.; Gwam, C.; Emory, C. L.	Hemiarthroplasty for Fractures of Metastatic Bone Disease Have Different Outcomes Compared to Fractures Without Metastasis: A Matched-Pair Analysis	2017	Does not address question of interest
Roshan, A.; Ram, S.	Early return to function in young adults with neglected femoral neck fractures	2006	Incorrect patient population (includes age<50 yrs)
Ross, J. R.; Keith, A.; Pashos, G. E.; Duncan, S.; Schoenecker, P.; Clohisy, J. C.	Early Clinical and Radiographic Outcomes of Combined Hip Arthroscopy and Periacetabular Osteotomy	2014	Poster presentation (insufficient data)
Rotman, D.; Giladi, O.; Senderey, A. B.; Dallich, A.; Dolkart, O.; Kadar, A.; Maman, E.; Chechik, O.	Mortality After Complex Displaced Proximal Humerus Fractures in Elderly Patients: Conservative Versus Operative Treatment With Reverse Total Shoulder Arthroplasty	2018	Incorrect patient population (not exclusive to hip)
Rousseau, A. C.; Blanchon, T.; Turbelin, C.; Cabane, J.; Hanslik, T.; Feron, J. M.; Rousseau, B.; Fardet, L.	Primary-care physicians' patient referral patterns to private versus public hospitals for orthopaedic or trauma surgery-- French Sentinels R database, 1997-2011	2013	Incorrect patient population (includes age<50 yrs)
Roux, S.; Gaboury, I.; Gionet-Landry, N.; Garant, M. P.; Beaulieu, M. C.; Carrier, N.; Cabana, F.; Boire, G.	Using a sequential explanatory mixed method to evaluate the therapeutic window of opportunity for initiating osteoporosis treatment following fragility fractures	2018	Does not address question of interest - prognostic endpoints
Rowlands, M.; Forward, D. P.; Sahota, O.; Moppett, I. K.	The effect of intravenous iron on postoperative transfusion requirements in hip fracture patients: Study protocol for a randomized controlled trial	2013	Protocol
Rubayi, S.; Gabbay, J.; Kruger, E.; Ruhge, K.	The Modified Girdlestone Procedure With Muscle Flap for Management of Pressure Ulcers and Heterotopic Ossification of the Hip Region in Spinal Injury Patients: A 15-Year Review With Long-term Follow-up	2016	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Rudiger, H. A.; Betz, M.; Zingg, P. O.; McManus, J.; Dora, C. F.	Outcome after proximal femoral fractures during primary total hip replacement by the direct anterior approach	2013	Incorrect patient population (<30 patients/group)
Ruhullah, M.; Singh, H. R.; Shah, S.; Shrestha, D.	Hip spica versus Rush pins for management of femoral diaphyseal fractures in children	2014	Incorrect patient population (includes age<50 yrs)
Rui, M.; Zheng, X.; Sun, S. S.; Li, C. Y.; Zhang, X. C.; Guo, K. J.; Zhao, F. C.; Pang, Y.	A prospective randomised comparison of 2 skin closure techniques in primary total hip arthroplasty surgery	2018	Incorrect patient population (includes age<50 yrs)
Rutherford, M.; Khan, R. J. K.; Fick, D. P.; Haebich, S.; Nivbrant, O.; Kozak, T.	Randomised clinical trial assessing migration of uncemented primary total hip replacement stems, with and without autologous impaction bone grafting	2019	Imperfect comparison
Ryan, D. J.; Yoshihara, H.; Yoneoka, D.; Egol, K. A.; Zuckerman, J. D.	Delay in Hip Fracture Surgery: An Analysis of Patient-Specific and Hospital-Specific Risk Factors	2015	Does not address question of interest - prognostic endpoints
Ryan, T.; Enderby, P.; Rigby, A. S.	A randomized controlled trial to evaluate intensity of community-based rehabilitation provision following stroke or hip fracture in old age	2006	Excluded PICO
Ryu, H. G.; Roh, Y. J.; Oh, K. J.; Hwang, J. H.; Kim, Y.; Cho, H. W.; Kim, S. M.	Dual mobility articulation total hip arthroplasty for displaced neck fracture in elderly with neuromuscular disorder	2021	Does not address question of interest - stratified by pt characteristics
S, V.; Rao, S. K.	One and two femoral neck screws with intramedullary nails for unstable trochanteric fractures of femur in the elderly-Randomised clinical trial	2007	DUPLICATE to AAOS ID 4970
Saag, K. G.; Pannacciulli, N.; Geusens, P.; Adachi, J. D.; Messina, O. D.; Morales-Torres, J.; Emkey, R.; Butler, P. W.; Yin, X.; Lems, W. F.	Denosumab Versus Risedronate in Glucocorticoid-Induced Osteoporosis: Final Results of a Twenty-Four-Month Randomized, Double-Blind, Double-Dummy Trial	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Saag, K. G.; Wagman, R. B.; Geusens, P.; Adachi, J. D.; Messina, O. D.; Emkey, R.; Chapurlat, R.; Wang, A.; Pannacciulli, N.; Lems, W. F.	Denosumab versus risedronate in glucocorticoid-induced osteoporosis: a multicentre, randomised, double-blind, active-controlled, double-dummy, non-inferiority study	2018	Incorrect patient population (includes age<50 yrs)
Sadeghi, M.; Mehr-Aein, A.	Does a single bolus dose of tranexamic acid reduce blood loss and transfusion requirements during hip fracture surgery? A prospective randomized double blind study in 67 patients	2007	Incorrect patient population (includes age<50 yrs)
Sadowski, C.; Lübbeke, A.; Saudan, M.; Riand, N.; Stern, R.; Hoffmeyer, P.	Treatment of reverse oblique and transverse intertrochanteric fractures with use of an intramedullary nail or a 95 degrees screw-plate: a prospective, randomized study	2002	Sample Size too Small (n < 30 per group)
Saeed Younis, A.; Mahmoud, S.; Salem Eid, A.; Khairy Mahmoud, A.	Functional outcomes of internal fixation and arthroplasty in the treatment of intertrochanteric femoral fractures: A systematic review	2018	Systematic review
Sahin, E.; Songur, M.; Kalem, M.; Zehir, S.; Aksekili, M. A.; Keser, S.; Bayar, A.	Traction table versus manual traction in the intramedullary nailing of unstable intertrochanteric fractures: A prospective randomized trial	2016	Does not address question of interest - both groups received traction
Sahin, O.; Demirors, H.; Akgun, R.; Senturk, I.; Tuncay, I. C.	Dynamic hip screw versus proximal femoral nail for treatment of trochanteric hip fractures: An outcome analyses with a minimum 2 years of follow-up	2012	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Sahota, O.; Rowlands, M.; Bradley, J.; Van de Walt, G.; Bedforth, N.; Armstrong, S.; Moppett, I.	Femoral nerve block Intervention in Neck of Femur fracture (FINOF): Study protocol for a randomized controlled trial	2014	Protocol
Sakic, L.; Tonkovic, D.; Sakic, K.	Dexamethasone - Intrathecal Minimiser of Simple Haemathologic Stress Biomarkers in Hip Fracture	2019	Does not address question of interest - both groups received spinal anesthesia
Salar, O.; Holley, J.; Baker, B.; Ollivere, B. J.; Moran, C. G.	Omitting pre-operative coagulation screening tests in hip fracture patients: stopping the financial cascade?	2014	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Salcuni, A. S.; Morelli, V.; Eller Vainicher, C.; Palmieri, S.; Cairoli, E.; Spada, A.; Scillitani, A.; Chiodini, I.	Adrenalectomy reduces the risk of vertebral fractures in patients with monolateral adrenal incidentalomas and subclinical hypercortisolism	2016	Incorrect patient population (<30 patients/group)
Saliba, W.; Arbel, A.; Abu-Full, Z.; Cohen, S.; Rennert, G.; Preis, M.	Preoperative direct oral anticoagulants treatment and all-cause mortality in elderly patients with hip fracture: A retrospective cohort study	2020	Does not address question of interest
Salpakoski, A.; Kallinen, M.; Kiviranta, I.; Alen, M.; Portegijs, E.; Jamsen, E.; Ylinen, J.; Rantanen, T.; Sipila, S.	Type of surgery is associated with pain and walking difficulties among older people with previous hip fracture	2016	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Salpakoski, A.; Tormakangas, T.; Edgren, J.; Kallinen, M.; Sihvonen, S. E.; Pesola, M.; Vanhatalo, J.; Arkela, M.; Rantanen, T.; Sipila, S.	Effects of a multicomponent home-based physical rehabilitation program on mobility recovery after hip fracture: a randomized controlled trial	2014	Does not address question of interest - final results reported as prognostic endpoints
Saltvedt, I.; Prestmo, A.; Einarsen, E.; Johnsen, L. G.; Helbostad, J. L.; Sletvold, O.	Development and delivery of patient treatment in the Trondheim Hip Fracture Trial. A new geriatric in-hospital pathway for elderly patients with hip fracture	2012	Does not address question of interest
Samsami, S.; Augat, P.; Rouhi, G.	Stability of femoral neck fracture fixation: A finite element analysis	2019	Does not address question of interest

Authors	Article Title	Year	Reason for Exclusion
Sanchez-Garcia, J.; Falantes, J.; Medina Perez, A.; Hernandez-Mohedo, F.; Hermosin, L.; Torres-Sabariego, A.; Bailen, A.; Hernandez-Sanchez, J. M.; SolÃ© Rodriguez, M.; CasaÃ±o, F. J.; Calderon, C.; Labrador, M.; VahÃ, M.; Serrano, J.; Lumbreras, E.; HernÃ¡ndez-Rivas, J. M.	Prospective randomized trial of 5 days azacitidine versus supportive care in patients with lower-risk myelodysplastic syndromes without 5q deletion and transfusion-dependent anemia	2018	Incorrect patient population (includes age<50 yrs)
Sanclemente-Boli, T.; Ponce-Ruiz, S.; Alvarez-Lorenzo, C.; Zuriguel-Perez, E.; Tapia-Melenchon, R.; Ramentol-Sintas, M.; Villar-Casares, M. D. M.; Teixidor-Serra, J.; Molero-Garcia, V.; Sanchez-Raya, J.; Lalueza-Broto, P.; Gines-Puertas, A.; Garrido-Clua, M.; Mestre-Torres, J.	Effectiveness of a multidisciplinary educational intervention in patients with hip fracture: SWEET HOME study	2019	Foreign language
Santori, N.; Falez, F.; Potestio, D.; Santori, F. S.	Fourteen-year experience with short cemented stems in total hip replacement	2019	Imperfect comparison
Sargin, S.; Konya, M. N.; Gulcu, A.; Aslan, A.	Effects of Zoledronic Acid Treatment on Fracture Healing, Morbidity and Mortality in Elderly Patients with Osteoporotic Hip Fractures	2019	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Sariali, E.; Catonne, Y.; Pascal-Moussellard, H.	Three-dimensional planning-guided total hip arthroplasty through a minimally invasive direct anterior approach. Clinical outcomes at five years' follow-up	2017	Incorrect patient population (includes age<50 yrs)
Sasabuchi, Y.; Matsui, H.; Lefor, A. K.; Fushimi, K.; Yasunaga, H.	Timing of surgery for hip fractures in the elderly: A retrospective cohort study	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Sasabuchi, Y.; Matsui, H.; Lefor, A. K.; Jo, T.; Michihata, N.; Fushimi, K.; Yasunaga, H.	Japanese Herbal Kampo Hochu-Ekki-To or Juzen-Taiho-To after Surgery for Hip Fracture Does Not Reduce Infectious Complications	2018	Incorrect patient population (includes age<50 yrs, >40 yrs)
Sasaki, S.; Miyakoshi, N.; Matsuura, H.; Saito, H.; Nakanishi, T.; Kudo, Y.; Fujiya, T.; Shimada, Y.	Prospective study on the efficacies of fondaparinux and enoxaparin in preventing venous thromboembolism after hip fracture surgery	2011	Incorrect patient population (< 30 pts/group)
Sassoon, A.; D'Apuzzo, M.; Sems, S.; Cass, J.; Mabry, T.	Total hip arthroplasty for femoral neck fracture: comparing in-hospital mortality, complications, and disposition to an elective patient population	2013	Incorrect patient population (includes age<50 yrs)
Savage, P.; McCormick, M.; Al-Dadah, O.	Arthroplasty infection rates in fractured neck of femur: single vs dual antibiotic cement	2019	Does not address question of interest (not among specified interventions)
Saving, J.; Enocson, A.; Ponzer, S.; Mellstrand Navarro, C.	External Fixation Versus Volar Locking Plate for Unstable Dorsally Displaced Distal Radius Fractures-A 3-Year Follow-Up of a Randomized Controlled Study	2019	Incorrect patient population (not exclusive to hip)
Sawaguchi, A.; Momosaki, R.; Hasebe, K.; Chono, M.; Kasuga, S.; Abo, M.	Effectiveness of preoperative physical therapy for older patients with hip fracture	2018	Does not address question of interest (not among specified interventions)
Sayed-Noor, A. S.; Hanas, A.; Skoldenberg, O. G.; Mukka, S. S.	Abductor Muscle Function and Trochanteric Tenderness After Hemiarthroplasty for Femoral Neck Fracture	2016	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Sayeed, Z.; Anoushiravani, A.; El-Othmani, M.; Barinaga, G.; Sayeed, Y.; Cagle, P., Jr.; Saleh, K. J.	Implementation of a Hip Fracture Care Pathway Using Lean Six Sigma Methodology in a Level I Trauma Center	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Scaglione, M.; Casella, F.; Giuntoli, M.; Celli, F.; Fabbri, L.; Marchetti, S.	The role of superior capsular approach (SuperPATH) in the treatment of femoral neck fractures with hemiarthroplasty implantation: our experience and review of literature	2020	Case series
Scarcella, N.; Schnaser, E.; Vallier, H. A.	Results and complications in elderly patients with acetabular fractures	2016	not best available evidence
Schermann, H.; Gurel, R.; Gold, A.; Maman, E.; Dolkart, O.; Steinberg, E. L.; Chechik, O.	Safety of urgent hip fracture surgery protocol under influence of direct oral anticoagulation medications	2019	Does not meet inclusion criteria (non-post-operative for VTE)
Schermann, H.; Gurel, R.; Rotman, D.; Chechik, O.; Sternheim, A.; Salai, M.; Ben-Tov, T.; Kadar, A.	Regulatory Measures Expedited Hip Fracture Surgery Without Lowering Overall Patient Mortality	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Schmid, S.; Blobner, M.; Haas, B.; Lucke, M.; Neumaier, M.; Anetsberger, A.; Jungwirth, B.	Perioperative multi-system optimization protocol in elderly hip fracture patients: a randomized-controlled trial	2019	Does not address question of interest
Schmitz, P.; Baumann, F.; Acklin, Y. P.; Gueorguiev, B.; Nerlich, M.; Grechenig, S.; MÃ¼ller, M. B.	Clinical application of a minimally invasive cement-augmentable Schanz screw rod system to treat pelvic ring fractures	2019	Incorrect patient population (<30 patients/group)
Schulte, S.; Nguyen, M. P.; Reich, M.; Adler, A.; Tienderen, R. Van; Fernandez, I.	Impact of fascia iliaca block on pain outcomes and opioid consumption for hip fracture patients: a prospective, randomized study	2019	Poster presentation

Authors	Article Title	Year	Reason for Exclusion
Schulz, C.; Konig, H. H.; Rapp, K.; Becker, C.; Rothenbacher, D.; Buchele, G.	Analysis of mortality after hip fracture on patient, hospital, and regional level in Germany	2019	Does not address question of interest - prognostic endpoints
Schumaier, A.; Grawe, B.	Proximal humerus fractures: Evaluation and management in the elderly patient	2018	Narrative review
Schwab, P.; Klein, R. F.	Nonpharmacological approaches to improve bone health and reduce osteoporosis	2008	Background article
Schwartz, B. E.; Sisko, Z. W.; Mayekar, E. M.; Wang, O. J.; Gordon, A. C.	Transitioning to the Direct Anterior Approach in Total Hip Arthroplasty: Is It Safe in the Current Health Care Climate?	2016	Incorrect patient population (includes age<50 yrs)
Schwarzer, A.; Kaisler, M.; Kipping, K.; Seybold, D.; Rausch, V.; Maier, C.; Vollert, J.	Opioid intake prior to admission is not increased in elderly patients with low-energy fractures: A case-control study in a German hospital population	2018	Does not address question of interest - stratified by pt characteristics
Schwarzkopf, R.; Chin, G.; Kim, K.; Murphy, D.; Chen, A. F.	Do Conversion Total Hip Arthroplasty Yield Comparable Results to Primary Total Hip Arthroplasty?	2017	Insufficient data - age range not provided
Sedighinejad, A.; Naderi Nabi, B.; Ettehad, H.; Mirbolook, A.; Atrkarroushan, Z.; Ghazanfar Tehran, S.; Biazar, G.; Haghighi, M.	Does Adding Lidocaine to Intrathecal Bupivacaine Affect Hemodynamic Parameters during Hip Fracture Surgery?	2018	Does not address question of interest (not measuring pain outcomes)
Segerstad, M. H. A.; Olsen, F.; Patel, A.; Houltz, E.; NellgÃ¥rd, B.; Ricksten, S. E.	Pulmonary haemodynamics and right ventricular function in cemented vs uncemented total hip arthroplastyâ??A randomized trial	2019	Incorrect patient population (<30 patients/group)
Seitz, D. P.; Gill, S. S.; Bell, C. M.; Austin, P. C.; Gruneir, A.; Anderson, G. M.; Rochon, P. A.	Postoperative medical complications associated with anesthesia in older adults with dementia	2014	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Sellan, M.; Bryant, D.; Tieszer, C.; Papp, S.; Lawendy, A.; Liew, A.; Viskontas, D.; MacLeod, M.; Coles, C.; Carey, T.; Gofton, W.; Trenholm, A.; Stone, T.; Leighton, R.; Sanders, D.	Short Versus Long InterTAN Fixation for Geriatric Intertrochanteric Hip Fractures: A Multicentre Head-to-Head Comparison	2019	Secondary analysis
Selvam, P.; Soundarapandian, S.; Soundarapandian, R.; Senguttuvan, C.	Preoperative Factors Influencing Decision Between Hemiarthroplasty and Total Hip Arthroplasty in Femoral Neck Fractures in Indian Patients-Retrospective Single-Center Study	2017	not best available evidence
Seng, W. R.; Belani, M. H.; Ramason, R.; Naidu, G.; Doshi, H. K.	Functional Improvement in Geriatric Hip Fractures: Does Vitamin D Deficiency Affect the Functional Outcome of Patients With Surgically Treated Intertrochanteric Hip Fractures	2015	Does not address question of interest
Seo, J. S.; Shin, S. K.; Jun, S. H.; Cho, C. H.; Lim, B. H.	The Early Result of Cementless Arthroplasty for Femur Neck Fracture in Elderly Patients with Severe Osteoporosis	2014	not best available evidence
Sermon, A.; Rochus, I.; Smeets, B.; Metsemakers, W. J.; Misselyn, D.; Nijs, S.; Hoekstra, H.	The implementation of a clinical pathway enhancing early surgery for geriatric hip fractures: how to maintain a success story?	2019	Does not meet inclusion criteria (non-RCT for timing PICO)
Serrano, R.; Blair, J. A.; Watson, D. T.; Infante, A. F., Jr.; Shah, A. R.; Mir, H. R.; Maxson, B. J.; Downes, K. L.; Sanders, R. W.	Cephalomedullary Nail Fixation of Intertrochanteric Femur Fractures: Are Two Proximal Screws Better Than One?	2017	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Setiobudi, T.; Ng, Y. H.; Lim, C. T.; Liang, S.; Lee, K.; Das De, S.	Clinical outcome following treatment of stable and unstable intertrochanteric fractures with dynamic hip screw	2011	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)

Authors	Article Title	Year	Reason for Exclusion
Seyhan, M.; Turkmen, I.; Unay, K.; Ozkut, A. T.	Do PFNA devices and Intertan nails both have the same effects in the treatment of trochanteric fractures? A prospective clinical study	2015	Incorrect patient population (includes age<50 yrs)
Shah, R. R.; Goldstein, J. M.; Cipparrone, N. E.; Gordon, A. C.; Jimenez, M. L.; Goldstein, W. M.	Alarmingly High Rate of Implant Fractures in One Modular Femoral Stem Design: A Comparison of Two Implants	2017	Insufficient data - age range not provided
Shah, S. W. A.; Bakhsh, K.; Ahmed, N.	Cemented bipolar hemiarthroplasty better than austin Moore hemiarthroplasty for treatment of fracture neck of femur - Is this true?	2019	not best available evidence
Shah, S.; Patel, A.; Choudhry, B.; Thilagarajah, M.	Educational e-learning tool to improve fascia iliac block uptake for neck of femur fracture patients: A multi-disciplinary approach	2020	Incorrect patient population (<30 patients/group)
Shahrezaee, M.; Okhovatpour, M. A.; Banasiri, M.; Sharifzadeh, S. R.	Studying the effects of primary arthroplasty on post-treatment results among elderly patients with pertrochanteric fracture	2018	Insufficient data - (within comparison group)
Shams, A.; El-Sayed, M.; Elsawy, M.; Hafez, K.; Gad, H.	Comparative, prospective, randomized study of the modified minimally invasive technique versus the conventional technique of dynamic hip screw (DHS), fixation for intertrochanteric fractures in the elderly	2015	Does not meet inclusion criteria (stable & unstable hips)
Shao, Q. D.; Yan, X.; Sun, J. Y.; Xu, T. M.	Internal hemipelvectomy with reconstruction for primary pelvic neoplasm: a systematic review	2015	Systematic review
Sharma, A.; Mahajan, A.; John, B.	A Comparison of the Clinico-Radiological Outcomes with Proximal Femoral Nail (PFN) and Proximal Femoral Nail Antirotation (PFNA) in Fixation of Unstable Intertrochanteric Fractures	2017	Incorrect patient population (<30 patients/group)
Sharma, G.; Singh, R.; Gn, K. K.; Jain, V.; Gupta, A.; Gamanagatti, S.; Farooque, K.; Sharma, V.	Which AO/OTA 31-A2 pertrochanteric fractures can be treated with a dynamic hip screw without developing a lateral wall fracture? A CT-based study	2016	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Sheehan, K. J.; Filliter, C.; Sobolev, B.; Levy, A. R.; Guy, P.; Kuramoto, L.; Kim, J. D.; Dunbar, M.; Morin, S. N.; Sutherland, J. M.; Jaglal, S.; Harvey, E.; Beaupre, L.; Chudyk, A.; Canadian Collaborative Study on Hip, Fractures	Time to surgery after hip fracture across Canada by timing of admission	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Sheehan, K. J.; Fitzgerald, L.; Hatherley, S.; Potter, C.; Ayis, S.; Martin, F. C.; Gregson, C. L.; Cameron, I. D.; Beaupre, L. A.; Wyatt, D.; Milton-Cole, R.; DiGiorgio, S.; Sackley, C.	Inequity in rehabilitation interventions after hip fracture: a systematic review	2019	Systematic review
Sheehan, K. J.; Guerrero, E. M.; Tainter, D.; Dial, B.; Milton-Cole, R.; Blair, J. A.; Alexander, J.; Swamy, P.; Kuramoto, L.; Guy, P.; Bettger, J. P.; Sobolev, B.	Prognostic factors of in-hospital complications after hip fracture surgery: a scoping review	2019	Does not address question of interest - prognostic endpoints
Sheehan, K. J.; Williamson, L.; Alexander, J.; Filliter, C.; Sobolev, B.; Guy, P.; Bearne, L. M.; Sackley, C.	Prognostic factors of functional outcome after hip fracture surgery: a systematic review	2018	Systematic review
Shen, J.; Hu, C.; Yu, S.; Huang, K.; Xie, Z.	A meta-analysis of percutenous compression plate versus intramedullary nail for treatment of intertrochanteric HIP fractures	2016	Meta-analysis

Authors	Article Title	Year	Reason for Exclusion
Shenouda, M.; Silk, Z.; Radha, S.; Bouanem, E.; Radford, W.	The Introduction of a Multidisciplinary Hip Fracture Pathway to Optimise Patient Care and Reduce Mortality: A Prospective Audit of 161 Patients	2017	not best available evidence
Shieh, A. K.; Refaat, M.; Heyrani, N.; Garcia-Nolen, T. C.; Lee, M. A.; Eastman, J. G.	Are piriformis reconstruction implants ideal for prophylactic femoral neck fixation?	2019	Does not address question of interest
Shields, E.; Kates, S. L.	Revision rates and cumulative financial burden in patients treated with hemiarthroplasty compared to cannulated screws after femoral neck fractures	2014	not best available evidence
Shields, L.; Henderson, V.; Caslake, R.	Comprehensive Geriatric Assessment for Prevention of Delirium After Hip Fracture: A Systematic Review of Randomized Controlled Trials	2017	Systematic review
Shigemoto, K.; Sawaguchi, T.; Goshima, K.; Iwai, S.; Nakanishi, A.; Ueoka, K.	The effect of a multidisciplinary approach on geriatric hip fractures in Japan	2019	not best available evidence
Shin, W. C.; Jang, J. H.; Jeong, J. Y.; Suh, K. T.; Moon, N. H.	Effect of a synthetic osteoconductive bone graft substitute with zeta potential control (geneX Rds) in the treatment of intertrochanteric fracture: A single center experience of 115 consecutive proximal femoral nail antirotations	2019	Does not address question of interest (not among specified interventions)
Shin, W. C.; Jang, J. H.; Seo, H. E.; Suh, K. T.; Moon, N. H.	Prevalence and clinical impact of sarcopenia in osteoporotic hip fracture: Single center retrospective cohort study	2020	Incorrect patient population (includes age<50 yrs)
Shin, W. C.; Moon, N. H.; Jang, J. H.; Lee, H. J.; Suh, K. T.	Comparative study between biologic plating and intramedullary nailing for the treatment of subtrochanteric fractures: Is biologic plating using LCP-DF superior to intramedullary nailing?	2017	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Shin, W. C.; Moon, N. H.; Jeon, S. B.; Suh, K. T.	Comparison of Surgical Outcomes Between Standard and Elevated-Rim Highly Cross-Linked Polyethylene Acetabular Liners in Primary Total Hip Arthroplasty With Minimum 15-Year Follow-Up: Single-Center, Retrospective Cohort Study	2020	Incorrect patient population (includes age<50 yrs)
Shin, Y. S.; Chae, J. E.; Kang, T. W.; Han, S. B.	Prospective randomized study comparing two cephalomedullary nails for elderly intertrochanteric fractures: Zimmer natural nail versus proximal femoral nail antirotation II	2017	Did not address question of interest
Shin, Y. S.; Suh, D. H.; Park, J. H.; Kim, J. L.; Han, S. B.	Comparison of Specific Femoral Short Stems and Conventional-Length Stems in Primary Cementless Total Hip Arthroplasty	2016	Incorrect patient population (includes age<50 yrs)
Shinoda, S.; Mutsuzaki, H.; Watanabe, A.; Morita, H.; Kamioka, Y.	Factors influencing period from surgery to discharge in patients with femoral trochanteric fractures	2017	Incorrect patient population (<30 patients/group)
Shukla, R.; Singh, M.; Jain, R. K.; Mahajan, P.; Kumar, R.	Functional Outcome of Bipolar Prosthesis versus Total Hip Replacement in the Treatment of Femoral Neck Fracture in Elderly Patients	2017	Incorrect pt population (<30 pts/group)
Shuman, C. J.; Xie, X. J.; Herr, K. A.; Titler, M. G.	Sustainability of Evidence-Based Acute Pain Management Practices for Hospitalized Older Adults	2018	*Follow-up study
Siebens, H. C.; Sharkey, P.; Aronow, H. U.; Deutscher, D.; Roberts, P.; Munin, M. C.; Radnay, C. S.; Horn, S. D.	Variation in Rehabilitation Treatment Patterns for Hip Fracture Treated With Arthroplasty	2016	Does not meet inclusion criteria (non-RCT for timing PICO)
Sieber, F. E.; Neufeld, K. J.; Gottschalk, A.; Bigelow, G. E.; Oh, E. S.; Rosenberg, P. B.; Mears, S. C.; Stewart, K. J.; Ouanes, J. P.; Jaberi, M.; Hasenboehler, E. A.; Li, T.; Wang, N. Y.	Effect of Depth of Sedation in Older Patients Undergoing Hip Fracture Repair on Postoperative Delirium: The STRIDE Randomized Clinical Trial	2018	Does not address question of interest - comparison of sedation depth

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Sieber, F.; Neufeld, K. J.; Gottschalk, A.; Bigelow, G. E.; Oh, E. S.; Rosenberg, P. B.; Mears, S. C.; Stewart, K. J.; Ouanes, J. P.; Jaberi, M.; Hasenboehler, E. A.; Wang, N. Y.	Depth of sedation as an interventional target to reduce postoperative delirium: mortality and functional outcomes of the Strategy to Reduce the Incidence of Postoperative Delirium in Elderly Patients randomised clinical trial	2019	Does not address question of interest - both groups receive spinal anesthesia
Simoni, A. H.; Nikolajsen, L.; Olesen, A. E.; Christiansen, C. F.; Pedersen, A. B.	Opioid use after hip fracture surgery: A Danish nationwide cohort study from 2005 to 2015	2019	Does not address question of interest - stratified by timing of opioid use
Sims, A. L.; Parsons, N.; Achten, J.; Griffin, X. L.; Costa, M. L.; Reed, M. R.	A randomized controlled trial comparing the Thompson hemiarthroplasty with the Exeter polished tapered stem and Unitrax modular head in the treatment of displaced intracapsular fractures of the hip	2018	Does not address question of interest (both groups received cement)
Sims, A. L.; Parsons, N.; Achten, J.; Griffin, X. L.; Costa, M. L.; Reed, M. R.; Cornet trainee collaborative	A randomized controlled trial comparing the Thompson hemiarthroplasty with the Exeter polished tapered stem and Unitrax modular head in the treatment of displaced intracapsular fractures of the hip: the WHiTE 3: HEMI Trial	2018	Imperfect comparison group (both groups receive cemented hemiarthroplasty)
Singh, A. K.; Narsaria, N.; G, R. A.; Srivastava, V.	Treatment of Unstable Trochanteric Femur Fractures: Proximal Femur Nail Versus Proximal Femur Locking Compression Plate	2017	Incorrect patient population (<30 patients/group)
Singh, A. K.; Vinay, K.	Surgical treatment of displaced intra-articular calcaneal fractures: Is bone grafting necessary?	2013	Incorrect patient population (includes age<50 yrs)
Singh, G. K.; Deshmukh, R. G.	Uncemented Austin-Moore and cemented Thompson unipolar hemiarthroplasty for displaced fracture neck of femur--comparison of complications and patient satisfaction	2006	Incorrect patient population (< 30 pts/group)

Authors	Article Title	Year	Reason for Exclusion
Singh, N. K.; Sharma, V.; Trikha, V.; Gamanagatti, S.; Roy, A.; Balawat, A. S.; Aravindh, P.; Diwakar, A. R.	Is PFNA-II a better implant for stable intertrochanteric fractures in elderly population ? A prospective randomized study	2019	Incorrect patient population (<30 patients/group)
Singh, S.; Whitehurst, D. G.; Funnell, L.; Scott, V.; MacDonald, V.; Leung, P. M.; Friesen, K.; Feldman, F.	Breaking the cycle of recurrent fracture: implementing the first fracture liaison service (FLS) in British Columbia, Canada	2019	not best available evidence
Sinno, K.; Sakr, M.; Girard, J.; Khatib, H.	The effectiveness of primary bipolar arthroplasty in treatment of unstable intertrochanteric fractures in elderly patients	2010	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Sivakumar, B. S.; McDermott, L. M.; Bell, J. J.; Pulle, C. R.; Jayamaha, S.; Ottley, M. C.	Dedicated hip fracture service: implementing a novel model of care	2013	Incorrect patient population (includes age<50 yrs)
Skala-Rosenbaum, J.; Dzupa, V.; Bartoska, R.; Dousa, P.; Waldauf, P.; Krbec, M.	Distal locking in short hip nails: Cause or prevention of peri-implant fractures?	2016	Incorrect patient population (includes age<50 yrs)
Skoldenberg, O. G.; Sjoo, H.; Kelly-Pettersson, P.; Boden, H.; Eisler, T.; Stark, A.; Muren, O.	Good stability but high periprosthetic bone mineral loss and late-occurring periprosthetic fractures with use of uncemented tapered femoral stems in patients with a femoral neck fracture	2014	Incorrect pt population (<60 patients, <30 pts/group))
Skoldenberg, O.; Chammout, G.; Mukka, S.; Muren, O.; Nasell, H.; Hedbeck, C. J.; Salemyr, M.	HOPE-trial: hemiarthroplasty compared to total hip arthroplasty for displaced femoral neck fractures in the elderly-elderly, a randomized controlled trial	2015	Protocol

Authors	Article Title	Year	Reason for Exclusion
Slobogean, G. P.; Sprague, S.; Bzovsky, S.; Scott, T.; Thabane, L.; Heels-Ansdell, D.; O'Toole, R. V.; Howe, A.; Gaski, G. E.; Hill, L. C.; Brown, K. M.; Viskontas, D.; Zomar, M.; Della Rocca, G. J.; O'Hara, N. N.; Bhandari, M.	Fixation using Alternative Implants for the Treatment of Hip Fractures (FAITH-2): The Exploratory Health-Related Quality of Life and Patient-Reported Functional Outcomes of a Multi-Centre 2 x 2 Factorial Randomized Controlled Pilot Trial in Young Femoral Neck Fracture Patients	2021	Incorrect patient population (includes age<50 yrs)
Smith, A. K.; Cenzer, I. S.; John Boscardin, W.; Ritchie, C. S.; Wallhagen, M. L.; Covinsky, K. E.	Increase in Disability Prevalence Before Hip Fracture	2015	Does not address question of interest
Smith, A.; Denehy, K.; Ong, K. L.; Lau, E.; Hagan, D.; Malkani, A.	Total hip arthroplasty following failed intertrochanteric hip fracture fixation treated with a cephalomedullary nail	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Smith, T.; Hameed, Y.; Cross, J.; Sahota, O.; Fox, C.	Assessment of people with cognitive impairment and hip fracture: a systematic review and meta-analysis	2013	Meta-analysis
Smith, T.; Pelpola, K.; Ball, M.; Ong, A.; Myint, P. K.	Pre-operative indicators for mortality following hip fracture surgery: a systematic review and meta-analysis	2014	Systematic review
Smitham, P. J.; Carbone, T. A.; Bolam, S. M.; Kim, Y. S.; Callary, S. A.; Costi, K.; Howie, D. W.; Munro, J. T.; Solomon, L. B.	Vancouver B2 Peri-Prosthetic Fractures in Cemented Femoral Implants can be Treated With Open Reduction and Internal Fixation Alone Without Revision	2019	Incorrect pt population (includes aged<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Sobolev, B.; Guy, P.; Sheehan, K. J.; Kuramoto, L.; Bohm, E.; Beaupre, L.; Sutherland, J. M.; Dunbar, M.; Griesdale, D.; Morin, S. N.; Harvey, E.; Canadian Collaborative Study on Hip, Fractures	Time trends in hospital stay after hip fracture in Canada, 2004-2012: database study	2016	Does not address question of interest
Sobolev, B.; Guy, P.; Sheehan, K. J.; Kuramoto, L.; Sutherland, J. M.; Levy, A. R.; Blair, J. A.; Bohm, E.; Kim, J. D.; Harvey, E. J.; Morin, S. N.; Beaupre, L.; Dunbar, M.; Jaglal, S.; Waddell, J.; Canadian Collaborative Study of Hip, Fractures	Mortality effects of timing alternatives for hip fracture surgery	2018	Does not meet inclusion criteria (not RCT for timing PICO)
Solgaard, S.; Kjersgaard, A. G.	Increased risk for early periprosthetic fractures after uncemented total hip replacement	2014	Does not address question of interest - prognostic endpoints
Somashekar,; Krishna, S. V.; Sridhara Murthy, J.	Treatment of femoral neck fractures: unipolar versus bipolar hemiarthroplasty	2013	Incorrect pt population (<30 pts/group)
Sonaje, J. C.; Meena, P. K.; Bansiwal, R. C.; Bobade, S. S.	Comparison of functional outcome of bipolar hip arthroplasty and total hip replacement in displaced femoral neck fractures in elderly in a developing country: a 2-year prospective study	2018	Incorrect patient population (<30 patients/group)
Song, J. S. A.; Dillman, D.; Wilson, D.; Dunbar, M.; Richardson, G.	Higher periprosthetic fracture rate associated with use of modern uncemented stems compared to cemented stems in femoral neck fractures	2019	Incorrect patient population (includes aged<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Sonmez, M. M.; Camur, S.; Erturer, E.; Ugurlar, M.; Kara, A.; Ozturk, I.	Strategies for Proximal Femoral Nailing of Unstable Intertrochanteric Fractures: Lateral Decubitus Position or Traction Table	2017	Does not meet inclusion criteria (Unstable fractures for traction PICO)
Sonne-Holm, S.; Walter, S.; Jensen, J. S.	Moore hemi-arthroplasty with and without bone cement in femoral neck fractures. A clinical controlled trial	1982	Intervention not applicable (moore prosthesis)
Sonohata, M.; Kitajima, M.; Kawano, S.; Tanaka, R.; Mawatari, M.	Total hip arthroplasty with femoral subtrochanteric osteotomy after Schanz osteotomy	2016	Incorrect patient population (<30 patients/group)
Soo, C. G.; Della Torre, P. K.; Yolland, T. J.; Shatwell, M. A.	Clopidogrel and hip fractures, is it safe? A systematic review and meta-analysis	2016	Systematic review
SooHoo, N. F.; Farng, E.; Chambers, L.; Znigmond, D. S.; Lieberman, J. R.	Comparison of complication rates between hemiarthroplasty and total hip arthroplasty for intracapsular hip fractures	2013	Incorrect pt population (includes pts <50 yrs)
Soukkio, P.; Suikkanen, S.; KÃ¤Ã¤riÃ¤, S.; Kautiainen, H.; SipilÃ¤, S.; Kukkonen-Harjula, K.; Hupli, M.	Effects of 12-month home-based physiotherapy on duration of living at home and functional capacity among older persons with signs of frailty or with a recent hip fracture - protocol of a randomized controlled trial (HIPFRA study)	2018	Protocol
Soylemez, M. S.; Uygur, E.; Poyanli, O.	Effectiveness of distally slotted proximal femoral nails on prevention of femur fractures during and after intertrochanteric femur fracture surgery	2019	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Spansberg, N. L.; Anker-Møller, E.; Dahl, J. B.; Schultz, P.; Christensen, E. F.	The value of continuous blockade of the lumbar plexus as an adjunct to acetylsalicyclic acid for pain relief after surgery for femoral neck fractures	1996	<30 per group
Speck, F. L.; Morris, R. P.; McAngus, J. K.; Carayannopoulos, N. L.; Lindsey, R. W.	The impact of preoperative medical clearance procedures on the time to definitive surgical management of hip fractures	2014	Does not address question of interest

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Spinelli, L. F.; Pagnussato, F.; Ribeiro, T. A.; Guareze, F. S.; Feder, M. G.; Macedo, C. A. S.; Moreira, L. F.; Galia, C. R.	Clinical, laboratory and densitometric comparison of patients with coxarthrosis and femoral neck fractures	2018	Incorrect patient population (<30 patients/group)
Sprague, S.; Madden, K.; Slobogean, G.; Petrisor, B.; Adachi, J. D. R.; Bogoch, E.; Kleinlugtenbelt, Y. V.; Bhandari, M.	A Missed Opportunity in Bone Health: Vitamin D and Calcium Use in Elderly Femoral Neck Fracture Patients Following Arthroplasty	2017	Does not address question of interest - secondary analysis of ongoing RCT
Sprowson, A. P.; Jensen, C.; Chambers, S.; Parsons, N. R.; Aradhyula, N. M.; Carluke, I.; Inman, D.; Reed, M. R.	The use of high-dose dual-impregnated antibiotic-laden cement with hemiarthroplasty for the treatment of a fracture of the hip: The Fractured Hip Infection trial	2016	Incorrect patient population (includes age<50 yrs)
Sriramka, B.; Panigrahi, S. K.; Acharya, R.; Singh, J.	Effect of Dexmedetomidine on Levobupivacaine and Ropivacaine in Fascia Iliaca Block for Trochanteric Fractures Treated by Proximal Femoral Nail - A Randomized Trial	2019	Incorrect patient population (includes age<50 yrs)
Staerk, L.; Fosbol, E. L.; Lamberts, M.; Bonde, A. N.; Gadsboll, K.; Sindet-Pedersen, C.; Holm, E. A.; Gerds, T. A.; Ozenne, B.; Lip, G. Y. H.; Torp-Pedersen, C.; Gislason, G. H.; Olesen, J. B.	Resumption of oral anticoagulation following traumatic injury and risk of stroke and bleeding in patients with atrial fibrillation: a nationwide cohort study	2018	Incorrect patient population (not exclusive to hip)
Stappaerts, K. H.; Deldycke, J.; Broos, P. L.; Staes, F. F.; Rommens, P. M.; Claes, P.	Treatment of unstable peritrochanteric fractures in elderly patients with a compression hip screw or with the Vandeputte (VDP) endoprosthesis: a prospective randomized study	1995	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Starlinger, J.; Schmidt, R.; Machold, W.	Post-operative retransfusion of unwashed filtered shed blood reduces allogenic blood demand in hip hemiarthroplasty in traumatic femoral neck fractures-a prospective randomized trial	2016	Incorrect patient population (includes age<50 yrs)
Steinberg, E. L.; Sternheim, A.; Kadar, A.; Sagi, Y.; Sherer, Y.; Chechik, O.	Early operative intervention is associated with better patient survival in patients with intracapsular femur fractures but not extracapsular fractures	2014	Incorrect patient population (includes age<50 yrs)
Stenvers, E.; Mars, R. C.; Zuurmond, R. G.	Frail Patients Benefit From Less Invasive Procedures	2019	Incorrect patient population (<30 patients/group)
Stephan, S. R.; Garlich, J. M.; Debbi, E. M.; Johnson, C. R.; Polakof, L. S.; Noorzad, A. S.; Moak, Z. B.; Yalamanchili, D. R.; Stephenson, S. K.; Anand, K. K.; Lin, C. A.; Little, M. T. M.; Moon, C. N.	A Comparison in Outcomes of Preoperative Single-shot versus Continuous Catheter Fascia Iliaca Regional Anesthesia in Geriatric Hip Fracture Patients	2020	Does not address question of interest - comparing frequency
Stephens, J. R.; Caraccio, D.; Mabry, D. R.; Stepanek, K. V.; Jones, M. S.; Hemsey, D. F.; Moore, C. R.	Implementation of a fracture liaison service for patients with hip fracture cared for on a hospital medicine service	2021	not best available evidence
Stephens, J. R.; Chang, J. W.; Liles, E. A.; Adem, M.; Moore, C.	Impact of hospitalist vs. non-hospitalist services on length of stay and 30-day readmission rate in hip fracture patients	2019	Does not address question of interest - prognostic endpoints
Stibolt, R. D., Jr.; Patel, H. A.; Huntley, S. R.; Lehtonen, E. J.; Shah, A. B.; Naranje, S. M.	Total hip arthroplasty for posttraumatic osteoarthritis following acetabular fracture: A systematic review of characteristics, outcomes, and complications	2018	Systematic review

Authors	Article Title	Year	Reason for Exclusion
Stolbrink, M.; McGowan, L.; Saman, H.; Nguyen, T.; Knightly, R.; Sharpe, J.; Reilly, H.; Jones, S.; Turner, A. M.	The Early Mobility Bundle: a simple enhancement of therapy which may reduce incidence of hospital-acquired pneumonia and length of hospital stay	2014	Incorrect patient population (includes age<50 yrs)
Stollenwerk, B.; Bartmus, T.; Klug, F.; Stock, S.; MÃ¼ller, D.	Cost-effectiveness of hip protector use on a geriatric ward in Germany: a Markov model	2015	Imperfect comparison group
Stucinskas, J.; Grigaitis, K.; Smailys, A.; Robertsson, O.; Tarasevicius, S.	Bipolar hemiarthroplasty versus total hip arthroplasty in femoral neck fracture patients: results from Lithuanian Arthroplasty Register	2020	Insufficient data - age range not provided
Studnicka, K. J.; Kumar, G.	Total hip replacement for displaced intracapsular neck of femur fracture. Are current guidelines appropriate for all patients? Five-year retrospective analysis of 315 cases	2021	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Su, E. P.; Morgenstern, R.; Khan, I.; Gaillard, M. D.; Gross, T. P.	Hip resurfacing arthroplasty for end-stage arthritis caused by childhood hip disease	2019	Incorrect patient population (includes age<50 yrs)
Su, H.; Sun, K.; Wang, X.	A randomized prospective comparison of intertan and gamma3 for treating unstable intertrochanteric fractures	2016	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Suh, Y. S.; Nho, J. H.; Kim, S. M.; Hong, S.; Choi, H. S.; Park, J. S.	Clinical and Radiologic Outcomes among Bipolar Hemiarthroplasty, Compression Hip Screw and Proximal Femur Nail Antirotation in Treating Comminuted Intertrochanteric Fractures	2015	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Suhm, N.; Kaelin, R.; Studer, P.; Wang, Q.; Kressig, R. W.; Rikli, D.; Jakob, M.; Pretto, M.	Orthogeriatric care pathway: a prospective survey of impact on length of stay, mortality and institutionalisation	2014	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Summers, S.; Grau, L. C.; Massel, D. H.; Ong, A.; Orozco, F.; Rosas, S.; Hernandez, V.	Trends in Utilization of Total Hip Arthroplasty for Femoral Neck Fractures in the United States	2018	Does not address question of interest
Summers, S.; Grau, L.; Massel, D.; Rosas, S.; Ong, A.; Hernandez, V. H.	Opioid Use Disorders Are Associated With Perioperative Morbidity and Mortality in the Hip Fracture Population	2018	Does not address question of interest - prognostic endpoints
Sutcliffe, A. J.; Parker, M.	Mortality after spinal and general anaesthesia for surgical fixation of hip fractures	1994	not best available evidence
Suzuki, K.; Tsuji, S.; Fukushima, Y.; Nakase, T.; Hamada, M.; Tomita, T.; Yoshikawa, H.	Clinical results of alendronate monotherapy and combined therapy with menatetrenone (VitK2) in postmenopausal RA patients	2013	Incorrect patient population (<30 patients/group)
Suzuki, T.; Sukezaki, F.; Shibuki, T.; Toyoshima, Y.; Nagai, T.; Inagaki, K.	Teriparatide Administration Increases Periprosthetic Bone Mineral Density After Total Knee Arthroplasty: A Prospective Study	2018	Incorrect patient population (not exclusive to hip)
Svenoy, S.; Watne, L. O.; Hestnes, I.; Westberg, M.; Madsen, J. E.; Frihagen, F.	Results after introduction of a hip fracture care pathway: comparison with usual care	2020	Incorrect patient population (aged <50 years)
Svenoy, S.; Westberg, M.; Figved, W.; Valland, H.; Brun, O. C.; Wangen, H.; Madsen, J. E.; Frihagen, F.	Posterior versus lateral approach for hemiarthroplasty after femoral neck fracture: Early complications in a prospective cohort of 583 patients	2017	not best available evidence
Sylliaas, H.; Brovold, T.; Wyller, T. B.; Bergland, A.	Progressive strength training in older patients after hip fracture: a randomised controlled trial	2011	Excluded PICO
Szklanny, K.; Jakubek, M.; Zbierska-Rubinkiewicz, K.; Undas, A.	Bridging anticoagulation in patients treated with vitamin K antagonists prior to trochanteric and hip fracture surgeries: The current practice	2019	Does not meet inclusion criteria (non-post-operative for VTE)

Authors	Article Title	Year	Reason for Exclusion
Szucs, S.; Jessop, D.; Iohom, G.; Shorten, G. D.	Postoperative analgesic effect, of preoperatively administered dexamethasone, after operative fixation of fractured neck of femur: randomised, double blinded controlled study	2016	Incorrect patient population (<30 patients/group)
Szucs, S.; Morau, D.; Sultan, S. F.; Iohom, G.; Shorten, G.	A comparison of three techniques (local anesthetic deposited circumferential to vs. above vs. below the nerve) for ultrasound guided femoral nerve block	2014	Incorrect pt population (<30 pts/group)
Tabori-Jensen, S.; Frolich, C.; Hansen, T. B.; Bovling, S.; Homilius, M.; Stilling, M.	Higher UHMWPE wear-rate in cementless compared with cemented cups with the Saturne R Dual-Mobility acetabular system	2018	not best available evidence
Taheriazam, A.; Mohseni, G.; Esmailiejah, A. A.; Safdari, F.; Abrishamkarzadeh, H.	Bilateral total hip arthroplasty: one-stage versus two-stage procedure	2019	Incorrect patient population (includes age<50 yrs)
Tai, S. M.; Imbuldeniya, A. M.; Munir, S.; Walter, W. L.; Walter, W. K.; Zicat, B. A.	The effect of obesity on the clinical, functional and radiological outcome of cementless total hip replacement: a case-matched study with a minimum 10-year follow-up	2014	Does not address question of interest - stratified by pt characteristics
Taipale, H.; Hamina, A.; Karttunen, N.; Koponen, M.; Tanskanen, A.; Tiihonen, J.; Hartikainen, S.; Tolppanen, A. M.	Incident opioid use and risk of hip fracture among persons with Alzheimer disease: a nationwide matched cohort study	2019	Does not address question of interest - prognostic endpoints
Takada, R.; Jinno, T.; Miyatake, K.; Hirao, M.; Yagishita, K.; Yoshii, T.; Okawa, A.	Supine versus lateral position for accurate positioning of acetabular cup in total hip arthroplasty using the modified Watson-Jones approach: A randomized single-blind controlled trial	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Takahashi, J.; Nakae, K.; Miyagawa, M.; Yokota, O.; Fujiki, Y.; Ide, M.; Nishida, S.; Aoki, H.; Aoki, T.	Plastic wrap as a dressing material to treat stage III/IV pressure ulcers in the inflammatory phase: A randomized controlled trial	2017	Incorrect patient population (includes age<50 yrs)
Tal, A.; Rubin, G.; Rozen, N.	Treatment with vitamin K in hip fracture patients receiving warfarin	2013	Incorrect patient population (<30 patients/group)
Talboys, R.; Mak, M.; Modi, N.; Fanous, N.; Cutts, S.	Enhanced recovery programme reduces opiate consumption in hip hemiarthroplasty	2016	Does not address question of interest
Talevski, J.; Guerrero-Cedeno, V.; Demontiero, O.; Suriyaarachchi, P.; Boersma, D.; Vogrin, S.; Brennan-Olsen, S.; Duque, G.	Implementation of an electronic care pathway for hip fracture patients: a pilot before and after study	2020	Imperfect comparison group (comparing electronic vs. paper)
Talevski, J.; Sanders, K. M.; Duque, G.; Connaughton, C.; Beauchamp, A.; Green, D.; Millar, L.; Brennan-Olsen, S. L.	Effect of Clinical Care Pathways on Quality of Life and Physical Function After Fragility Fracture: A Meta-analysis	2019	Meta-analysis
Talmac, M. A.; Gorgel, M. A.; Armagan, R.; Sonmez, M. M.; Ozdemir, H. M.	Examining implant superiority in the treatment of simple pertrochanteric fractures of the proximal femur in elderly patients	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device vs. SHS PICO)
Talsnes, O.; Hjelmstedt, F.; Dahl, O. E.; Pripp, A. H.; Reikerås, O.	Biochemical lung, liver and kidney markers and early death among elderly following hip fracture	2012	Excluded PICO
Talsnes, O.; Vinje, T.; Gjertsen, J. E.; Dahl, O. E.; Engesaeter, L. B.; Baste, V.; Pripp, A. H.; Reikeras, O.	Perioperative mortality in hip fracture patients treated with cemented and uncemented hemiprosthesis: a register study of 11,210 patients	2013	not best available evidence

Authors	Article Title	Year	Reason for Exclusion
Tamaki, T.; Jonishi, K.; Miura, Y.; Oinuma, K.; Shiratsuchi, H.	Cementless Tapered-Wedge Stem Length Affects the Risk of Periprosthetic Femoral Fractures in Direct Anterior Total Hip Arthroplasty	2018	Incorrect patient population (includes age<50 yrs)
Tan, J.; Chen, H.; Chen, C.; Liang, X.; Huang, W.	The strength and function of hip abductors following anterolateral minimally invasive total hip arthroplasty	2014	Incorrect patient population (<30 patients/group)
Tan, S. T.; Tan, W. P.; Jaipaul, J.; Chan, S. P.; Sathappan, S. S.	Clinical outcomes and hospital length of stay in 2,756 elderly patients with hip fractures: a comparison of surgical and non-surgical management	2017	not best available evidence
Tan, T. L.; Ho, S. W. L.; Graetz, A. E. K.; Kwek, E. B. K.	Hemiarthroplasty in the Hip Fracture Patient with Renal Impairment: To Cement or Not to Cement	2019	not best available evidence
Tanaka, T.; Kumagae, Y.; Chazono, M.; Komaki, H.; Kitasato, S.; Kakuta, A.; Marumo, K.	An Injectable Complex of beta-tricalcium Phosphate Granules, Hyaluronate, and rhFGF-2 on Repair of Long-bone Fractures with Large Fragments	2014	Incorrect patient population (<30 patients/group)
Tang, W. Y. W.; Amy Ng, M. F.	The effectiveness of nursing management on improving health outcomes for hospitalized older adults with delirium: A systematic review protocol	2013	Protocol
Tang, Y.; Wang, K.; Shi, Z.; Yang, P.; Dang, X.	A RCT study of Rivaroxaban, low-molecular-weight heparin, and sequential medication regimens for the prevention of venous thrombosis after internal fixation of hip fracture	2017	Incorrect patient population (includes age<50 yrs)
Tang, Y.; Wang, X.; Zhu, Y.; Sun, H.; Zhu, M.	A Comparative evaluation of CBCT outcomes of two closed treatment methods in intracapsular condylar fractures	2017	Incorrect patient population (<30 patients/group)
Tang, Z.; Zhang, C.; Xu, Z.; Jin, F.; Liang, D.	Observation of single spinal anesthesia by 25G needle puncture through a lateral crypt for hip surgery in elderly patients	2019	Does not address question of interest (both groups receive spinal anesthesia)

Authors	Article Title	Year	Reason for Exclusion
Tanner Ii, A.; Jarvis, S.; Orlando, A.; Nwafo, N.; Madayag, R.; Roberts, Z.; Corrigan, C.; Carrick, M.; Bourg, P.; Smith, W.; Bar-Or, D.	A three-year retrospective multi-center study on time to surgery and mortality for isolated geriatric hip fractures	2020	Does not meet inclusion criteria (not RCT for timing PICO)
Tanzer, M.; Graves, S. E.; Peng, A.; Shimmin, A. J.	Is Cemented or Cementless Femoral Stem Fixation More Durable in Patients Older Than 75 Years of Age? A Comparison of the Best-performing Stems	2018	not best available evidence
Taraldsen, K.; Sletvold, O.; Thingstad, P.; Saltvedt, I.; Granat, M. H.; Lydersen, S.; Helbostad, J. L.	Physical behavior and function early after hip fracture surgery in patients receiving comprehensive geriatric care or orthopedic care--a randomized controlled trial	2014	Doesn't address question of interest;
Taraldsen, K.; Thingstad, P.; Dohl, O.; Follestad, T.; Helbostad, J. L.; Lamb, S. E.; Saltvedt, I.; Sletvold, O.; Halsteinli, V.	Short and long-term clinical effectiveness and cost-effectiveness of a late-phase community-based balance and gait exercise program following hip fracture. The EVA-Hip Randomised Controlled Trial	2019	Does not address question of interest
Taraldsen, K.; Thingstad, P.; Sletvold, O.; Saltvedt, I.; Lydersen, S.; Granat, M. H.; Chastin, S.; Helbostad, J. L.	The long-term effect of being treated in a geriatric ward compared to an orthopaedic ward on six measures of free-living physical behavior 4 and 12 months after a hip fracture - a randomised controlled trial	2015	Doesn't address question of interest;
Taranu, R.; Redclift, C.; Williams, P.; Diament, M.; Tate, A.; Maddox, J.; Wilson, F.; Eardley, W.	Use of Anticoagulants Remains a Significant Threat to Timely Hip Fracture Surgery	2018	Does not meet inclusion criteria (non-post-operative for VTE)
Tarasevicius, S.; Robertsson, O.; Dobozinskas, P.; Wingstrand, H.	A comparison of outcomes and dislocation rates using dual articulation cups and THA for intracapsular femoral neck fractures	2013	Insufficient data - age range not provided

Authors	Article Title	Year	Reason for Exclusion
Tay, E.	Hip fractures in the elderly: operative versus nonoperative management	2016	not best available evidence
Taylor, M.; Hopman, W.; Yach, J.	Length of stay, wait time to surgery and 30-day mortality for patients with hip fractures after the opening of a dedicated orthopedic weekend trauma room	2016	Incorrect patient population (includes age<50 yrs)
Tecimel, O.; Bozkurt, I; Çepni, S; Yaman, F.; Firat, A.; Öçgüder, D. A.	The comparison of single plate and double plate fixation methods for treatment of humeral shaft nonunions	2021	Incorrect patient population (<30 patients/group)
Temizel, F.; UÃ§kun, S.; KuzucuoÄ?lu, T.; Arslan, G.; Ã?evik, B.	The effects of comorbidities on intensive care admission in elderly patients undergoing hip surgerious	2018	not relevant. ICU admission is an outcome instead of a predictor of outcomes
Thaler, M.; Dammerer, D.; Ban, M.; Leitner, H.; Khosravi, I.; Nogler, M.	Femoral Revision Total Hip Arthroplasty Performed through the Interval of the Direct Anterior Approach	2021	Incorrect patient population - hip revision
Thambapillary, S.; Dimitriou, R.; Makridis, K. G.; Fragkakis, E. M.; Bobak, P.; Giannoudis, P. V.	Implant longevity, complications and functional outcome following proximal femoral arthroplasty for musculoskeletal tumors: a systematic review	2013	Systematic review
Thein, R.; Herman, A.; Kedem, P.; Chechik, A.; Shazar, N.	Osteosynthesis of unstable intracapsular femoral neck fracture by dynamic locking plate or screw fixation: early results	2014	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Thingstad, P.; Taraldsen, K.; Hagen, G.; Sand, S.; Saltvedt, I.; Sletvold, O.; Helbostad, J. L.	Effectiveness of task specific gait and balance exercise 4 months after hip fracture: protocol of a randomized controlled trial--the Eva-hip study	2015	Protocol
Thingstad, P.; Taraldsen, K.; Saltvedt, I.; Sletvold, O.; Vereijken, B.; Lamb, S. E.; Helbostad, J. L.	The long-term effect of comprehensive geriatric care on gait after hip fracture: the Trondheim Hip Fracture Trial--a randomised controlled trial	2016	Doesn't address question of interest;

Authors	Article Title	Year	Reason for Exclusion
Thomas, C. J.; Smith, R. P.; Uzoigwe, C. E.; Braybrooke, J. R.	The weekend effect: short-term mortality following admission with a hip fracture	2014	Incorrect patient population (includes age<50 yrs)
Thompson, J.; Long, M.; Rogers, E.; Pesso, R.; Galos, D.; Dengenis, R. C.; Ruotolo, C.	Fascia Iliaca Block Decreases Hip Fracture Postoperative Opioid Consumption: A Prospective Randomized Controlled Trial	2020	Incorrect patient population (<30 patients/group)
Thorpe, K. E.; Zwarenstein, M.; Oxman, A. D.; Treweek, S.; Furberg, C. D.; Altman, D. G.; Tunis, S.; Bergel, E.; Harvey, I.; Magid, D. J.; Chalkidou, K.	A pragmatic-explanatory continuum indicator summary (PRECIS): a tool to help trial designers	2009	Doesn't address question of interest;
Tian, R. H.; Zhang, Q. M.; Chu, F. L.; Li, X. Y.; Jiang, Z.; Han, L.; Sun, P.; Wang, H. B.; Chi, Y. L.; Wu, B.	Comparison of two methods of locating proximal femoral nail anti-rotation in the treatment of femoral intertrochanteric fractures	2020	Does not address question of interest
Tjeenk Willink, R.; Devos, B.; Vundelinckx, B.; De Schepper, J.; Vanderstappen, J.; De Mulder, K.	Vitamin D, calcium and albumin bloodserum levels in Belgian orthopedic patients - is systematic screening justified?	2020	Does not address question of interest (not among specified interventions)
Todd, C. J.; Freeman, C. J.; Camilleri-Ferrante, C.; Palmer, C. R.; Hyder, A.; Laxton, C. E.; Parker, M. J.; Payne, B. V.; Rushton, N.	Differences in mortality after fracture of hip: the east Anglian audit	1995	Does not address question of interest
Tol, M. C.; van den Bekerom, M. P.; Sierevelt, I. N.; Hilverdink, E. F.; Raaymakers, E. L.; Goslings, J. C.	Hemiarthroplasty or total hip arthroplasty for the treatment of a displaced intracapsular fracture in active elderly patients: 12-year follow-up of randomised trial	2017	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Toluse, A. M.; Asuquo, J. E.; Ikem, I. C.; Esan, O.; Akinyoola, A. L.	Comparison of effect of retrograde and antegrade approaches to interlocking nail fixation of femoral diaphyseal fractures on ipsilateral hip and knee joint motion	2014	Incorrect patient population (<30 patients/group)
Tomaszuk, M.; Kiryluk, J.; Tomaszuk, A.; Popko, J.	Evaluation of Treatment of Low-energy Distal Radial Fractures in Postmenopausal Women	2017	Incorrect patient population (<30 patients/group)
Tong, D.; Qin, S.; Xu, K.; Zhang, H.; Wang, G.; Ji, F.; Tang, H.	Treatment of subtrochanteric fracture with an intramedullary nail by lateral recumbent position	2019	Incorrect patient population (includes age<50 yrs)
Topal, F. E.; Bilgin, S.; Yamanoglu, A.; Karakaya, Z.; Payza, U.; Akyol, P. Y.; Aslan, C.; Aksun, M.	The Feasibility of the Ultrasound-Guided Femoral Nerve Block Procedure with Low-Dose Local Anesthetic in Intracapsular and Extracapsular Hip Fractures	2020	Incorrect patient population (<30 patients/group)
Torbergsen, A. C.; Watne, L. O.; Frihagen, F.; Wyller, T. B.; Mowe, M.	Effects of nutritional intervention upon bone turnover in elderly hip fracture patients. Randomized controlled trial	2019	Secondary analysis
Toro, G.; Bothorel, H.; Saffarini, M.; Jacquot, L.; Chouteau, J.; Rollier, J. C.	Uncemented total hip arthroplasty in octogenarian and nonagenarian patients	2019	Does not address question of interest - stratified by pt characteristics
Trads, M.; Deutch, S. R.; Pedersen, P. U.	Supporting patients in reducing postoperative constipation: fundamental nursing care - a quasi-experimental study	2018	Does not address question of interest (not among specified interventions)
Trads, M.; Hakonson, S. J.; Pedersen, P. U.	Validation of the Danish version of the constipation risk assessment scale (CRAS)	2017	Incorrect patient population (includes age<50 yrs)
Tran, T.; Delluc, A.; de Wit, C.; Petrcich, W.; Le Gal, G.; Carrier, M.	The impact of oral anticoagulation on time to surgery in patients hospitalized with hip fracture	2015	Does not meet inclusion criteria (non-post-operative for VTE)

Authors	Article Title	Year	Reason for Exclusion
Treskes, K.; Voeten, S. C.; Tol, M. C.; Zuidema, W. P.; Vermeulen, J.; Goslings, J. C.; Schep, N. W.; Study group on certification of trauma proximal femoral, fractures; Collaborators,; van den Brand, J. G. H.; van Velde, R.; Haverlag, R.; Ultee, J. M.; Postma, V. A.; Twigt, B. A.; van Dijkman, B. A.; Heres, P.; Winkelhagen, J.; Klooster, M.; Toor, E. J.	Trauma surgery by general surgeons: Still an option for proximal femoral fractures?	2017	Incorrect patient population (includes age<50 yrs)
Trieu, J.; Hadden, A. E. F.; Sutherland, A. G.	Assessment of acetabular version in total hip arthroplasty: an application of Widmer's technique in a regional setting	2018	Incorrect patient population (includes age<50 yrs)
Trikha, V.; Das, S.; Agrawal, P.; M, A.; Kumar Dhaka, S.	Role of percutaneous cerclage wire in the management of subtrochanteric fractures treated with intramedullary nails	2018	Incorrect patient population (<30 patients/group)
Trpeski, S.; Kaftandziev, I.; Kjaev, A.	The effects of time-to-surgery on mortality in elderly patients following hip fractures	2013	Incorrect patient population (<30 patients/group)
Tsai, S. W.; Chen, C. F.; Wu, P. K.; Huang, C. K.; Chen, W. M.; Chang, M. C.	Does Implant Selection Impact Postoperative Complications Following Hip Arthroplasty for Failed Intertrochanteric Fractures? A Retrospective Comparative Study	2016	Incorrect patient population (includes age<50 yrs)
Tsang, K. S.; Page, J.; Mackenney, P.	Can intravenous paracetamol reduce opioid use in preoperative hip fracture patients?	2013	Incorrect patient population (<30 patients/group)
Tsang, S. T.; Aitken, S. A.; Golay, S. K.; Silverwood, R. K.; Biant, L. C.	When does hip fracture surgery fail?	2014	Does not address question of interest - stratified by pt characteristics

Authors	Article Title	Year	Reason for Exclusion
Tsauo, J. Y.; Leu, W. S.; Chen, Y. T.; Yang, R. S.	Effects on function and quality of life of postoperative home-based physical therapy for patients with hip fracture	2005	Excluded PICO
Tseng, M. Y.; Liang, J.; Wang, J. S.; Yang, C. T.; Wu, C. C.; Cheng, H. S.; Chen, C. Y.; Lin, Y. E.; Wang, W. S.; Shyu, Y. L.	Effects of a diabetes-specific care model for hip fractured older patients with diabetes: A randomized controlled trial	2019	Does not address question of interest (not among specified interventions) - comparing diabetes specific care vs. usual care
Tseng, M. Y.; Shyu, Y. L.; Liang, J.; Tsai, W. C.	Interdisciplinary intervention reduced the risk of being persistently depressive among older patients with hip fracture	2016	Secondary analysis
Tsuda, Y.; Yasunaga, H.; Horiguchi, H.; Fushimi, K.; Kawano, H.; Tanaka, S.	Complications and Postoperative Mortality Rate After Surgery for Pathological Femur Fracture Related to Bone Metastasis: Analysis of a Nationwide Database	2016	Does not meet inclusion criteria - cancer
Tucker, A.; Warnock, M.; McDonald, S.; Cusick, L.; Foster, A. P.	Fatigue failure of the cephalomedullary nail: revision options, outcomes and review of the literature	2018	Incorrect patient population (<30 patients/group)
Tulic, G.; Dubljanin-Raspopovic, E.; Tomanovic-Vujadinovic, S.; Sopta, J.; Todorovic, A.; Manojlovic, R.	Prolonged pre-operative hospital stay as a predictive factor for early outcomes and mortality after geriatric hip fracture surgery: a single institution open prospective cohort study	2018	Does not meet inclusion criteria (non-RCT for timing PICO)
Tuncer, Sema; Akkoyun Sert, Özlem; Yosunkaya, Alper; Mutlu, Mahmut; Çelik, Jale; Ökesli, Selmin	Patient-controlled femoral nerve analgesia versus patient-controlled intravenous analgesia for postoperative analgesia after trochanteric fracture repair	2003	<30 per group
Tung, Y. C.; Hsu, Y. H.; Chang, G. M.	The Effect of Anesthetic Type on Outcomes of Hip Fracture Surgery: A Nationwide Population-Based Study	2016	Incorrect patient population (includes age<50 yrs)
Turgut, A.; Kalenderer, O.; Akan, I.; Ilyas, G.; Kumbaraci, M.; Karapinar, L.	Do Patients With Acute Isolated Pubic Ramus Fractures Have To Be Hospitalized?	2017	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Tyblova, M.; Kalincik, T.; Zikan, V.; Havrdova, E.	Impaired ambulation and steroid therapy impact negatively on bone health in multiple sclerosis	2015	Does not address question of interest
Ucpunar, H.; Camurcu, Y.; Cobden, A.; Sofu, H.; Kis, M.; Demirel, H.	Comparative evaluation of postoperative health status and functional outcome in patients treated with either proximal femoral nail or hemiarthroplasty for unstable intertrochanteric fracture	2019	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Ueoka, K.; Sawaguchi, T.; Goshima, K.; Shigemoto, K.; Iwai, S.; Nakanishi, A.	The influence of pre-operative antiplatelet and anticoagulant agents on the outcomes in elderly patients undergoing early surgery for hip fracture	2019	Does not meet inclusion criteria (non-post-operative for VTE)
Ugland, T. O.; Haugeberg, G.; Svenningsen, S.; Ugland, S. H.; Berg, O. H.; Hugo Pripp, A.; Nordsletten, L.	Less periprosthetic bone loss following the anterolateral approach to the hip compared with the direct lateral approach: a subgroup analysis from a randomized trial in patients with a femoral neck fracture	2017	Incorrect patient population (<30 patients/group)
Ullmark, G.	Femoral head fractures: hemiarthroplasty or total hip arthroplasty?	2014	Background article
Unizony, S.; Menendez, M. E.; Rastalsky, N.; Stone, J. H.	Inpatient complications in patients with giant cell arteritis: decreased mortality and increased risk of thromboembolism, delirium and adrenal insufficiency	2015	Cross-sectional study
Unnanuntana, A.; Laohaprasitiporn, P.; Jarusriwanna, A.	Effect of bisphosphonate initiation at week 2 versus week 12 on short-term functional recovery after femoral neck fracture: a randomized controlled trial	2017	Does not address question of interest - imperfect comparator
Unneby, A.; Svensson, P. O.; Gustafson, P. Y.; Lindgren, A. P. B.; Bergstrom, U.; Olofsson, P. B.	Complications with focus on delirium during hospital stay related to femoral nerve block compared to conventional pain management among patients with hip fracture - A randomised controlled trial	2020	Duplicate study (identical to AAOS ID 13810)
Ur Rehman, M.; Imran, M.; Kang, T. A.	Functional outcome of cemented versus uncemented hemiarthroplasty for intracapsular hip fractures	2014	Poster presentation

Authors	Article Title	Year	Reason for Exclusion
Uri, O.; Behrbalk, E.; Laufer, G.; Folman, Y.	A reimbursement system based on a 48-hour target time for surgery shortens the waiting time for hip fracture fixation in elderly patients	2019	Does not meet inclusion criteria (not RCT for timing PICO)
Uriarte, I.; Moreta, J.; Jimenez, I.; Legarreta, M. J.; Martinez de Los Mozos, J. L.	Dual-mobility cups in total hip arthroplasty after femoral neck fractures: A retrospective study comparing outcomes between cemented and cementless fixation	2020	Low quality literature
Uzer, G.; Elmadag, N. M.; Yildiz, F.; Bilsel, K.; Erden, T.; Toprak, H.	Comparison of two types of proximal femoral hails in the treatment of intertrochanteric femur fractures	2015	Imperfect comparison (comparing amount of lag screws within f PFNs)
Vaculik, J.; Braun, M.; Dungl, P.; Pavelka, K.; Stepan, J. J.	Serum and bone pentosidine in patients with low impact hip fractures and in patients with advanced osteoarthritis	2016	Does not address question of interest - stratified by pt characteristics
Vaculik, J.; Stepan, J. J.; Dungl, P.; Majernicek, M.; Celko, A.; Dzupa, V.	Secondary fracture prevention in hip fracture patients requires cooperation from general practitioners	2017	Does not address question of interest
Vallet, H.; Breining, A.; Le Manach, Y.; Cohen-Bittan, J.; Meziere, A.; Raux, M.; Verny, M.; Riou, B.; Khiami, F.; Boddaert, J.	Isolated cardiac troponin rise does not modify the prognosis in elderly patients with hip fracture	2017	Does not address question of interest (not among specified interventions)
van de Ree, C. L. P.; De Jongh, M. A. C.; Peeters, C. M. M.; de Munter, L.; Roukema, J. A.; Gosens, T.	Hip Fractures in Elderly People: Surgery or No Surgery? A Systematic Review and Meta-Analysis	2017	Meta-analysis
van der Kolk, N. M.; de Vries, N. M.; Kessels, R. P. C.; Joosten, H.; Zwinderman, A. H.; Post, B.; Bloem, B. R.	Effectiveness of home-based and remotely supervised aerobic exercise in Parkinson's disease: a double-blind, randomised controlled trial	2019	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Van Der Sijp, M. P. L.; Schipper, I. B.; Keizer, S. B.; Krijnen, P.; Niggebrugge, A. H. P.	Prospective comparison of the anterior and lateral approach in hemiarthroplasty for hip fractures: A study protocol	2017	Protocol
van der Sijp, M. P. L.; van Delft, D.; Krijnen, P.; Niggebrugge, A. H. P.; Schipper, I. B.	Surgical Approaches and Hemiarthroplasty Outcomes for Femoral Neck Fractures: A Meta-Analysis	2018	Meta-analysis
van der Zanden, V.; Beishuizen, S. J.; Scholtens, R. M.; de Jonghe, A.; de Rooij, S. E.; van Munster, B. C.	The Effects of Blood Transfusion on Delirium Incidence	2016	Does not meet inclusion criteria (non-RCT for Hg PICO)
van Dortmont, L. M.; Douw, C. M.; van Breukelen, A. M.; Laurens, D. R.; Mulder, P. G.; Wereldsma, J. C.; van Vugt, A. B.	Cannulated screws versus hemiarthroplasty for displaced intracapsular femoral neck fractures in demented patients	2000	<30 per group
Van Grootven, B.; Mendelson, D. A.; Deschodt, M.	Impact of geriatric co-management programmes on outcomes in older surgical patients: update of recent evidence	2020	Systematic review
van Rijn, M.; Buurman, B. M.; MacNeil-Vroomen, J. L.; Suijker, J. J.; ter Riet, G.; Moll van Charante, E. P.; de Rooij, S. E.	Changes in the in-hospital mortality and 30-day post-discharge mortality in acutely admitted older patients: retrospective observational study	2016	Does not address question of interest
Van Stijn, M. F.; Bruins, A. A.; Vermeulen, M. A.; Witlox, J.; Teerlink, T.; Schoorl, M. G.; De Bandt, J. P.; Twisk, J. W.; Van Leeuwen, P. A.; Houdijk, A. P.	Effect of oral taurine on morbidity and mortality in elderly hip fracture patients: a randomized trial	2015	not intervention of interest;

Authors	Article Title	Year	Reason for Exclusion
Van Voorden, T. A. J.; Den Hartog, D.; Schep, N. W. L.; Dhfa Consortium	Effect of the Dutch Hip Fracture Audit implementation on mortality, length of hospital stay and time until surgery in elderly hip fracture patients; a multi-center cohort study	2020	not best available evidence
Van Waesberghe, J.; Stevanovic, A.; Rossaint, R.; Coburn, M.	General vs. neuraxial anaesthesia in hip fracture patients: a systematic review and meta-analysis	2017	Systematic review
van Walsum, A. D. P.; Vroemen, J.; Janzing, H. M. J.; Winkelhorst, T.; Kalsbeek, J.; Roerdink, W. H.	Low failure rate by means of DLBP fixation of undisplaced femoral neck fractures	2017	Incorrect patient population (includes age<50 yrs)
Varady, N. H.; Ameen, B. T.; Hayden, B. L.; Yeung, C. M.; Schwab, P. E.; Chen, A. F.	Short-Term Morbidity and Mortality After Hemiarthroplasty and Total Hip Arthroplasty for Pathologic Proximal Femur Fractures	2019	not best available evidence
Varnum, C.; Pedersen, A. B.; Kjaersgaard-Andersen, P.; Overgaard, S.	Comparison of the risk of revision in cementless total hip arthroplasty with ceramic-on-ceramic and metal-on-polyethylene bearings	2015	Incorrect patient population (includes patients <50 years of age)
Vaswani, R.; Manoli, A.; Goch, A.; Egol, K. A.	Surgical Fracture Repair in Chronic Renal Failure Patients on Hemodialysis An Analysis of Complications and Hospital Quality Measures	2016	Incorrect patient population (includes age<50 yrs)
Velasco Villa, D.; Mateo Negreira, J.; Los Santos Aransay, A.; Castro Munoz, R.; Lanuza Lagunilla, L.; Suarez-Anta Rodriguez, P.	Interimplant femoral fractures: risk factors, treatment and evolution	2018	Incorrect patient population (not exclusive to hip)
Veldman, H. D.; Heyligers, I. C.; Grimm, B.; Boymans, T. A.	Cemented versus cementless hemiarthroplasty for a displaced fracture of the femoral neck: a systematic review and meta-analysis of current generation hip stems	2017	Meta-analysis

Authors	Article Title	Year	Reason for Exclusion
Veldman, H. D.; Heyligers, I. C.; Grimm, B.; Boymans, T. A. E. J.	Cemented versus cementless hemiarthroplasty for a displaced fracture of the femoral neck	2017	Systematic review
Vendittoli, P. A.; Riviere, C.; Roy, A. G.; Barry, J.; Lusignan, D.; Lavigne, M.	Metal-on-metal hip resurfacing compared with 28-mm diameter metal-on-metal total hip replacement: a randomised study with six to nine years' follow-up	2013	Incorrect patient population (includes age<50 yrs)
Ventura, C.; Trombetti, S.; Pioli, G.; Belotti, L. M.; De Palma, R.	Impact of multidisciplinary hip fracture program on timing of surgery in elderly patients	2014	Does not address question of interest - prognostic endpoints
Viberg, B.; Gundtoft, P. H.; Schonnemann, J.; Pedersen, L.; Andersen, L. R.; Titlestad, K.; Madsen, C. F.; Lauritsen, J.; Overgaard, S.	Introduction of national guidelines for restrictive blood transfusion threshold for hip fracture patients--a consecutive cohort study based on complete follow-up in national databases	2018	Does not meet inclusion criteria (non-RCT for Hg PICO)
Viberg, B.; Kold, S.; Brink, O.; Larsen, M. S.; Hare, K. B.; Palm, H.; Sense collaborators	Is arthroplaSty bEtter than interNal fixation for undiSplaced femoral nEck fracture? A national pragmatic RCT: the SENSE trial	2020	Protocol
Viberg, B.; Overgaard, S.; Lauritsen, J.; Ovesen, O.	Lower reoperation rate for cemented hemiarthroplasty than for uncemented hemiarthroplasty and internal fixation following femoral neck fracture: 12- to 19-year follow-up of patients aged 75 years or more	2013	not best available evidence
Vidyadhara, S.; Rao, S. K.	One and two femoral neck screws with intramedullary nails for unstable trochanteric fractures of femur in the elderly--randomised clinical trial	2007	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths

Authors	Article Title	Year	Reason for Exclusion
Viktil, K. K.; Lehre, I.; Ranhoff, A. H.; Molden, E.	Serum Concentrations and Elimination Rates of Direct-Acting Oral Anticoagulants (DOACs) in Older Hip Fracture Patients Hospitalized for Surgery: A Pilot Study	2019	Incorrect patient population (<30 patients/group)
Viswanath, A.; Malik, A.; Chan, W.; Klasan, A.; Walton, N. P.	Treatment of displaced intracapsular fractures of the femoral neck with total hip arthroplasty or hemiarthroplasty	2020	not best available evidence
Vives, R.; Fernandez-Galinski, D.; Gordo, F.; Izquierdo, A.; Oliva, J. C.; Colilles, C.; Pontes, C.	Effects of bupivacaine or levobupivacaine on cerebral oxygenation during spinal anesthesia in elderly patients undergoing orthopedic surgery for hip fracture: a randomized controlled trial	2019	Incorrect pt population (<30 pts/group)
Voeten, S. C.; Arends, A. J.; Wouters, Mwjm; Blom, B. J.; Heetveld, M. J.; Slee-Valentijn, M. S.; Krijnen, P.; Schipper, I. B.; Hegeman, J. H. H.; Dutch Hip Fracture Audit, Group	The Dutch Hip Fracture Audit: evaluation of the quality of multidisciplinary hip fracture care in the Netherlands	2019	Incorrect patient population (includes age<50 yrs)
Voskuijl, T.; Neuhaus, V.; Kinaci, A.; Vrahas, M.; Ring, D.	In-Hospital Outcomes after Hemiarthroplasty versus Total Hip Arthroplasty for Isolated Femoral Neck Fractures	2014	Does not address question of interest - prognostic endpoints
Vossinakis, I. C.; Badras, L. S.	The external fixator compared with the sliding hip screw for pertrochanteric fractures of the femur	2002	EXCLUDE - INCLUDES STABLE AND UNSTABLE PATIENTS for Cephalomedullary device vs sliding hip screw
Vrignaud, A.; Pelletier, S.; Dernis, E.; Moui, Y.; Haettich, B.	Improvement in the primary and secondary prevention of osteoporosis by a Fracture Liaison Service: feedback from a single French center care pathway	2018	Incorrect patient population (includes age<50 yrs)
Vukomanovic, A.; Djurovic, A.; Popovic, Z.; Pejovic, V.	The A-test: assessment of functional recovery during early rehabilitation of patients in an orthopedic ward--content, criterion and construct validity	2014	Insufficient data - results not stratified by treatment

Authors	Article Title	Year	Reason for Exclusion
Wagner, J.; Langlois, F.; Ting Lim, D. S.; McCartney, S.; Fleseriu, M.	Hypercoagulability and risk of venous thromboembolic events in endogenous Cushing's syndrome: A systematic meta-analysis	2018	Systematic review
Wallace, R.; Angus, L. D. G.; Munnangi, S.; Shukry, S.; DiGiacomo, J. C.; Ruotolo, C.	Improved outcomes following implementation of a multidisciplinary care pathway for elderly hip fractures	2019	not best available evidence
Wan, H. Y.; Li, S. Y.; Ji, W.; Yu, B.; Jiang, N.	Fascia Iliaca Compartment Block for Perioperative Pain Management of Geriatric Patients with Hip Fractures: A Systematic Review of Randomized Controlled Trials	2020	Systematic review
Wang, C. G.; Li, Y. M.; Zhang, H. F.; Li, H.; Li, Z. J.	Anterior approach versus posterior approach for Pipkin I and II femoral head fractures: A systemic review and meta-analysis	2016	Systematic review
Wang, D.; Zhang, K.; Qiang, M.; Jia, X.; Chen, Y.	Computer-assisted preoperative planning improves the learning curve of PFNA-II in the treatment of intertrochanteric femoral fractures	2020	Does not address question of interest (not among specified interventions)
Wang, F.; Zhang, H.; Zhang, Z.; Ma, C.; Feng, X.	Comparison of bipolar hemiarthroplasty and total hip arthroplasty for displaced femoral neck fractures in the healthy elderly: a meta-analysis	2015	Meta-analysis
Wang, H.; Li, C.; Zhang, Y.; Jia, Y.; Zhu, Y.; Sun, R.; Li, W.; Liu, Y.	The influence of inpatient comprehensive geriatric care on elderly patients with hip fractures: a meta-analysis of randomized controlled trials	2015	Meta-analysis
Wang, J. P.; Yang, T. F.; Kong, Q. Q.; Liu, S. J.; Xiao, H.; Liu, Y.; Zhang, H.	Minimally invasive technique versus conventional technique of dynamic hip screws for intertrochanteric femoral fractures	2010	Does not address question of interest - comparing invasive technique
Wang, J.; Li, Z.; Yu, Y.; Li, B.; Shao, G.; Wang, Q.	Risk factors contributing to postoperative delirium in geriatric patients postorthopedic surgery	2015	Does not address question of interest - prognostic endpoints
Wang, J.; Ma, J. X.; Jia, H. B.; Chen, Y.; Yang, Y.; Ma, X. L.	Biomechanical Evaluation of Four Methods for Internal Fixation of Comminuted Subtrochanteric Fractures	2016	Does not meet inclusion criteria

Authors	Article Title	Year	Reason for Exclusion
Wang, L. W.; Zhu, M. J.; Li, Y.; Wang, S. T.; Zhou, M. Y.; Yu, Y. J.; Ma, Z. L.	FKBP51 is associated with early postoperative cognitive dysfunction in elderly patients undergoing hip fracture surgery	2019	Does not address question of interest - comparison of gene receptor
Wang, Q.; Yang, X.; He, H. Z.; Dong, L. J.; Huang, D. G.	Comparative study of interTAN and Dynamic Hip Screw in treatment of femoral intertrochanteric injury and wound	2014	Incorrect patient population (includes age<50 yrs)
Wang, S.; Qiu, Y.	Application of predictive nursing care in elderly patients with fractures that underwent total hip arthroplasty procedures	2019	Insufficient data - age range not provided
Wang, X. D.; Lan, H.; Hu, Z. X.; Li, K. N.; Wang, Z. H.; Luo, J.; Long, X. D.	SuperPATH Minimally Invasive Approach to Total Hip Arthroplasty of Femoral Neck Fractures in the Elderly: Preliminary Clinical Results	2020	not best available evidence
Wang, X.; Ma, J.; Wang, Z.; Xiao, L.	The clinical efficacy of using autologous platelet-rich plasma in total hip arthroplasty: A retrospective comparative study	2018	Does not address question of interest (not among specified interventions)
Wang, Z. H.; Li, K. N.; Lan, H.; Wang, X. D.	A Comparative Study of Intramedullary Nail Strengthened with Auxiliary Locking Plate or Steel Wire in the Treatment of Unstable Trochanteric Fracture of Femur	2020	Incorrect patient population (includes age<50 yrs)
Wang, Z.; Bhattacharyya, T.	Outcomes of Hemiarthroplasty and Total Hip Arthroplasty for Femoral Neck Fracture: A Medicare Cohort Study	2017	Does not address question of interest - prognostic endpoints
Wang, Z.; Hao, W.; Liu, D.; Zhang, K.; Jia, L.; Yang, S.; Wang, Z.; Zhang, D.; Zhang, D.	Prospective Study of Closed Reduction of Trochanteric Fractures via a Novel Intraoperative Femoral Fracture Reduction Device: Early Clinical Results	2018	Not comparison of interest
Wang, Z.; Hou, J. Z.; Wu, C. H.; Zhou, Y. J.; Gu, X. M.; Wang, H. H.; Feng, W.; Cheng, Y. X.; Sheng, X.; Bao, H. W.	A systematic review and meta-analysis of direct anterior approach versus posterior approach in total hip arthroplasty	2018	Meta-analysis
Wani, I. H.; Sharma, S.; Latoo, I.; Salaria, A. Q.; Farooq, M.; Jan, M.	Primary total hip arthroplasty versus internal fixation in displaced fracture of femoral neck in sexa- and septuagenarians	2014	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)

Authors	Article Title	Year	Reason for Exclusion
Wantonoro, W.; Kuo, W. Y.; Shyu, Y. L.	Changes in Health-Related Quality of Life for Older Persons With Cognitive Impairment After Hip Fracture Surgery: A Systematic Review	2020	Systematic review
Waring, A. C.; Harrison, S.; Fink, H. A.; Samuels, M. H.; Cawthon, P. M.; Zmuda, J. M.; Orwoll, E. S.; Bauer, D. C.; Osteoporotic Fractures in Men, Study	A prospective study of thyroid function, bone loss, and fractures in older men: The MrOS study	2013	Incorrect patient population (not exclusive to hip)
Warren, J. A.; Sundaram, K.; Anis, H. K.; Piuzzi, N. S.; Higuera, C. A.; Kamath, A. F.	Total Hip Arthroplasty Outperforms Hemiarthroplasty in Patients Aged 65 Years and Older: A Propensity-Matched Study of Short-Term Outcomes	2019	not best available evidence
Warren, J. A.; Sundaram, K.; Hampton, R.; McLaughlin, J.; Patterson, B.; Higuera, C. A.; Piuzzi, N. S.	Cephalomedullary nailing versus sliding hip screws for Intertrochanteric and basicervical hip fractures: a propensity-matched study of short-term outcomes in over 17,000 patients	2020	Insufficient data - age range not provided
Warschawski, Y.; Ankori, R.; Rutenberg, T. F.; Steinberg, E. L.; Atzmon, R.; Drexler, M.	Expandable Proximal Femoral Nail versus Gamma Proximal Femoral Nail for the treatment of hip reverse oblique fractures	2021	Incorrect patient population (<30 patients/group)
Watne, L. O.; Torbergsen, A. C.; Conroy, S.; Engedal, K.; Frihagen, F.; Hjorthaug, G. A.; Juliebo, V.; Raeder, J.; Saltvedt, I.; Skovlund, E.; Wyller, T. B.	The effect of a pre- and postoperative orthogeriatric service on cognitive function in patients with hip fracture: randomized controlled trial (Oslo Orthogeriatric Trial)	2014	Incorrect patient population (includes age<50 yrs)

Authors	Article Title	Year	Reason for Exclusion
Watson, A.; Zhang, Y.; Beattie, S.; Page, R. S.	Prospective randomized controlled trial comparing dynamic hip screw and screw fixation for undisplaced subcapital hip fractures	2013	Incorrect patient population (<30 patients/group)
Weber, M.; Benditz, A.; Woerner, M.; Weber, D.; Grifka, J.; Renkawitz, T.	Trainee Surgeons Affect Operative Time but not Outcome in Minimally Invasive Total Hip Arthroplasty	2017	Does not address question of interest
Weiss, R. J.; Ekstrom, W.; Hansen, B. H.; Keller, J.; Laitinen, M.; Trovik, C.; Zaikova, O.; Wedin, R.	Pathological subtrochanteric fractures in 194 patients: a comparison of outcome after surgical treatment of pathological and non-pathological fractures	2013	Incorrect patient population (includes age<50 yrs)
Wenzel, L.; von Ruden, C.; Thannheimer, A.; Becker, J.; Brand, A.; Augat, P.; Perl, M.	The Pararectus Approach in Acetabular Surgery: Radiological and Clinical Outcome	2020	Incorrect patient population (includes age<50 yrs)
Werner, M.; Krause, O.; Macke, C.; Herold, L.; Ranker, A.; Krettek, C.; Liodakis, E.	Orthogeriatric co-management for proximal femoral fractures. Can two additions make a big difference?	2020	not best available evidence
Westberg, M.; Frihagen, F.; Brun, O. C.; Figved, W.; Grogaard, B.; Valland, H.; Wangen, H.; Snorrason, F.	Effectiveness of gentamicin-containing collagen sponges for prevention of surgical site infection after hip arthroplasty: a multicenter randomized trial	2015	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Westin, J. R.; Thompson, M. A.; Cataldo, V. D.; Fayad, L. E.; Fowler, N.; Fanale, M. A.; Neelapu, S.; Samaniego, F.; Romaguera, J.; Shah, J.; McLaughlin, P.; Pro, B.; Kwak, L. W.; Sanjorjo, P.; Murphy, W. A.; Jimenez, C.; Toth, B.; Dong, W.; Hagemeister, F. B.	Zoledronic acid for prevention of bone loss in patients receiving primary therapy for lymphomas: a prospective, randomized controlled phase III trial	2013	Incorrect patient population (includes age<50 yrs)
Whale, C. S.; Hulet, D. A.; Beebe, M. J.; Rothberg, D. L.; Zhang, C.; Presson, A. P.; Stuart, A. R.; Kubiak, E. N.	Cephalomedullary nail versus sliding hip screw for fixation of AO 31 A1/2 intertrochanteric femoral fracture: A 12-year comparison of failure, complications, and mortality	2016	Incorrect patient population (includes age<50 yrs)
Whitaker, S. R.; Nisar, S.; Scally, A. J.; Radcliffe, G. S.	Does achieving the â??Best Practice Tariffâ?? criteria for fractured neck of femur patients improve one year outcomes?	2019	Does not address question of interest - prognostic endpoints
White, S. M.; Moppett, I. K.; Griffiths, R.	Outcome by mode of anaesthesia for hip fracture surgery. An observational audit of 65 535 patients in a national dataset	2014	Incorrect patient population (includes age<50 yrs)
Whitehouse, M. R.; Berstock, J. R.; Kelly, M. B.; Gregson, C. L.; Judge, A.; Sayers, A.; Chesser, T. J.	Higher 30-day mortality associated with the use of intramedullary nails compared with sliding hip screws for the treatment of trochanteric hip fractures: a prospective national registry study	2019	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Whiting, P. S.; Molina, C. S.; Greenberg, S. E.; Thakore, R. V.; Obremskey, W. T.; Sethi, M. K.	Regional anaesthesia for hip fracture surgery is associated with significantly more peri-operative complications compared with general anaesthesia	2015	Insufficient data - age range not provided

Authors	Article Title	Year	Reason for Exclusion
Widhalm, H. K.; Arnhold, R.; BeiglbÃ¶ck, H.; Munteanu, A.; Lang, N. W.; Hajdu, S.	A comparison of dynamic hip screw and two cannulated screws in the treatment of undisplaced intracapsular neck fracturesâ??two-year follow-up of 453 patients	2019	Incorrect patient population (includes age<50 yrs)
Williams, H.; Gwyn, R.; Smith, A.; Dramis, A.; Lewis, J.	Variable life-adjusted display (VLAD) for hip fracture patients: a prospective trial	2015	Incorrect patient population (includes age<50 yrs)
Williams, H.; Paringe, V.; Shenoy, S.; Michaels, P.; Ramesh, B.	Standard preoperative analgesia with or without fascia iliaca compartment block for femoral neck fractures	2016	not best available evidence
Williams, J.; Allen, F.; Kedrzycki, M.; Shenava, Y.; Gupta, R.	Use of Multislice CT for Investigation of Occult Geriatric Hip Fractures and Impact on Timing of Surgery	2019	Does not address question of interest - imaging
Williams, N. H.; Roberts, J. L.; Din, N. U.; Charles, J. M.; Totton, N.; Williams, M.; Mawdesley, K.; Hawkes, C. A.; Morrison, V.; Lemmey, A.; Edwards, R. T.; Hoare, Z.; Pritchard, A. W.; Woods, R. T.; Alexander, S.; Sackley, C.; Logan, P.; Wilkinson, C.; Rycroft-Malone, J.	Developing a multidisciplinary rehabilitation package following hip fracture and testing in a randomised feasibility study: Fracture in the Elderly Multidisciplinary Rehabilitation (FEMuR)	2017	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Williams, N. H.; Roberts, J. L.; Din, N. U.; Totton, N.; Charles, J. M.; Hawkes, C. A.; Morrison, V.; Hoare, Z.; Williams, M.; Pritchard, A. W.; Alexander, S.; Lemmey, A.; Woods, R. T.; Sackley, C.; Logan, P.; Edwards, R. T.; Wilkinson, C.	Fracture in the Elderly Multidisciplinary Rehabilitation (FEMuR): a phase II randomised feasibility study of a multidisciplinary rehabilitation package following hip fracture	2016	Incorrect patient population (<30 patients/group)
Winge, M. I.; RÃ¸kkum, M.	CaP cement is equivalent to iliac bone graft in filling of large metaphyseal defects: 2 year prospective randomised study on distal radius osteotomies	2018	Incorrect patient population (includes age<50 yrs)
Wittenberg, R. H.; Steffen, R.	Comparative 5-year results of short hip total hip arthroplasty with Ti- or CoCr-neck adapters	2015	Incorrect patient population (includes age<50 yrs)
Wong, S. H. J.; Fang, X. C.; Yee, K. H. D.; Wong, T. M.; Pun, C. T. T.; Lau, T. W.; Leung, K. L. F.	Hip fracture time-to-surgery and mortality revisited: mitigating comorbidity confounding by effect of holidays on surgical timing	2018	Does not address question of interest - prognostic endpoints
Woods, S.; Pilling, R.; Vidakovic, I.; Al-Mothenna, A.; Mayahi, R.	To derotate or not? The impact of a permanent derotation screw on the revision rate of dynamic hip screw fixation for intracapsular neck of femur fractures	2017	Incorrect patient population (<30 patients/group)
Wouthuyzen-Bakker, M.; Tornero, E.; Morata, L.; Nannan Panday, P. V.; Jutte, P. C.; Bori, G.; Kampinga, G. A.; Soriano, A.	Moxifloxacin plus rifampin as an alternative for levofloxacin plus rifampin in the treatment of a prosthetic joint infection with Staphylococcus aureus	2018	Incorrect patient population (<30 patients/group)
Wu, D.; Ren, G.; Peng, C.; Zheng, X.; Mao, F.; Zhang, Y.	InterTan nail versus Gamma3 nail for intramedullary nailing of unstable trochanteric fractures	2014	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)

Authors	Article Title	Year	Reason for Exclusion
Wu, K.; Xu, Y.; Zhang, L.; Zhang, Y.; Xu, W.; Chu, J.; Bao, N.; Ma, Q.; Yang, H.; Guo, J. J.	Which implant is better for beginners to learn to treat geriatric intertrochanteric femur fractures: A randomised controlled trial of surgeons, metalwork, and patients	2020	Not comparison of interest
Wu, X.; Tian, M.; Zhang, J.; Yang, M.; Gong, X.; Liu, Y.; Li, X.; Lindley, R. I.; Anderson, M.; Peng, K.; Jagnoor, J.; Ji, J.; Wang, M.; Ivers, R.; Tian, W.	The effect of a multidisciplinary co-management program for the older hip fracture patients in Beijing: a "pre- and post-" retrospective study	2019	not best available evidence
Wu, Y.; Han, R.	Perioperative Continuous Femoral Nerve Block Reduces Postoperative Cognitive Dysfunction of High-Risk Patients with Femoral Neck Fracture: Evidence from a Retrospective Propensity-Matched Study	2020	not best available evidence
Wu, Y.; Leu, T. H.; Chuang, T. Y.; Ho, W. P.; Chen, Y. P.; Lin, C. Y.	Screw trajectory affects screw cut-out risk after fixation for nondisplaced femoral neck fracture in elderly patients	2019	Incorrect patient population (<30 patients/group)
Wu, Z.; Zhang, M.; Zhang, Z.; Dong, W.; Wang, Q.; Ren, J.	Ratio of beta-amyloid protein (Abeta) and Tau predicts the postoperative cognitive dysfunction on patients undergoing total hip/knee replacement surgery	2018	Incorrect patient population (not exclusive to hip)
Wyatt, M. C.; Poutawera, V.; Kieser, D. C.; Frampton, C. M. A.; Hooper, G. J.	How do cemented short Exeter stems perform compared with standard-length Exeter stems? The experience of the New Zealand National Joint Registry	2020	Incorrect patient population (includes age<50 yrs)
Xabregas, A.; Gray, L.; Ham, J. M.	Heparin prophylaxis of deep vein thrombosis in patients with a fractured neck of the femur	1978	Incorrect patient population (< 30 pts/group)
Xia, Z. N.; Xiao, K.; Zhu, W.; Feng, B.; Zhang, B. Z.; Lin, J.; Qian, W. W.; Jin, J.; Gao, N.; Qiu, G. X.; Weng, X. S.	Risk assessment and management of preoperative venous thromboembolism following femoral neck fracture	2018	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Xie, H.; Wang, Z.; Zhang, J.; Xu, L.; Chen, B.	Clinical outcome of dynamic hip locking plates and proximal femoral nails anti-rotation-Asia for treating intertrochanteric femur fracture with lateral wall fractures in the elder patients	2017	Incorrect patient population (<30 patients/group)
Xie, S.; Xie, M.	Effect of dexmedetomidine on postoperative delirium in elderly patients undergoing hip fracture surgery	2018	not best available evidence
Xie, Y.; Dong, Q.; Xie, Z.	Proximal femoral nail anti-rotation (PFNA) and hemi-arthroplasty in the treatment of elderly intertrochanteric fractures	2019	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Xing, F.; Chen, W.; Long, C.; Huang, F.; Wang, G.; Xiang, Z.	Postoperative outcomes of tranexamic acid use in geriatric trauma patients treated with proximal femoral intramedullary nails: A systematic review and meta-analysis	2020	Systematic review
Xiong, W. F.; Chang, S. M.; Zhang, Y. Q.; Hu, S. J.; Du, S. C.	Inferior calcar buttress reduction pattern for displaced femoral neck fractures in young adults: a preliminary report and an effective alternative	2019	Incorrect patient population (<30 patients/group)
Xu, C.; Guo, H.; Bell, K. L.; Kuo, F. C.; Chen, J. Y.	Pigmented villonodular synovitis does not influence the outcome following cementless total hip arthroplasty using ceramic-on-ceramic articulation: a case-control study with middle-term follow-up	2018	Incorrect pt population (<30 pts/group)
Xu, D.; Li, X.; Bi, F.; Ma, C.; Lu, L.; Cao, J.	Hemiarthroplasty compared with total hip arthroplasty for displaced fractures of femoral neck in the elderly: A systematic review and meta-analysis of fourteen randomized clinical trials	2018	Systematic review
Xu, K.; Anwaier, D.; He, R.; Zhang, X.; Qin, S.; Wang, G.; Duan, X.; Tong, D.; Ji, F.	Hidden blood loss after hip hemiarthroplasty using the superPATH approach: A retrospective study	2019	not best available evidence
Xu, Q.; Lai, J.; Zhang, F.; Xu, Y.; Zhu, F.; Lin, J.; Zhao, M.; Ye, J.; Wen, L.	Poor outcomes for osteoporotic patients undergoing conversion total hip arthroplasty following prior failed dynamic hip screw fixation: a nationwide retrospective cohort study	2019	Incorrect patient population (failed fixation patients)

Authors	Article Title	Year	Reason for Exclusion
Xu, W. N.; Xue, Q. Y.	Long-Term Efficacy of Screw Fixation vs Hemiarthroplasty for Undisplaced Femoral Neck Fracture in Patients over 65 Years of Age: A Systematic Review and Meta-Analysis	2021	Systematic review
Xu, X.; Liao, X.	Effect of mindfulness cognitive behavior intervention on self-efficacy, self-management ability and self-perceived burden in elderly patients with hip fracture fixation	2021	Imperfect comparison group (insufficient multidisciplinary care treatment)
Xu, X.; Xie, L.; Yu, H.; Hu, Y.	Safety and efficacy of tranexamic acid with epinephrine for prevention of blood loss following surgery for trochanteric femoral fractures	2020	Insufficient data - age range not provided
Xue, D.; Yu, J.; Zheng, Q.; Feng, G.; Li, W.; Pan, Z.; Wang, J.; Li, H.	The treatment strategies of intertrochanteric fractures nonunion: An experience of 23 nonunion patients	2017	Incorrect patient population (<30 patients/group)
Xue, L.; Zha, L.; Chen, Q.; Liang, Y. J.; Li, K. R.; Zhou, Z.; Guan, J. L.; Qin, H.; Li, Y. P.	Randomized controlled trials of proximal femoral nail antirotation in lateral decubitus and supine position on treatment of intertrochanteric fractures	2013	Does not meet inclusion criteria (both groups receive proximal femoral nail antirotation (PFNA))
Yam, M.; Kang, B. J.; Chawla, A.; Zhang, W.; Way, L. G.; Xavier, R. P. A.; Park, D. H.; Yeo, N. E. M.; Howe, T. S.; Kwek, E. B. K.	Cephalomedullary blade cut-ins: a poorly understood phenomenon	2020	Case series
Yamamoto, N.; Sakura, S.; Noda, T.; Nishiyama, A.; Dan'ura, T.; Matsui, Y.; Ozaki, T.	Comparison of the postoperative analgesic efficacies of intravenous acetaminophen and fascia iliaca compartment block in hip fracture surgery: A randomised controlled trial	2019	Incorrect patient population (<30 patients/group)
Yamamoto, T.; Kobayashi, Y.; Nonomiya, H.	Undisplaced femoral neck fractures need a closed reduction before internal fixation	2019	Incorrect patient population (includes age<50 yrs)
Yamauchi, K.; Fushimi, K.; Shirai, G.; Fukuta, M.	Comparison of functional recovery in the very early period after surgery between plate and nail fixation for correction of stable femoral intertrochanteric fractures: a controlled clinical trial of 18 patients	2014	Incorrect patient population (<30 patients/group)

Authors	Article Title	Year	Reason for Exclusion
Yan, D.; Song, Y.; Pei, F.	Minimally invasive direct anterior approach for total hip arthroplasty in the management of femoral neck fractures in older patients	2015	not best available evidence
Yang, B.; Lin, X.; Yin, X. M.; Wen, X. Z.	Bipolar versus unipolar hemiarthroplasty for displaced femoral neck fractures in the elder patient: a systematic review and meta-analysis of randomized trials	2015	Systematic review
Yang, S.; Liu, Y.; Yang, T.; Zou, J.; Yang, H.	Early Clinical Efficacy Comparison Study of Gamma3 Nail, Percutaneous Compression Plate (PCCP) and Femoral Head Replacement (FHR) Treatment on Senile Unstable Intertrochanteric Fractures	2018	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Yang, Y. H.; Wang, Y. R.; Jiang, S. D.; Jiang, L. S.	Proximal femoral nail antirotation and third-generation Gamma nail: which is a better device for the treatment of intertrochanteric fractures?	2013	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Yang, Y.; Wang, J.; Sun, J.; Liu, L.; Zhang, Q.; Zhang, Y.	Comparison of hemiarthroplasty versus internal fixation in treatment of displaced femoral neck fracture: A meta-analysis	2016	Meta-analysis
Yang, Y.; Zhao, X.; Dong, T.; Yang, Z.; Zhang, Q.; Zhang, Y.	Risk factors for postoperative delirium following hip fracture repair in elderly patients: a systematic review and meta-analysis	2017	Systematic review
Yang, Z. B.; Wu, P. H.; Wong, P. K.; Huang, Z. Y.; Fu, M.; Liao, W. M.; He, A. S.; Kang, Y.	Better Prognosis of Senile Patients with Intertrochanteric Femoral Fracture by Treatment with Open Reduction Internal Fixation than by Hip Arthroplasty	2018	Incorrect patient population (<30 patients/group)
Yazdanshenas, H.; Washington, E. R. th; Shamie, A. N.; Madadi, F.; Washington, E. R., 3rd	Senior Managed Care System for Hip Fracture in the United States	2016	not best available evidence
Ye, C. Y.; Liu, A.; Xu, M. Y.; Nonso, N. S.; He, R. X.	Arthroplasty versus Internal Fixation for Displaced Intracapsular Femoral Neck Fracture in the Elderly: Systematic Review and Meta-analysis of Short- and Long-term Effectiveness	2016	Meta-analysis

Authors	Article Title	Year	Reason for Exclusion
Yee, D. K. H.; Lau, W.; Tiu, K. L.; Leung, F.; Fang, E.; Pineda, J. P. S.; Fang, C.	Cementation: for better or worse? Interim results of a multi-centre cohort study using a fenestrated spiral blade cephalomedullary device for pertrochanteric fractures in the elderly	2020	Incorrect patient population (<30 patients/group)
Yeganeh, A.; Taghavi, R.; Moghtadaei, M.	Comparing the Intramedullary Nailing Method Versus Dynamic Hip Screw in Treatment of Unstable Intertrochanteric Fractures	2016	es not meet inclusion criteria (non-RCT for cephalomedullary device PICO) Intramedullary Versus sliding Hip Screw
Yeh, M. W.; Zhou, H.; Adams, A. L.; Ituarte, P. H.; Li, N.; Liu, I. L.; Haigh, P. I.	The Relationship of Parathyroidectomy and Bisphosphonates With Fracture Risk in Primary Hyperparathyroidism: An Observational Study	2016	Incorrect patient population (includes age<50 yrs)
Yeh, W. L.; Su, C. Y.; Chang, C. W.; Chen, C. H.; Fu, T. S.; Chen, L. H.; Lin, T. Y.	Surgical outcome of atypical subtrochanteric and femoral fracture related to bisphosphonates use in osteoporotic patients with or without teriparatide treatment	2017	Incorrect patient population (<30 patients/group)
Yeung, J.; Patel, V.; Champaneria, R.; Dretzke, J.	Regional versus general anaesthesia in elderly patients undergoing surgery for hip fracture: Protocol for a systematic review	2016	Systematic review
Yilmaz, A.	Efficacy of Different Posterior Capsulotomies on Dislocations in Hip Hemiarthroplasty: T-Shaped Capsulotomy versus Longitudinal Capsulotomy	2019	not best available evidence
Yin, C.; Zhang, J.; Er, Z.	Clinical application of auricular point sticking in perioperative hemostasis for elderly patients with intertrochanteric fractures of the femur	2019	Imperfect comparator (groups received TXA)
Yin, M.; Yan, Y.; Fan, Z.; Fang, N.; Wan, H.; Mo, W.; Wu, X.	The efficacy of Enhanced Recovery after Surgery (ERAS) for elderly patients with intertrochanteric fractures who received surgery: study protocol for a randomized, blinded, controlled trial	2020	Protocol

Authors	Article Title	Year	Reason for Exclusion
Yli-Kyyny, T.; Ojanpera, J.; Venesmaa, P.; Kettunen, J.; Miettinen, H.; Salo, J.; Kroger, H.	Perioperative complications after cemented or uncemented hemiarthroplasty in hip fracture patients	2013	not best available evidence
Yli-Kyyny, T.; Sund, R.; Heinanen, M.; Venesmaa, P.; Kroger, H.	Cemented or uncemented hemiarthroplasty for the treatment of femoral neck fractures?	2014	not best available evidence
Yonezawa, T.; Yamazaki, K.; Atsumi, T.; Obara, S.	Influence of the timing of surgery on mortality and activity of hip fracture in elderly patients	2009	Does not meet inclusion criteria (non-RCT for timing PICO)
Yoo, H.; Cho, Y.; Hwang, S.	Outcomes of Combined Neck and Trochanter Fractures of the Femur Treated with Cephallomedullary Nail in Elderly	2019	Incorrect patient population (<30 patients/group)
Yoo, J. I.; Cha, Y. H.; Kim, J. T.; Park, C. H.	Clinical Outcomes of Bipolar Hemiarthroplasty versus Total Hip Arthroplasty: Assessing the Potential Impact of Cement Use and Pre-Injury Activity Levels in Elderly Patients with Femoral Neck Fractures	2019	Systematic review
Yoo, J. I.; Cha, Y. H.; Kim, K. J.; Kim, H. Y.; Choy, W. S.; Hwang, S. C.	Comparison between Cementless and Cemented Bipolar Hemiarthroplasty for Treatment of Unstable Intertrochanteric Fractures: Systematic Review and Meta-analysis	2018	Meta-analysis
Yoo, J. I.; Ha, Y. C.; Lim, J. Y.; Kang, H.; Yoon, B. H.; Kim, H.	Early Rehabilitation in Elderly after Arthroplasty versus Internal Fixation for Unstable Intertrochanteric Fractures of Femur: Systematic Review and Meta-Analysis	2017	Systematic review
Yoo, J.; Kim, S.; Choi, J.; Hwang, J.	Gamma 3 U-Blade lag screws in patients with trochanteric femur fractures: are rotation control lag screws better than others?	2019	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Yoon, B. H.; Ko, Y. S.; Jang, S. H.; Ha, J. K.	Feasibility of Hip Fracture Surgery Using a No Transfusion Protocol in Elderly Patients: A Propensity Score-Matched Cohort Study	2017	Does not meet inclusion criteria (non-RCT for Hg PICO)

Authors	Article Title	Year	Reason for Exclusion
Yoon, B. H.; Lee, Y. K.; Jo, W. L.; Ha, Y. C.; Choi, D. H.; Koo, K. H.	Incidence and Risk Period of Periprosthetic Femoral Fracture After Cementless Bipolar Hemiarthroplasty in Elderly Patients	2016	Case series (comparing identical intervention stratified by 2 fracture types)
Yoon, B. H.; Seo, J. G.; Koo, K. H.	Comparison of Postoperative Infection-Related Complications between Cemented and Cementless Hemiarthroplasty in Elderly Patients: A Meta-Analysis	2017	Systematic review
Yoon, R. S.; Mahure, S. A.; Hutzler, L. H.; Iorio, R.; Bosco, J. A.	Hip Arthroplasty for Fracture vs Elective Care: One Bundle Does Not Fit All	2017	not best available evidence
Yoshii, H.; Oinuma, K.; Tamaki, T.; Miura, Y.; Kaneyama, R.; Shiratsuchi, H.	Comparison of patient satisfaction after unilateral or simultaneous bilateral total hip arthroplasty through a direct anterior approach: Evaluation using the Japanese Orthopaedic Association Hip Disease Evaluation Questionnaire	2016	Insufficient data - age range not provided
Yoshikawa, A.; Ramirez, G.; Smith, M. L.; Foster, M.; Nabil, A. K.; Jani, S. N.; Ory, M. G.	Opioid Use and the Risk of Falls, Fall Injuries and Fractures among Older Adults: A Systematic Review and Meta-Analysis	2020	Systematic review
Yoshitani, J.; Kabata, T.; Kajino, Y.; Takagi, T.; Ohmori, T.; Ueno, T.; Ueoka, K.; Tsuchiya, H.	The effect of flexion alignment in total hip arthroplasty with a cementless tapered-wedge femoral stem	2018	Incorrect patient population (includes age<50 yrs)
You, D.; Xu, Y.; Ponich, B.; Ronksley, P.; Skeith, L.; Korley, R.; Carrier, M.; Schneider, P. S.	Effect of oral anticoagulant use on surgical delay and mortality in hip fracture	2021	Systematic review - Does not address question of interest (not among specified interventions)
Youn, Y. C.; Shin, H. W.; Choi, B. S.; Kim, S.; Lee, J. Y.; Ha, Y. C.	Rivastigmine patch reduces the incidence of postoperative delirium in older patients with cognitive impairment	2017	Does not address question of interest (not among specified interventions)

Authors	Article Title	Year	Reason for Exclusion
Yu, W.; Zhang, X.; Wu, R.; Zhu, X.; Hu, J.; Xu, Y.; Yi, J.; Liu, Y.	The visible and hidden blood loss of Asia proximal femoral nail anti-rotation and dynamic hip screw in the treatment of intertrochanteric fractures of elderly high- risk patients: a retrospective comparative study with a minimum 3 years of follow-up	2016	Does not meet inclusion criteria (non-RCT for cephalomedullary device vs. sliding hip screw)
Yu, W.; Zhang, X.; Zhu, X.; Hu, J.; Liu, Y.	A retrospective analysis of the InterTan nail and proximal femoral nail anti-rotation-Asia in the treatment of unstable intertrochanteric femur fractures in the elderly	2016	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Yu, W.; Zhang, X.; Zhu, X.; Yu, Z.; Xu, Y.; Zha, G.; Hu, J.; Yi, J.; Liu, Y.	Proximal femoral nails anti-rotation versus dynamic hip screws for treatment of stable intertrochanteric femur fractures: an outcome analyses with a minimum 4 years of follow-up	2016	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Yu, X.; Wang, J.; Wang, X.; Xie, L.; Chen, C.; Zheng, W.	The efficacy and safety of tranexamic acid in the treatment of intertrochanteric fracture: an updated meta-analysis of 11 randomized controlled trials	2020	Meta-analysis
Yuan, B. J.; Abdel, M. P.; Cross, W. W.; Berry, D. J.	Hip Arthroplasty After Surgical Treatment of Intertrochanteric Hip Fractures	2017	Does not address question of interest - secondary surgery
Yuan, W.; Kwek, E. B. K.	Management of elderly hip fractures by an orthopaedic trauma surgeon reduces surgical delays but does not improve outcomes compared to non-trauma surgeons	2019	Imperfect comparison
Yuasa, T.; Maezawa, K.; Nozawa, M.; Kaneko, K.	Surgical outcome for hip fractures in patients with and without Parkinson's disease	2013	Insufficient data - results not stratified by treatment
Yun, H. H.; Lim, J. T.; Yang, S. H.; Park, P. S.	Occult periprosthetic femoral fractures occur frequently during a long, trapezoidal, double-tapered cementless femoral stem fixation in primary THA	2019	Incorrect patient population (includes age<50 yrs)
Yun, M. J.; Kim, Y. H.; Han, M. K.; Kim, J. H.; Hwang, J. W.; Do, S. H.	Analgesia before a spinal block for femoral neck fracture: fascia iliaca compartment block	2009	<30 per group

Authors	Article Title	Year	Reason for Exclusion
Yurdakul, E.; Karaaslan, F.; Korkmaz, M.; Duygulu, F.; Baktir, A.	Is cemented bipolar hemiarthroplasty a safe treatment for femoral neck fracture in elderly patients?	2015	not best available evidence
Zaloga, G. P.; Pontes-Arruda, A.; Dardaine-Giraud, V.; Constans, T.	Safety and Efficacy of Subcutaneous Parenteral Nutrition in Older Patients: A Prospective Randomized Multicenter Clinical Trial	2017	Does not address question of interest (not among specified interventions)
Zang, W.; Liu, P. F.; Han, X. F.	A comparative study of proximal femoral locking compress plate, proximal femoral nail antirotation and dynamic hip screw in intertrochanteric fractures	2018	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)
Zarei, M.; Moharrami, A.; Haghpanah, B.	Delay in anesthesia assessment time - A cause of postponement in orthopedic trauma surgery	2020	Does not address question of interest (not among specified interventions) - comparing ejection fractions
Zehir, S.; Sahin, E.; Zehir, R.	Comparison of clinical outcomes with three different intramedullary nailing devices in the treatment of unstable trochanteric fractures	2015	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Zehir, S.; Zehir, R.; Sarak, T.	Early surgery is feasible in patients with hip fractures who are on clopidogrel therapy	2015	Does not meet inclusion criteria (non-post-operative for VTE)
Zeltzer, J.; Mitchell, R. J.; Toson, B.; Harris, I. A.; Ahmad, L.; Close, J.	Orthogeriatric services associated with lower 30-day mortality for older patients who undergo surgery for hip fracture	2014	Incorrect patient population (<30 patients/group)
Zeng, X.; Zhang, N.; Zeng, D.; Zhang, L.; Xu, P.; Cao, L.; Yu, W.; Zhan, K.; Zhang, X.	Proximal femoral nail antirotation versus dynamic hip screw fixation for treatment of osteoporotic type 31-A1 intertrochanteric femoral fractures in elderly patients	2017	Does not meet inclusion criteria (non-RCT for sliding hip screw)

Authors	Article Title	Year	Reason for Exclusion
Zeng, Z. Y.; Xu, Z. W.; He, D. W.; Zhao, X.; Ma, W. H.; Ni, W. F.; Song, Y. X.; Zhang, J. Q.; Yu, W.; Fang, X. Q.; Zhou, Z. J.; Xu, N. J.; Huang, W. J.; Hu, Z. C.; Wu, A. L.; Ji, J. F.; Han, J. F.; Fan, S. W.; Zhao, F. D.; Jin, H.; Pei, F.; Fan, S. Y.; Sui, D. X.	Complications and Prevention Strategies of Oblique Lateral Interbody Fusion Technique	2018	Incorrect patient population (includes age<50 yrs)
Zhang, C.; Xu, B.; Liang, G.; Zeng, X.; Zeng, D.; Chen, D.; Ge, Z.; Yu, W.; Zhang, X.	Optimizing stability in AO/OTA 31-A2 intertrochanteric fracture fixation in older patients with osteoporosis	2018	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Zhang, F. F.; Lv, C.; Yang, L. Y.; Wang, S. P.; Zhang, M.; Guo, X. W.	Pharmacokinetics of ropivacaine in elderly patients receiving fascia iliaca compartment block	2019	Incorrect patient population (<30 pts/group)
Zhang, H.; Zeng, X.; Zhang, N.; Zeng, D.; Xu, P.; Zhang, L.; Chen, D.; Yu, W.; Zhang, X.	INTERTAN nail versus proximal femoral nail antirotation-Asia for intertrochanteric femur fractures in elderly patients with primary osteoporosis	2017	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Zhang, H.; Zhu, X.; Pei, G.; Zeng, X.; Zhang, N.; Xu, P.; Chen, D.; Yu, W.; Zhang, X.	A retrospective analysis of the InterTan nail and proximal femoral nail anti-rotation in the treatment of intertrochanteric fractures in elderly patients with osteoporosis: a minimum follow-up of 3 years	2017	Confounding effect - comparison between 2 different cephalomedullary devices within PICO addressing device lengths
Zhang, J.; Ang, M. L.; Kwek, E. B.	Who Will Walk Again? Effects of Rehabilitation on the Ambulatory Status in Elderly Patients Undergoing Hemiarthroplasty for Femoral Neck Fracture	2015	Imperfect comparison group (insufficent detail describing multidisciplinary)

Authors	Article Title	Year	Reason for Exclusion
Zhang, J.; Chen, X.; Wang, J.; Liu, Z.; Wang, X.; Ren, J.; Sun, T.	Poor prognosis after surgery for intertrochanteric fracture in elderly patients with clopidogrel treatment: A cohort study	2017	Insufficient data - age range not provided
Zhang, J.; Liu, J.; Wang, W.; Fu, Q.; Zheng, Y.; Yuan, X.	Proximal femoral nail anti-rotation versus hip arthroplasty for osteoporotic intertrochanteric fracture: Surgical effects and indications	2018	Incorrect patient population (includes age<50 yrs)
Zhang, J.; Wang, X.; Zhang, H.; Shu, Z.; Jiang, W.	Comparison of combined lumbar and sacral plexus block with sedation versus general anaesthesia on postoperative outcomes in elderly patients undergoing hip fracture surgery (CLSB-HIPELD): Study protocol for a prospective, multicentre, randomised controlled trial	2019	Protocol
Zhang, K.; Zhang, S.; Yang, J.; Dong, W.; Wang, S.; Cheng, Y.; Al-Qwbani, M.; Wang, Q.; Yu, B.	Proximal femoral nail vs. dynamic hip screw in treatment of intertrochanteric fractures: a meta-analysis	2014	Meta-analysis
Zhang, L. L.; Zhang, Y.; Ma, X.; Liu, Y.	Multiple cannulated screws vs. dynamic hip screws for femoral neck fractures : A meta-analysis	2017	Meta-analysis
Zhang, L.; Shen, J.; Yu, S.; Huang, Q.; Xie, Z.	Percutaneous compression plate versus dynamic hip screw for treatment of intertrochanteric Hip fractures: a meta-analyse of five randomized controlled trials	2014	Meta-analysis
Zhang, M.	Effect of HBM rehabilitation exercises on depression, anxiety and health belief in elderly patients with osteoporotic fracture	2017	Doesn't address question of interest;
Zhang, R.; Yin, Y.; Li, S.; Guo, J.; Hou, Z.; Zhang, Y.	Sacroiliac screw versus a minimally invasive adjustable plate for Zone II sacral fractures: a retrospective study	2019	Incorrect patient population (includes age<50 yrs)
Zhang, S.; Zhang, K.; Jia, Y.; Yu, B.; Feng, W.	InterTan nail versus Proximal Femoral Nail Antirotation-Asia in the treatment of unstable trochanteric fractures	2013	Insufficient data - age range not provided

Authors	Article Title	Year	Reason for Exclusion
Zhang, W.; Wang, T.; Wang, G.; Yuan, Y.; Zhou, Y.; Yang, X.; Yang, M.; Zheng, S.	Elevated Lateral Position Improves the Success of Paramedian Approach Subarachnoid Puncture in Spinal Anesthesia before Hip Fracture Surgery in Elderly Patients: A Randomized Controlled Study	2020	Does not address question of interest (not among specified interventions)
Zhang, X.; Sun, Y.; Xie, H.; Liu, J.; Zhao, Y.; Xu, Z.	The effect of simvastatin on periprosthetic bone mineral density in the hypercholesterolaemic patients after total hip arthroplasty	2018	Incorrect patient population (<30 patients/group)
Zhang, Y. L.; Zhang, W.; Zhang, C. Q.	A new angle and its relationship with early fixation failure of femoral neck fractures treated with three cannulated compression screws	2017	Incorrect patient population (includes age<50 yrs)
Zhang, Y. M.; Jiang, X.; Sun, Y. S.	Effect of rivaroxaban on preventing deep vein thrombosis in aged diabetics with femoral neck fractures after hip replacement	2017	Incorrect patient population (includes age<50 yrs)
Zhang, Y.; Dong, Q.; Sun, X.; Hu, F.	External fixation versus dynamic hip screw in treatment of elderly intertrochanteric hip fractures: A systematic review and meta-analysis	2016	Systematic review
Zhang, Y.; Zhang, S.; Wang, S.; Zhang, H.; Zhang, W.; Liu, P.; Ma, J.; Pervaiz, N.; Wang, J.	Long and short intramedullary nails for fixation of intertrochanteric femur fractures (OTA 31-A1, A2 and A3): A systematic review and meta-analysis	2017	Meta-analysis
Zhang, Y.; Zhao, X.; Tang, Y.; Zhang, C.; Xu, S.; Xie, Y.	Comparative study of comminuted posterior acetabular wall fracture treated with the Acetabular Tridimensional Memory Fixation System	2014	Incorrect patient population (<30 patients/group)
Zhang, Z. Y.; Gao, D. P.; Yang, J. J.; Sun, X. R.; Zhang, H.; Hu, J.; Fang, Z. Y.; Yang, J. J.; Ji, M. H.	Impact of length of red blood cells transfusion on postoperative delirium in elderly patients undergoing hip fracture surgery: A cohort study	2016	Does not address question of interest (not among specified interventions)
Zhang, Z.; Li, Z.; Li, J.; Liu, L.	Effects of Natural Hirudin and Low Molecular Weight Heparin in Preventing Deep Venous Thrombosis in Aged Patients with Intertrochanteric Fracture	2018	Does not meet inclusion criteria (non-post-operative for VTE)

Authors	Article Title	Year	Reason for Exclusion
Zhao, G.; Liu, C.; Chen, K.; Lyu, J.; Chen, J.; Shi, J.; Chen, F.; Wei, Y.; Wang, S.; Xia, J.; Huang, G.	Nonanatomical Reduction of Femoral Neck Fractures in Young Patients (<=65 Years Old) with Internal Fixation Using Three Parallel Cannulated Screws	2021	Incorrect patient population (includes age<50 yrs)
Zhao, X.; Yuan, W.	Perioperative Multicomponent Interdisciplinary Program Reduces Delirium Incidence in Elderly Patients With Hip Fracture	2020	not best available evidence
Zhao, Y.; Fu, D.; Chen, K.; Li, G.; Cai, Z.; Shi, Y.; Yin, X.	Outcome of hemiarthroplasty and total hip replacement for active elderly patients with displaced femoral neck fractures: a meta-analysis of 8 randomized clinical trials	2014	Meta-analysis
Zheng, H.; Zhang, Y.; Wang, H.; Sun, T.; Sun, Q.	Comparison of perioperative hidden blood loss for intertrochanteric fractures in the elderly by different intramedullary fixations: A randomized controlled study protocol	2020	Protocol
Zhong, H.; Wang, Y.; Wang, Y.; Wang, B.	Comparison of the effect and clinical value in general anesthesia and combined spinal-epidural anesthesia in elderly patients undergoing hip arthroplasty	2019	not best available evidence
Zhou, S.; Liu, J.; Zhen, P.; Shen, W.; Chang, Y.; Zhang, H.; Zhu, Q.; Li, X.	Proximal femoral nail anti-rotation versus cementless bipolar hemiarthroplasty for unstable femoral intertrochanteric fracture in the elderly: a retrospective study	2019	Does not meet inclusion criteria (non-RCT for arthroplasty vs. fixation)
Zhou, X. D.; Li, J.; Fan, G. M.; Huang, Y.; Xu, N. W.	Efficacy and safety of tranexamic acid in elderly patients with intertrochanteric fracture: An updated meta-analysis	2019	Meta-analysis
Zhou, X.; Chen, M.; Yu, W.; Han, G.; Ye, J.; Zhuang, J.	Uncemented versus cemented total hip arthroplasty for displaced femoral neck fractures in elderly patients with osteoporosis: A retrospective analysis	2020	not best available evidence
Zhou, Z.; Yan, F.; Sha, W.; Wang, L.; Zhang, X.	Unipolar Versus Bipolar Hemiarthroplasty for Displaced Femoral Neck Fractures in Elderly Patients	2015	Systematic review
Zhou, Z.; Zhang, X.; Tian, S.; Wu, Y.	Minimally invasive versus conventional dynamic hip screw for the treatment of intertrochanteric fractures in older patients	2012	Meta-analysis

Authors	Article Title	Year	Reason for Exclusion
Zhu, K.; Zhang, J.; Zhang, C.; Zhao, Z.; Gao, J.; Li, X.; Xia, X.; Xu, X.; Zhang, T.; Guan, J.	Therapeutic efficacy of zoledronic acid combined with calcitriol in elderly patients receiving total hip arthroplasty or hemiarthroplasty for osteoporotic femoral neck fracture	2020	not intervention of interest;
Zidén, L.; Frändin, K.; Kreuter, M.	Home rehabilitation after hip fracture. A randomized controlled study on balance confidence, physical function and everyday activities	2008	Excluded PICO
Zidén, L.; Kreuter, M.; Frändin, K.	Long-term effects of home rehabilitation after hip fracture - 1-year follow-up of functioning, balance confidence, and health-related quality of life in elderly people	2010	Doesn't address question of interest;
Ziran, B. H.; Heckman, D. S.; Olarte, C. M.; Chou, K.; Baranick, J.	Intramedullary hip screw versus standard compression hip screw: Early postoperative rehabilitation comparisons	2009	Does not meet inclusion criteria (non-RCT for cephalomedullary device PICO)Intramedullary Hip Screw Versus Standard Compression Hip Screw
Zusman, E. Z.; Dawes, M.; Fleig, L.; McAllister, M. M.; Cook, W. L.; Guy, P.; Brasher, P. M. A.; McKay, H. A.; Khan, K. M.; Ashe, M. C.	Older Adults' Sedentary Behavior and Physical Activity After Hip Fracture: Results From an Outpatient Rehabilitation Randomized Controlled Trial	2019	Incorrect patient population (<30 patients/group)