AAOS
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Supplement to the Management of Rotator Cuff Injuries Clinical Practice Guideline

e-Appendix 2

- Study Quality Evaluation
- Summary Data Tables
- Detailed Data Tables

This supplementary material has been provided by the authors to give readers additional information about their work

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Quality Evaluation Table 1: operative repair vs non-op repair-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Kukkonen, J, 2015	◑	●	●	●	●	○	●	●	●	Include	High Quality
Lambers, Heerspink Fo, 2015	◑	●	○	●	◑	●	●	●	●	Include	Moderate Quality
Moosmayer, S, 2010	●	●	●	●	◑	◑	●	●	●	Include	High Quality
Moosmayer, S, 2014	◑	●	●	●	●	○	●	●	●	Include	High Quality

Quality Evaluation Table 2: irreparable tear with arthropathy-Observational studies

Study	Design	Participant Recruitment	Allocation	Confounding Variables	Follow-Up Length	Other Bias? (If retrospective comparative, mark Yes)	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Kim, H., 2014	●	●	●	●	●	○				Include	Low Quality

Table 1: Summary of Findings-Pico 1 Part 2: Mini Open Repair vs. Non-operative

	Moderate Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Lambers, Heerspink Fo, 2015
Function	
PROs (specify)(CMS)	●
PROs (specify)(DSST)	●
Pain	
PROs (specify)(VAS (pain))	●
Quality of life	
PROs (specify)(VAS (disability))	↑

Table 2: Summary of Findings-Pico 1 Part 3: Repair vs. Non-operative

	High Quality		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Moosmayer, S, 2010	Moosmayer, S, 2014	Kukkonen, J., 2015
Composite			
PROs (specify)(Constant)	↑	↑	↑
PROs (specify)(ASES)	↑	↑	
Function			
Clinical outcomes (specify)((constant)Pain-free active abduction (degrees))	↑		
Clinical outcomes (specify)((constant)Pain-free active flexion (degrees))	↑		
Clinical outcomes (specify)((constant)Shoulder strength (kg))	●		
Clinical outcomes (specify)(Pain-free abduction (degrees))		●	
Clinical outcomes (specify)(Pain-free flexion (degrees))		●	
Pain			
PROs (specify)(VAS (cm)(ASES))	↑		
PROs (specify)(VAS pain (cm))		↑	
Quality of life			
PROs (specify)(SF-36 (mental component summary score))	●		
PROs (specify)(SF-36 (physical component summary score))	●		
PROs (specify)(SF-36)		●	

Table 3: Pico 1 Part 2: Mini Open Repair vs. Non-operative -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lambers, Heerspink Fo, 2015	Moderate Quality	PROs (specify)(CMS)	1 years	G1 (Mini Open) (Mini open approach for surgerical repair)	20	81.9(15.60)	G2 (Conservative Treatment) (Subacromial steroid infiltration, physiotherapy, and analgesic medication)	25	73.7(18.40)	MeanDif	8.2(-1.74,18.14)	Not Significant (P-value>.05)
Lambers, Heerspink Fo, 2015	Moderate Quality	PROs (specify)(DSST)	1 years	G1 (Mini Open) (Mini open approach for surgerical repair)	20	11(2.80)	G2 (Conservative Treatment) (Subacromial steroid infiltration, physiotherapy, and analgesic medication)	25	9.7(3.60)	MeanDif	1.3(-0.57,3.17)	Not Significant (P-value>.05)

Table 4: Pico 1 Part 2: Mini Open Repair vs. Non-operative -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lambers, Heerspink Fo, 2015	Moderate Quality	PROs (specify)(VAS (pain))	1 years	G1 (Mini Open) (Mini open approach for surgerical repair)	20	2.2(1.90)	G2 (Conservative Treatment) (Subacromial steroid infiltration, physiotherapy, and analgesic medication)	25	3.2(2.10)	MeanDif	-1(-2.17,0.17)	Not Significant (P-value>.05)

Table 5: Pico 1 Part 2: Mini Open Repair vs. Non-operative -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lambers, Heerspink Fo, 2015	Moderate Quality	PROs (specify)(VAS (disability))	1 years	G1 (Mini Open) (Mini open approach for surgerical repair)	20	2.1(1.70)	G2 (Conservative Treatment) (Subacromial steroid infiltration, physiotherapy, and analgesic medication)	25	3.5(2.30)	MeanDif	-1.4(-2.57,-0.23)	**Treatment 1 Significant (P-value<.05)**

Table 6: Pico 1 Part 3: Open Repair vs. Non-operative -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moosmayer, S, 2010	High Quality	PROs (specify)(ASES)	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	92.6(14.72)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	79.2(22.95)	MeanDif	13.4(5.94,20.86)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2010	High Quality	PROs (specify)(Constant)	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	76.8(15.08)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	66.8(22.95)	MeanDif	10(2.49,17.51)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2014	High Quality	PROs (specify)(ASES)	1 years	G1 (Open) (Open repair (42) and mini-open (9))	51	93.6(12.50)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	51	83.6(18.30)	MeanDif	10(3.92,16.08)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2014	High Quality	PROs (specify)(ASES)	2 years	G1 (Open) (Open repair (42) and mini-open (9))	51	93.1(13.90)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	88(14.90)	MeanDif	5.1(-0.52,10.72)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	PROs (specify)(ASES)	5 years	G1 (Open) (Open repair (42) and mini-open (9))	51	92.8(13.30)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	85.4(21.00)	MeanDif	7.4(0.53,14.27)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2014	High Quality	PROs (specify)(Constant)	1 years	G1 (Open) (Open repair (42) and mini-open (9))	51	77.7(13.40)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	51	70.3(19.10)	MeanDif	7.4(1.00,13.80)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moosmayer, S, 2014	High Quality	PROs (specify)(Constant)	2 years	G1 (Open) (Open repair (42) and mini-open (9))	51	79.3(13.60)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	77.7(14.90)	MeanDif	1.6(-3.97,7.17)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	PROs (specify)(Constant)	5 years	G1 (Open) (Open repair (42) and mini-open (9))	51	79.8(15.00)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	74.2(20.30)	MeanDif	5.6(-1.37,12.57)	Not Significant (P-value>.05)

Table 7: Pico 1 Part 3: Open Repair vs. Non-operative -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moosmayer, S, 2010	High Quality	Clinical outcomes (specify)((constant)Pain-free active abduction (degrees))	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	156.7(37.16)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	136.1(49.55)	MeanDif	20.6(3.66,37.54)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2010	High Quality	Clinical outcomes (specify)((constant)Pain-free active flexion (degrees))	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	164.3(30.90)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	148.8(45.18)	MeanDif	15.5(0.52,30.48)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2010	High Quality	Clinical outcomes (specify)((constant)Shoulder strength (kg))	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	11(4.05)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	11.4(5.83)	MeanDif	-0.4(-2.34,1.54)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	Clinical outcomes (specify)(Pain-free abduction (degrees))	1 years	G1 (Open) (Open repair (42) and mini-open (9))	51	158.4(33.70)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	51	143.8(43.90)	MeanDif	14.6(-0.59,29.79)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	Clinical outcomes (specify)(Pain-free abduction (degrees))	2 years	G1 (Open) (Open repair (42) and mini-open (9))	51	161.7(30.80)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	163.6(32.60)	MeanDif	-1.9(-14.27,10.47)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	Clinical outcomes (specify)(Pain-free abduction (degrees))	5 years	G1 (Open) (Open repair (42) and mini-open (9))	51	167.3(30.60)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	155.1(41.20)	MeanDif	12.2(-1.98,26.38)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moosmayer, S, 2014	High Quality	Clinical outcomes (specify)(Pain-free flexion (degrees))	1 years	G1 (Open) (Open repair (42) and mini-open (9))	51	166.1(27.50)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	51	155.6(38.40)	MeanDif	10.5(-2.46,23.46)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	Clinical outcomes (specify)(Pain-free flexion (degrees))	2 years	G1 (Open) (Open repair (42) and mini-open (9))	51	168.5(26.10)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	170.5(23.00)	MeanDif	-2(-11.59,7.59)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	Clinical outcomes (specify)(Pain-free flexion (degrees))	5 years	G1 (Open) (Open repair (42) and mini-open (9))	51	170.6(27.90)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	163.5(35.40)	MeanDif	7.1(-5.35,19.55)	Not Significant (P-value>.05)

Table 8: Pico 1 Part 3: Open Repair vs. Non-operative -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moosmayer, S, 2010	High Quality	PROs (specify)(VAS (cm)(ASES))	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	0.6(1.47)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	2.1(2.55)	MeanDif	-1.5(-2.31,-0.69)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2014	High Quality	PROs (specify)(VAS pain (cm))	1 years	G1 (Open) (Open repair (42) and mini-open (9))	51	0.5(1.20)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	51	1.6(1.60)	MeanDif	-1.1(-1.65,-0.55)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2014	High Quality	PROs (specify)(VAS pain (cm))	2 years	G1 (Open) (Open repair (42) and mini-open (9))	51	0.7(1.50)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	1.4(1.40)	MeanDif	-0.7(-1.27,-0.13)	**Treatment 1 Significant (P-value<.05)**
Moosmayer, S, 2014	High Quality	PROs (specify)(VAS pain (cm))	5 years	G1 (Open) (Open repair (42) and mini-open (9))	51	0.6(1.40)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	1.6(1.60)	MeanDif	-1(-1.59,-0.41)	**Treatment 1 Significant (P-value<.05)**

Table 9: Pico 1 Part 3: Open Repair vs. Non-operative -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moosmayer, S, 2010	High Quality	PROs (specify)(SF-36 (mental component summary score))	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	56.2(9.57)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	57.5(7.29)	MeanDif	-1.3(-4.58,1.98)	Not Significant (P-value>.05)
Moosmayer, S, 2010	High Quality	PROs (specify)(SF-36 (physical component summary score))	1 year	G1 (Open repair) (Open (42 pts) and mini-open (9 pts))	52	50.7(10.67)	G2 (Physiotherapy) (Physiotherapy and Secondary Surgery)	51	48.9(10.20)	MeanDif	1.8(-2.23,5.83)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	PROs (specify)(SF-36)	1 years	G1 (Open) (Open repair (42) and mini-open (9))	51	51.2(10.00)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	51	50.3(8.70)	MeanDif	0.9(-2.74,4.54)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	PROs (specify)(SF-36)	2 years	G1 (Open) (Open repair (42) and mini-open (9))	51	51(9.70)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	50.4(9.20)	MeanDif	0.6(-3.09,4.29)	Not Significant (P-value>.05)
Moosmayer, S, 2014	High Quality	PROs (specify)(SF-36)	5 years	G1 (Open) (Open repair (42) and mini-open (9))	51	50.1(10.60)	G2 (Physiotherapy) (Cons. shoulder management, rehab prgm (52 exercises))	50	48.4(11.20)	MeanDif	1.7(-2.55,5.95)	Not Significant (P-value>.05)

Pico 1: Arthroscopic Repair vs. Non-operative-(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kukkonen, J., 2015	High	PROs (specify) Constant score	2 years	G1 (Arthroscopy and PT)	55	18.4	G2 (PT)	58	20.5			**Treatment 1 Significant** (P-value<.05)

Quality Evaluation Table 3: concomitant vs isolated repair-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Abrams, G. D., 2014	◑	●	●	◑	◑	○				Include	Moderate Quality
Gartsman, G. M., 2004	●	◑	◑	●	◑	◑				Include	Moderate Quality
Kim, J., 2011	●	◑	◑	●	◑	●				Include	High Quality
MacDonald, P., 2011	●	●	●	◑	◑	○				Include	Moderate Quality
Milano, G., 2007	●	◑	◑	◑	◑	●				Include	Moderate Quality
Oh, J., 2014	●	◑	◑	○	◑	●				Include	Moderate Quality
Park, Y., 2015	●	◑	◑	●	◑	○				Include	Moderate Quality
Shin, S-J, 2012	◑	◑	◑	○	●	●				Include	Moderate Quality

Figure 1 PICO 2 Meta-Analysis-Concomitant Repair (Acromioplasty) Vs Repair (non-Concomitant repair) at 12 and 24 months: Function

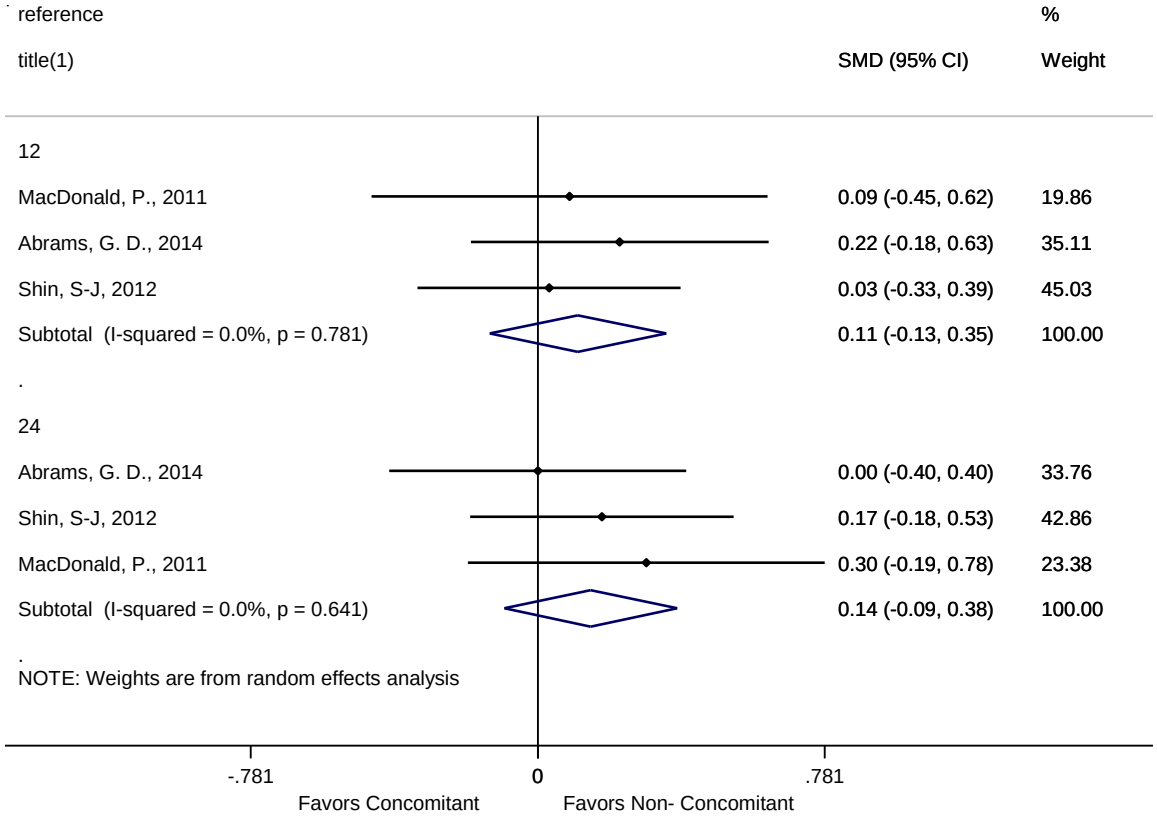

Table 10: Summary of Findings-Pico 2 Part 1: Acromioplasty vs. No concomitant treatment

	Moderate Quality				
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Abrams, G. D., 2014	Gartsman, G. M., 2004	MacDonald, P., 2011	Milano, G., 2007	Shin, S-J, 2012
Complications					
Healing rate(Failure of healing)					●
Composite					
PROs (specify)(Constant)	●				●
PROs (specify)(ASES)	●		●		●
PROs (specify)(UCLA)	↑				
PROs (specify)(ASES score)		●			
Clinical outcomes (specify)(DASH score)				●	
Clinical outcomes (specify)(Work-DASH)				●	
PROs (specify)(Constant- Murley scoring system)				●	
PROs (specify)(VAS (pain/patient satisfaction))					●
Function					
PROs (specify)(SST)	●				
Clinical outcomes (specify)(External rotation (degrees))					●
Clinical outcomes (specify)(Forward flexion (degrees))					●
Clinical outcomes (specify)(Internal rotation (degrees))					●
Clinical outcomes (specify)(UCLA score)					●
Pain					
PROs (specify)(VAS)	↑				
Quality of life					
PROs (specify)(WORC)			●		
Reoperation					
Adverse events/complications(Secondary surgery)	●				

Table 11: Pico 2 Part 1: Acromioplasty vs. No concomitant treatment -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, S-J, 2012	Moderate Quality	Healing rate(Failure of healing)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	16.67%	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	20.00%	RR	0.83(0.39,1.78)	Not Significant (P-value>.05)

Table 12: Pico 2 Part 1: Acromioplasty vs. No concomitant treatment -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(ASES)	1 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	90.3(11.40)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	86.8(12.60)	MeanDif	3.5(-1.38,8.38)	Not Significant (P-value>.05)
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(ASES)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	89(16.40)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	91.5(13.30)	MeanDif	-2.5(-8.47,3.47)	Not Significant (P-value>.05)
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(Constant)	1 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	79(12.50)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	77.8(6.20)	MeanDif	1.2(-2.67,5.07)	Not Significant (P-value>.05)
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(Constant)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	78.7(11.10)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	75(15.00)	MeanDif	3.7(-1.70,9.10)	Not Significant (P-value>.05)
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(UCLA)	1 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	18.1(2.50)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	16.2(3.50)	MeanDif	1.9(0.65,3.15)	**Treatment 1 Significant (P-value<.05)**
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(UCLA)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	17.4(3.30)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	17.2(3.40)	MeanDif	0.2(-1.16,1.56)	Not Significant (P-value>.05)
Gartsman, G. M., 2004	Moderate Quality	PROs (specify)(ASES score)	1 years	g1(acromioplasty) (RC repair with subacromial decompression)	47	91.5(10.30)	g2(w/out acromioplasty) (RC repair alone)	46	89.2(15.10)	MeanDif	2.3(-2.96,7.56)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
MacDonald, P., 2011	Moderate Quality	PROs (specify)(ASES)	1.5 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	22	90(13.50)	G2 (No concomitant) (Arthroscopic RC repair w/o acromioplasty)	22	85.6(13.60)	MeanDif	4.4(-114.29,123.09)	Not Significant (P-value>.05)
MacDonald, P., 2011	Moderate Quality	PROs (specify)(ASES)	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	26	86.6(19.10)	G2 (No concomitant) (Arthroscopic RC repair w/o acromioplasty)	27	85(18.10)	MeanDif	1.6(-107.58,110.78)	Not Significant (P-value>.05)
MacDonald, P., 2011	Moderate Quality	PROs (specify)(ASES)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	32	90.5(13.40)	G2 (No concomitant) (Arthroscopic RC repair w/o acromioplasty)	34	85.6(19.10)	MeanDif	4.9(-115.15,124.95)	Not Significant (P-value>.05)
Milano, G., 2007	Moderate Quality	Clinical outcomes (specify)(DASH score)	2 years	g1(Acromioplasty) (arthroscopic repair and subacromial decompression consisting of anterior-inferior acromioplasty, release of the coracoacromial ligament, and subacromial bursectomy)	37	18.2(17.60)	g2(w/out acromioplasty) (arthroscopic repair w only subacromial bursectomy)	34	23.1(19.30)	MeanDif	-4.9(-13.52,3.72)	Not Significant (P-value>.05)
Milano, G., 2007	Moderate Quality	Clinical outcomes (specify)(Work-DASH)	2 years	g1(Acromioplasty) (arthroscopic repair and subacromial decompression consisting of anterior-inferior acromioplasty, release of the coracoacromial ligament, and subacromial bursectomy)	37	23.7(25.30)	g2(w/out acromioplasty) (arthroscopic repair w only subacromial bursectomy)	34	26.2(24.80)	MeanDif	-2.5(-14.16,9.16)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Milano, G., 2007	Moderate Quality	PROs (specify)(Constant-Murley scoring system)	2 years	g1(Acromioplasty) (arthroscopic repair and subacromial decompression consisting of anterior-inferior acromioplasty, release of the coracoacromial ligament, and subacromial bursectomy)	37	103.6(17.50)	g2(w/out acromioplasty) (arthroscopic repair w only subacromial bursectomy)	34	96.1(20.90)	MeanDif	7.5(-1.51,16.51)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	PROs (specify)(ASES)	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	89.3(11.20)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	84.6(16.40)	MeanDif	4.7(-0.33,9.73)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	PROs (specify)(ASES)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	90.7(13.10)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	87.5(12.00)	MeanDif	3.2(-1.30,7.70)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	PROs (specify)(Constant)	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	83.9(11.30)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	82.3(12.20)	MeanDif	1.6(-2.61,5.81)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, S-J, 2012	Moderate Quality	PROs (specify)(Constant)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	85(11.30)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	83.3(13.00)	MeanDif	1.7(-2.66,6.06)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	PROs (specify)(VAS (pain/patient satisfaction))	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	1(1.30)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	1.5(1.90)	MeanDif	-0.5(-1.08,0.08)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	PROs (specify)(VAS (pain/patient satisfaction))	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	1.1(0.90)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	1.3(1.40)	MeanDif	-0.2(-0.62,0.22)	Not Significant (P-value>.05)

Table 13: Pico 2 Part 1: Acromioplasty vs. No concomitant treatment -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(SST)	1 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	10.4(2.20)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	9.9(2.30)	MeanDif	0.5(-0.41,1.41)	Not Significant (P-value>.05)
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(SST)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	10.5(2.30)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	10.5(2.10)	MeanDif	0(-0.89,0.89)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(External rotation (degrees))	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	66.8(16.50)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	68.5(14.20)	MeanDif	-1.7(-7.21,3.81)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	67.1(14.40)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	69.2(12.40)	MeanDif	-2.1(-6.91,2.71)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(Forward flexion (degrees))	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	171(12.00)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	170.6(14.00)	MeanDif	0.4(-4.27,5.07)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(Forward flexion (degrees))	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	173.8(14.70)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	170.8(19.40)	MeanDif	3(-3.16,9.16)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(Internal rotation (degrees))	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	8(1.70)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	8.3(1.50)	MeanDif	-0.3(-0.87,0.27)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(Internal rotation (degrees))	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	8.2(2.40)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	8.4(1.10)	MeanDif	-0.2(-0.87,0.47)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(UCLA score)	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	30.3(4.50)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	30.8(4.10)	MeanDif	-0.5(-2.04,1.04)	Not Significant (P-value>.05)
Shin, S-J, 2012	Moderate Quality	Clinical outcomes (specify)(UCLA score)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/subacromial decompression and acromioplasty)	60	33.4(3.30)	G2 (Control) (Arthroscopic RC repair w/subacromial decompression w/o acromioplasty)	60	32.3(3.50)	MeanDif	1.1(-0.12,2.32)	Not Significant (P-value>.05)

Table 14: Pico 2 Part 1: Acromioplasty vs. No concomitant treatment -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(VAS)	1 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	0.5(0.90)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	1.2(1.60)	MeanDif	-0.7(-1.24,-0.16)	**Treatment 1 Significant (P-value<.05)**
Abrams, G. D., 2014	Moderate Quality	PROs (specify)(VAS)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	1(1.70)	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	0.7(1.20)	MeanDif	0.3(-0.28,0.88)	Not Significant (P-value>.05)

Table 15: Pico 2 Part 1: Acromioplasty vs. No concomitant treatment -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
MacDonald, P., 2011	Moderate Quality	PROs (specify)(WORC)	1.5 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	22	87.9(16.10)	G2 (No concomitant) (Arthroscopic RC repair w/o acromioplasty)	22	82.2(18.00)	MeanDif	5.7(-108.14,119.54)	Not Significant (P-value>.05)
MacDonald, P., 2011	Moderate Quality	PROs (specify)(WORC)	1 year	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	22	84.2(18.80)	G2 (No concomitant) (Arthroscopic RC repair w/o acromioplasty)	22	76.3(23.30)	MeanDif	7.9(-98.81,114.61)	Not Significant (P-value>.05)
MacDonald, P., 2011	Moderate Quality	PROs (specify)(WORC)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	32	87.5(15.30)	G2 (No concomitant) (Arthroscopic RC repair w/o acromioplasty)	36	80.7(21.30)	MeanDif	6.8(-109.27,122.87)	Not Significant (P-value>.05)

Table 16: Pico 2 Part 1: Acromioplasty vs. No concomitant treatment -(Reoperation)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abrams, G. D., 2014	Moderate Quality	Adverse events/complications(Secondary surgery)	2 years	G1 (Acromioplasty) (Arthroscopic RC repair w/acromioplasty)	52	1.92%	G2 (Control) (Arthroscopic RC repair w/o acromioplasty)	43	9.30%	RR	0.21(0.02,1.78)	Not Significant (P-value>.05)

Table 17: Summary of Findings-Pico 2 Part 2: Cartilage restoration vs. No concomitant treatment

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Osti, L, 2013
Complications	
Healing rate(RCT healing)	●
Composite	
Clinical outcomes (specify)(UCLA score)	●
Clinical outcomes (specify)(Constant-Murley Score)	●
Function	
Clinical outcomes (specify)(external rotation)	●
Clinical outcomes (specify)(Forward flexion, degrees)	●

Table 18: Summary of Findings-Pico 2 Part 3: Distal clavicle resection vs. No concomitant treatment

	High Quality	Moderate Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Kim, J., 2011	Park, Y.B, 2015	Oh, J., 2014
Complications			
Adverse event/complications (Failed cuff healing)			●
Adverse event/complications (Retears)		●	
Composite			
PROs (specify)(ASES)	↑	●	●
PROs (specify)(UCLA)	↑		
Pain			
PROs (specify)(VAS)	↑	●	●
Function			
Clinical Outcomes		●	●

Table 19: Pico 2 Part 3: Distal clavicle resection vs. No concomitant treatment -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, J., 2011	High Quality	PROs (specify)(ASES)	1 years	G1 (Repair and DCR) (RC repair and arthroscopic distal clavicle resection)	31	86.5(.)	G2 (Repair w/o DCR) (RC repair)	52	87.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Kim, J., 2011	High Quality	PROs (specify)(ASES)	2 years	G1 (Repair and DCR) (RC repair and arthroscopic distal clavicle resection)	31	92.5(.)	G2 (Repair w/o DCR) (RC repair)	52	88.7(.)	Author Reported	NA	DCR over No DCR Significant (P-value<.05)
Kim, J., 2011	High Quality	PROs (specify)(UCLA)	1 years	G1 (Repair and DCR) (RC repair and arthroscopic distal clavicle resection)	31	26.4(.)	G2 (Repair w/o DCR) (RC repair)	52	25.3(.)	Author Reported	NA	DCR over No DCR Significant (P-value<.05)
Kim, J., 2011	High Quality	PROs (specify)(UCLA)	2 years	G1 (Repair and DCR) (RC repair and arthroscopic distal clavicle resection)	31	33.7(.)	G2 (Repair w/o DCR) (RC repair)	52	30.8(.)	Author Reported	NA	DCR over No DCR Significant (P-value<.05)

Table 11: Pico 2: Distal clavicle resection vs. No concomitant treatment-(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Park, Y.B, 2015	Moderate	PROs (specify) ASES (pain/function)	44 months	G1 (DCR and arthroscopic repair)	21	81 (14.3)	G2 (Arthroscopic repair)	26	79.3 (23.9)			Not Significant (P-value>.05)
Park, Y.B, 2015	Moderate	PROs (specify) Constant (pain/function)	44 months	G1 (DCR and arthroscopic repair)	21	74.5 (12)	G2 (Arthroscopic repair)	26	72.3 (20.6)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Oh, J., 2014	Moderate	PROs (specify) ASES (pain/function	30 months	G1 (DCR and acromioplasty)	39	91.5 (15.5)	G2 (Acromioplasty)	39	94.5 (11.8)			Not Significant (P-value>.05)
Oh, J., 2014	Moderate	PROs (specify) Constant (pain/function	30 months	G1 (DCR and acromioplasty)	39	96.3 (5.7)	G2 (Acromioplasty)	39	95.7 (4.6)			Not Significant (P-value>.05)

Table 12: Pico 2: Distal clavicle resection vs. No concomitant treatment-(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Park, Y.B, 2015	Moderate	PROs (specify) VAS (pain)	44 months	G1 (DCR and arthroscopic repair)	21	1.8 (1.3)	G2 (Arthroscopic repair)	26	2 (2.5)			Not Significant (P-value>.05)
Oh, J., 2014	Moderate	PROs (specify) VAS (pain)	30 months	G1 (DCR and acromioplasty)	39	0.6 (1.8)	G2 (Acromioplasty)	39	0.6 (0.9)			Not Significant (P-value>.05)

Table 13: Pico 2: Distal clavicle resection vs. No concomitant treatment-(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Park, Y.B, 2015	Moderate	Clinical outcomes (specify) Forward elevation (degrees)	44 months	G1 (DCR and arthroscopic repair)	21	141.42 (17.4)	G2 (Arthroscopic repair)	26	141.92 (21.91)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Park, Y.B, 2015	Moderate	Clinical outcomes (specify) External Rotation (degrees)	44 months	G1 (DCR and arthroscopic repair)	21	36.19 (12.84)	G2 (Arthroscopic repair)	26	33.46 (16.71)			Not Significant (P-value>.05)
Oh, J., 2014	Moderate	Clinical outcomes (specify) Forward Flexion (degrees)	30 months	G1 (DCR and acromioplasty)	39	167.7 (11.4)	G2 (Acromioplasty)	39	171.9 (8.9)			Not Significant (P-value>.05)
Oh, J., 2014	Moderate	Clinical outcomes (specify) Abduction (degrees)	30 months	G1 (DCR and acromioplasty)	39	170.1 (9.7)	G2 (Acromioplasty)	39	171.2 (10.9)			Not Significant (P-value>.05)
Oh, J., 2014	Moderate	Clinical outcomes (specify) External Rotation (degrees)	30 months	G1 (DCR and acromioplasty)	39	75.8 (17.1)	G2 (Acromioplasty)	39	73.6 (16.2)			Not Significant (P-value>.05)
Oh, J., 2014	Moderate	Clinical outcomes (specify) Internal Rotation (degrees)	30 months	G1 (DCR and acromioplasty)	39	8 (3)	G2 (Acromioplasty)	39	7.9 (1.4)			Not Significant (P-value>.05)

Table 14: Pico 2 Part 3: Distal clavicle resection vs. No concomitant treatment -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, J., 2011	High Quality	PROs (specify)(VAS)	1 years	G1 (Repair and DCR) (RC repair and arthroscopic distal clavicle resection)	31	2.1(.)	G2 (Repair w/o DCR) (RC repair)	52	2.4(.)	Author Reported	NA	DCR over No DCR Significant (P-value<.05)
Kim, J., 2011	High Quality	PROs (specify)(VAS)	2 years	G1 (Repair and DCR) (RC repair and arthroscopic distal clavicle resection)	31	1.7(.)	G2 (Repair w/o DCR) (RC repair)	52	2.3(.)	Author Reported	NA	DCR over No DCR Significant (P-value<.05)

Table 15: Distal clavicle resection vs. No concomitant treatment-(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Park, Y.B, 2015	Moderate Quality	Adverse event/complications Retears	44 months	G1 (DCR and arthroscopic repair)	21	0.1	G2 (Arthroscopic repair)	26	0.15			Not Significant (P-value>.05)
Oh, J., 2014	Moderate Quality	Adverse event/complications Failed cuff healing	30 months	G1 (DCR and acromioplasty)	39	0.23	G2 (Acromioplasty)	39	0.26			Not Significant (P-value>.05)

Quality Evaluation Table 4-Diagnosis

Study	Representative Population	Clear Selection Criteria	Detailed Enough to Replicate	Reference Standard Identifies Target Condition	Blinding	Other Bias?	Inclusion	Strength
Anbar, A., 2015	●	◑	●	●	●	●	Include	High Quality
Binkert, C. A., 2001	●	●	●	●	●	◑	Include	High Quality
Castoldi, F., 2009	●	●	●	●	●	◑	Include	High Quality
Cheng, X., 2015	●	●	●	●	●	●	Include	High Quality
Dae, K. O., 2009	●	●	●	●	●	◑	Include	High Quality
Day, M, 2016	●	●	●	◑	●	●	Include	High Quality
Duc, S. R., 2006	●	●	●	●	●	◑	Include	High Quality
Gillooly, J. J., 2010	●	●	●	●	●	●	Include	High Quality
Gormeli, C., 2014	●	●	●	●	●	●	Include	High Quality
Herold, T., 2006	●	●	●	●	●	●	Include	High Quality
Holtby, R., 2004	●	●	●	●	●	◑	Include	High Quality
Kim, S. H., 2005	●	●	●	●	●	◑	Include	High Quality
Lee, H., 2018	●	●	●	●	●	◑	Include	High Quality
Lee, R. W., 2016	●	●	●	●	●	◑	Include	High Quality
Lin, L., 2015	●	●	●	●	◑	●	Include	High Quality
Liu, Y. L., 2016	●	●	●	●	●	◑	Include	High Quality
Magee, T., 2014	●	●	●	●	●	◑	Include	High Quality
Magee, T., 2016	●	●	●	●	●	◑	Include	High Quality

Study	Representative Population	Clear Selection Criteria	Detailed Enough to Replicate	Reference Standard Identifies Target Condition	Blinding	Other Bias?	Inclusion	Strength
Mohtadi, N. G., 2004	●	●	●	●	●	◑	Include	High Quality
Moosmayer, S., 2007	●	●	●	●	●	◑	Include	High Quality
Ok, J. H., 2013	●	●	●	●	●	◑	Include	High Quality
Pfirrmann, C. W., 1999	●	●	●	●	●	◑	Include	High Quality
Probyn, L. J., 2007	●	●	●	●	●	◑	Include	High Quality
Razmjou, H., 2016	●	◑	●	●	●	●	Include	High Quality
Ryu, H. Y., 2016	●	◑	●	●	●	●	Include	High Quality
Sawalha, S., 2015	●	●	●	●	●	◑	Include	High Quality
Schaeffeler, C., 2012	●	●	●	●	●	◑	Include	High Quality
Schreinemachers, S. A., 2009	●	●	●	●	●	◑	Include	High Quality
Shellock, F. G., 2001	●	●	●	●	●	◑	Include	High Quality
Tuite, M. J., 1994	●	●	●	●	●	◑	Include	High Quality
VanBeek, C., 2014	●	●	●	●	●	◑	Include	High Quality
Villafane, J. H., 2015	●	●	●	◑	●	●	Include	High Quality
Waldt, S., 2007	●	●	●	●	●	◑	Include	High Quality
YÄ±ldÄ±z, F., 2017	●	◑	●	●	●	●	Include	High Quality

Table 1: Guide to Interpreting Likelihood Ratios

Positive Likelihood Ratio	Negative Likelihood Ratio	Test strength	Interpretation
>10	<0.1	Strong	Large and conclusive change in probability of PJI
5-10	0.1-0.2	Moderate	Moderate change in probability of PJI
2-5	0.2-0.5	Weak	Small (but sometimes important) change in probability of PJI
1-2	0.5-1	Poor	Small (and rarely important) change in probability of PJI

Physical exam diagnostic evidence summaries

External rotator lag sign summary

One high quality study evaluated the external rotator lag sign test to diagnose partial thickness tears(Castoldi 2009). A positive test resulted in a moderate sized increase in probability of a partial thickness tear (positive likelihood ratio(LR)= 6.44). However, the test was poor for ruling out partial thickness tears, with a negative test producing a very small decrease in probability of a partial thickness tear(neagive LR=.89).

IRLS test summary

One high quality study evaluated the IRLS test to diagnose any rotator cuff tear(Lin 2015). A positive test produced a small, but sometimes important increase in probability of a tear(positive LR=4.21). The test was poor for ruling out a tear, with a negative test producing a very small decrease in probability of a tear(negative LR=.74).

IRRT test summary

One high quality study evaluated the IRRT test to diagnose any rotator cuff tear. A positive test produced a small, but sometimes important increase in probability of a tear (Positive LR=2.59). However, it was a poor rule out test (negative LR=.51).

IRRTM test summary

One high quality study evaluated the IRRTM test to diagnose any rotator cuff tear(Lin 2015). Both positive and negative test results produced a small, but sometimes important change in probability of any rotator cuff tear(positive LR=3.91,negative LR=.29).

Jobe Test summary

Three high quality studies evaluated the Jobe test (Gillooly 2010,Holtby 2004,Villafane 2015); The strength of the test was somewhat inconsistent between studies. Gillooly(2010) found the test to be moderately good at ruling in any tear (positive LR=7.43), and a negative test produced a small but sometimes important decrease in probability of a tear(negative LR=.21).

Holtby(2004) was the only study to specifically evaluate full thickness tears. The study found the test results produced a very low change in probability of a full-thickness tear(positive LR=1.36, negative LR=.84).

Two of the studies evaluated the Jobe test for diagnosing a partial tear(Holtby 2004,Villafane 2015). Again, the results were varied between the two studies. The rule in test strength ranged from poor (positive LR=1.34, Holtby 2004) to moderately strong (positive LR=9.5, Villafane 2015). The Villafane study found that a negative test produced a small, but sometimes important decrease in probability of a partial tear(negative LR=.26). However, the Holtby study found the test to be poor at ruling out a partial tear (negative LR=.71).

Patte Test summary

One high quality study evaluated the Patte test to diagnose a partial tear (Villafane 2015). A positive test result produced a large and conclusive increase in probability of a partial tear(positive LR=19). However, it was a poor rule out test (negative LR=.63).

Yocum test summary

One high quality study evaluated the Yocum test for partial tears (Villafane 2015). A positive test result produced a large and conclusive increase in probability of a partial tear (positive LR=19.5). A negative test produced a small, but sometimes important decrease in probability of a partial tear (negative lr=.23).

Bear hug test summary

One high quality study evaluated the bear hug test to diagnose any rotator cuff tear (Lin 2015). The test results produce a small but sometimes important change in probability of rotator cuff tears (positive LR=3.49, negative LR=.37).

Belly press test summary

One high quality study evaluated the belly press test to diagnose any rotator cuff tear (Lin 2015). The test results produce a small, but sometimes important change in the probability of a tear (positive LR=3.18, negative LR=.45).

Empty can test summary

One high quality study evaluated the empty can test for diagnosing any rotator cuff tear (Liu 2016). The test results produce a small, but sometimes important change in the probability of a tear (positive LR=3.3, negative LR=.21).

Full Can Test summary

One high quality study evaluated the full can test to diagnose any rotator cuff tear (Liu 2016). The test results produce a small, but sometimes important change in the probability of a tear (positive LR=4.1, negative LR=.27).

Hawkins Test summary

Two high quality studies evaluated the Hawkins test(Liu 2016,Villafane 2015). Liu used the test to diagnose any rotator cuff tear, and found a positive test produced a small, but sometimes important increase in probability of a tear with a positive test (positive LR=2.82). However the same study found it was a poor test for ruling out a tear (negative LR=.73).

The Villafane(2015) study used the test to diagnose partial tears, and the results were more favorable than the Liu study. A positive test produced a large and conclusive increase in probability of a partial tear (positive LR=10.25), and a negative test produced a moderate decrease in probability of a partial tear(negative LR=.2).

Hug up test summary

One high quality study evaluated the hug up test for diagnosis of any rotator cuff tear (Liu 2016). A positive test produced a small, but sometimes important increase in probability of a tear (positive LR=4.02), and a negative test produced a large decrease in probability of a tear (negative LR=.08).

Lift off test summary

Lin(2015, high quality) evaluated the lift off test for diagnosing any rotator cuff tear. The test was poor at ruling in and ruling out a tear (positive LR=1.92, negative LR=.58).

NEER test summary

Two high quality studies evaluated the neer test (Liu 2016,Villafane 2015). Liu tested for any rotator cuff tear, and Villafane tested for partial tears. Both studies found that a positive test produced a moderate size increase in probability of a tear (positive LR range=5.9 to 7). Liu found that a negative test produced a small, but sometimes important decrease in probability of any rotator cuff tear (negative LR=.42). However, Villafane found that the test was poor for ruling out partial tears (negative LR=.75)

Subacromial grind test summary

One high quality study evaluated the subacromial grind test (Sawalha 2015). They looked at the test's ability to diagnose any tear, as well as its ability to diagnose full thickness tears. For all tears, a positive test produced a large increase in probability of a tear(positive LR=12.59), and a negative test produced a small, but sometimes important decrease in probability of a tear(.39). For full thickness tears, both positive and negative results produced a moderate change in probability of a tear (positive LR=6.18, negative LR=.2).

Ultrasound summary

Six high quality studies evaluated the use of ultrasound for diagnosing rotator cuff tears (Cheng 2015,Day 2016,Gormeli 2014,Moosmayer 2007,Ok 2013,Waldt 2007).

Four of the studies tested for the presence of any rotator cuff tear (full/partial thickness) vs no tear (Day 2016,Gormeli 2014,Moosmayer 2007,Waldt 2007). A meta-analysis of these four studies was conducted (see figures 1 and 2 for ROC curve and forest plot). The pooled positive LR was 3.6(2.1,6) indicating that a positive result produced a small, but sometimes important increase in probability of a tear. The confidence interval for this pooled effect crosses 5(the threshold for a moderate effect), so we cannot rule out the possibility that the test is of moderate strength for ruling in a tear. The pooled estimate of the negative LR revealed substantial heterogeneity, with an I-squared of 50.10%. Therefore, only the range of negative LRs from the included studies are reported in the summary of findings tables. Negative LRs ranged from .07(indicating a strong rule-out test) to .53(indicating a poor rule out test).

Four studies evaluated the ability of ultrasound to distinguish between full thickness tears and either partial or no tear(Cheng 2015,Gormeli 2014,Ok 2013,Waldt 2007). A meta-analysis of positive and negative LRs produced consistent estimates, with I squared heterogeneities of 0 and 22.15%. The Meta-Analysis ROC curves and forest plots can be found in figures 3 and 4. A positive ultrasound test produced a moderate increase in probability of full thickness tears vs partial/no tears(pooled positive LR=5.2(3.2,8.2)). A negative test produced a small, but sometimes important decrease in the probability a patient did not have a full thickness tear, but instead either had a partial tear or no tear (negative LR=0.28(0.20,0.38)).

MRA evidence summary

12 high quality studies tested MRA for the diagnosis of rotator cuff tears. (Anbar 2015,Dae 2009,Duc 2006,Lee 2018,Magee 2014,Magee 2016,Ok 2013,Pfirrmann 1999,Probyn 2007,Schaeffeler 2012,Schreinemachers 2009,Waldt 2007).

Five studies used MRA to distinguish between any tear(full/partial thickness) and no tear(Dae 2009,Pfirrmann 1999,Probyn 2007,Schaeffeler 2012,Schreinemachers 2009). A meta-analysis was attempted, but pooled estimates of positive and negative LRs revealed substantial heterogeneity, with I squared statistics of 85.16 and 80.33% respectively. Therefore, the range of positive and negative LRs are presented, rather than the pooled estimates. The positive LRs ranged from 1.6 (poor test) to 53.57(Strong test) for ruling in any tear vs no tear. The negative LRs ranged from 0(strong test) to .65(poor test) for ruling out any tear vs no tear. Given these results, MRA may provide a benefit for diagnosing any tear, but the exact strength of the test is unclear given widely heterogeneous results between studies.

Four studies tested the ability of MRA to distinguish between full thickness tears and partial or no tears(Duc 2006,Lee 2018,Ok 2013,Waldt 2007). A meta-analysis was conducted(see figures 5 and 6 for ROC curve and forest plot). The meta-analysis produced consistent estimates of the positive LR, indicating that a positive MRA test for full thickness tears produced a large increase in probability that a patient truly had a full tear instead of a partial or no tear (pooled positive LR= 19.55(5.73,55.72)). Pooled estimates for the negative LR had high heterogeneity (I squared=91.15%), so the pooled result is not reported. The negative LR in the included studies ranged from 0(strong rule out test) to .68(poor rule out test).

Three studies tested the ability of MRA to distinguish between a full thickness tear and no tear(Anbar 2015,Magee 2014,Magee 2016). These could not be meta-analyzed because a minimum of four studies is required. A positive test produced a moderate to large increase in probability of a full thickness tear versus no tear(positive LR range=7.33 to 100). The negative LR was more variable, ranging from 0(a strong decrease in probability of a full tear with a negative test) to .25(a small but sometimes important decrease in probability).

Two studies evaluated MRA for diagnosing partial tears vs no tears (Dae 2009,Lee 2018). Positive LRs ranged from a small(but sometimes important) increase in probability of a partial tear with a positive test(positive LR=4.16) to a large increase in probability of tear(positive LR=13.42). Negative LRs ranged from a strong decrease in probability of a partial tear with a negative test(negative LR=.03), to a small but sometimes important decrease in probability of a partial tear(negative LR=.44).

MRI evidence summary

Thirteen high quality studies evaluated MRI for the diagnosis of rotator cuff tears(Binkert 2001,Herold 2006,Lee 2016,Lee 2018,Magee 2014,Magee 2016,Mohtadi 2004,Razmjou 2016,Ryu 2016,Shellock 2001,Tuite 1994,VanBeek 2014,Yıldız2017).

Seven studies used MRI to test for any rotator cuff tear(full or partial thickness) versus no tear (Herold 2006,Lee 2018,Ryu 2016,Shellock 2001,Tuite 1994,VanBeek 2014,Yıldız 2017). An attempt was made to meta-analyze these studies, but there was very high heterogeneity in estimates of the positive and negative LRs between studies(I squared=91.94% and 91.8% respectively). Therefore, only the range of estimates from the studies is reported. The positive likelihood ratios ranged from 1.18(poor rule in test) to 97.06(strong rule in test). The negative LRs also ranged from a strong rule out test (negative LR=.03) to a poor rule out test(.79).

Six high quality studies used MRI to distinguish full thickness tears from no tear (Binkert 2001,Magee 2014,Magee 2016,Mohtadi 2004,Razmjou 2016,Tuite 1994). Again, meta-analysis results revealed high heterogeneity, and likelihood ratio ranges are presented here. The studies indicated that MRI was a moderate to strong test for ruling in a full thickness tear over no tear (positive LR range=6.82-100). The negative LR ranged from a large decrease in probability of a full tear with a negative test(negative LR=0) to a small, but sometimes important decrease in probability of a full tear(negative LR=.47).

Five studies evaluated the ability of MRI to distinguish between partial tears versus no tear. A meta-analysis produced consistent estimates of the positive LR, but negative LRs were inconsistent between studies. The ROC curve and forest plot can be found in figures 7 and 8. The pooled positive LR was 3.4(2.1,5.4), indicating that a positive MRI produced a small, but sometimes important increase in probability of a partial tear. The negative LR ranged from .27(a small but possibly important decrease in probability of a partial tear with a negative test) to .84(a poor rule out test).

Figure 2 Ultrasound Full/partial tear vs. no tear- meta-analysis statistics and ROC curve

Log likelihood = -19.984083 Number of studies = 4

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Bivariate						
E(logitSe)	1.303822	.3289352			.6591209	1.948523
E(logitSp)	1.265829	.3727244			.535303	1.996356
Var(logitSe)	.2762636	.3534115			.0225123	3.390216
Var(logitSp)	.1785601	.3361254			.0044613	7.146686
Corr(logits)	-1	.			.	.
HSROC						
Lambda	2.580808	.4150061			1.767411	3.394205
Theta	-.1213528	.7317517			-1.55556	1.312854
beta	-.218215	1.093224	-0.20	0.842	-2.360895	1.924465
s2alpha	0	.			.	.
s2theta	.2221028	.262313			.0219406	2.248328
Summary pt.						
Se	.7864775	.0552383			.6590629	.8752855
Sp	.780028	.0639537			.6307191	.8804139
DOR	13.06127	4.762726			6.391445	26.69142
LR+	3.575352	.9489646			2.125172	6.015109
LR-	.2737369	.063551			.1736672	.4314685
1/LR-	3.653142	.8481164			2.317667	5.75814

Covariance between estimates of E(logitSe) & E(logitSp) -.0570779

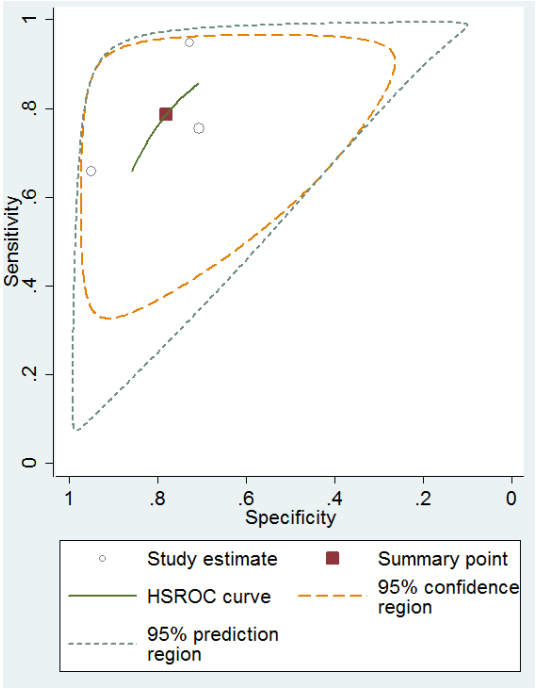

Figure 3 Meta-analysis forest plot-Ultrasound Full/partial tear vs. no tear

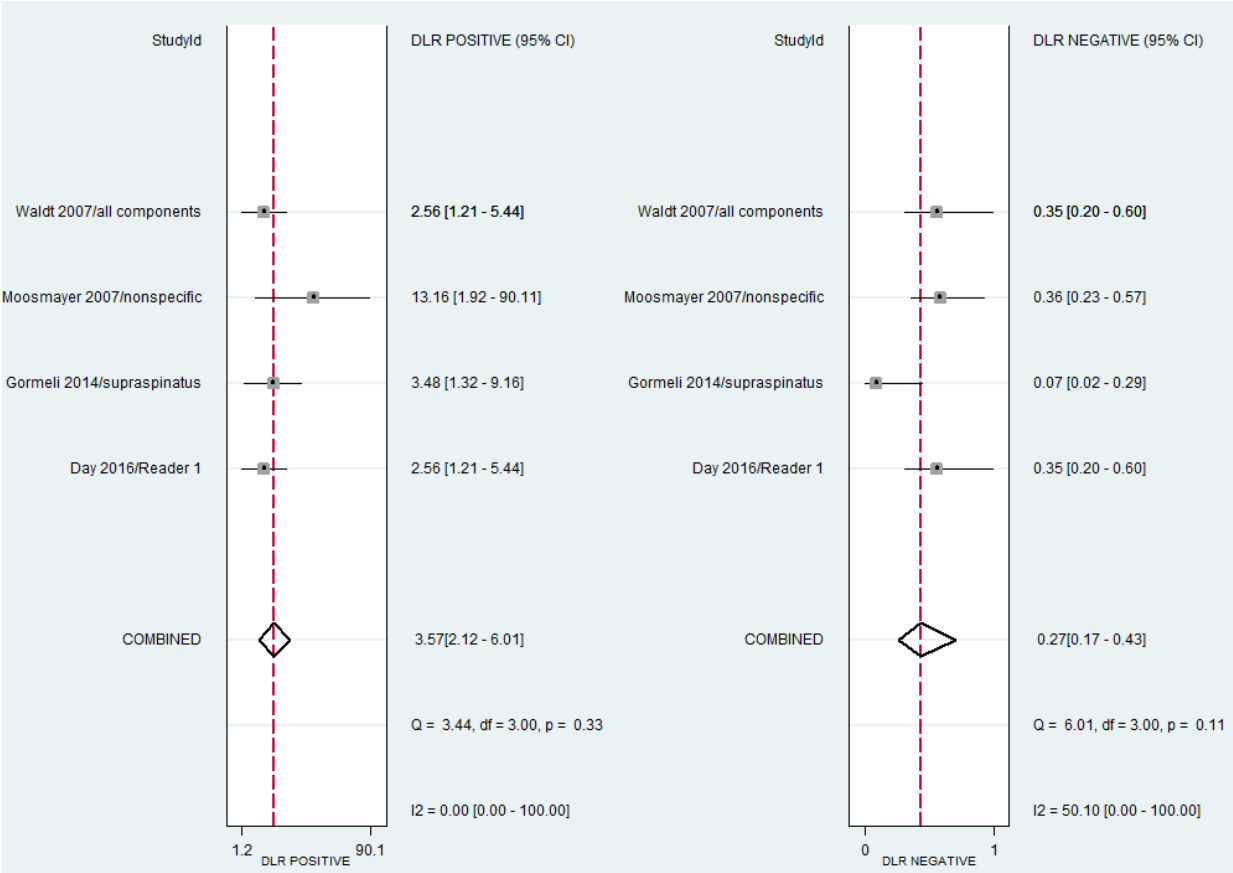

Figure 4 ROC Curve: Ultrasound Full Thickness Tear vs. Partial or no tear

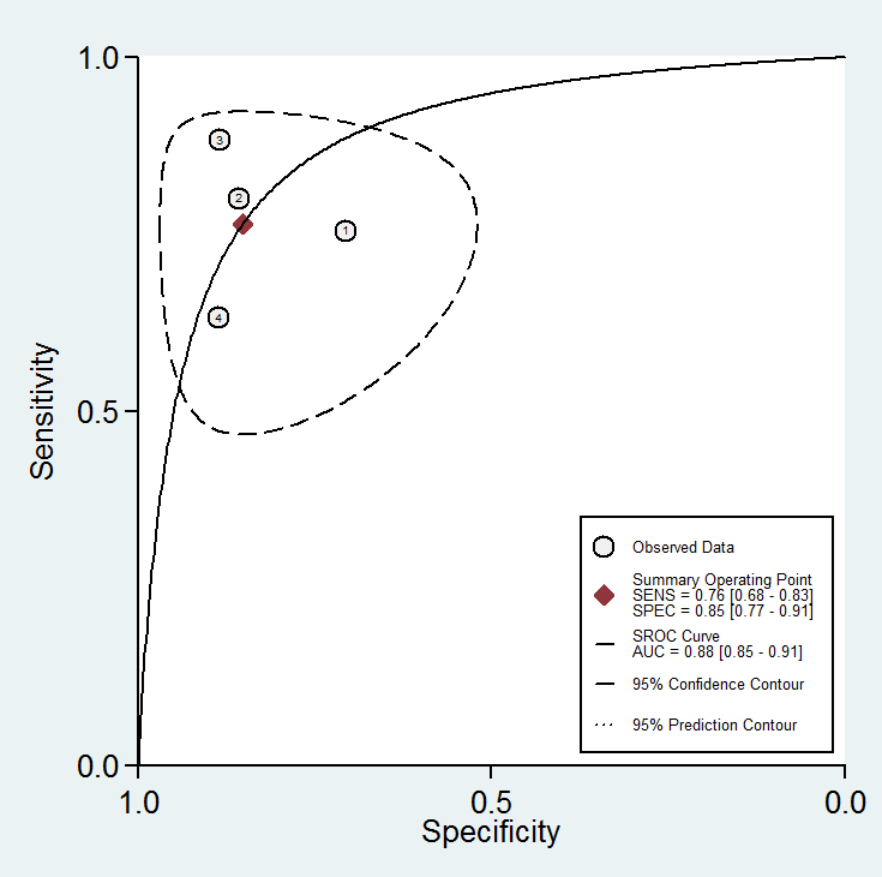

Figure 5 Meta-analysis Forest Plot: Ultrasound Full Thickness Tear vs. Partial or no tear

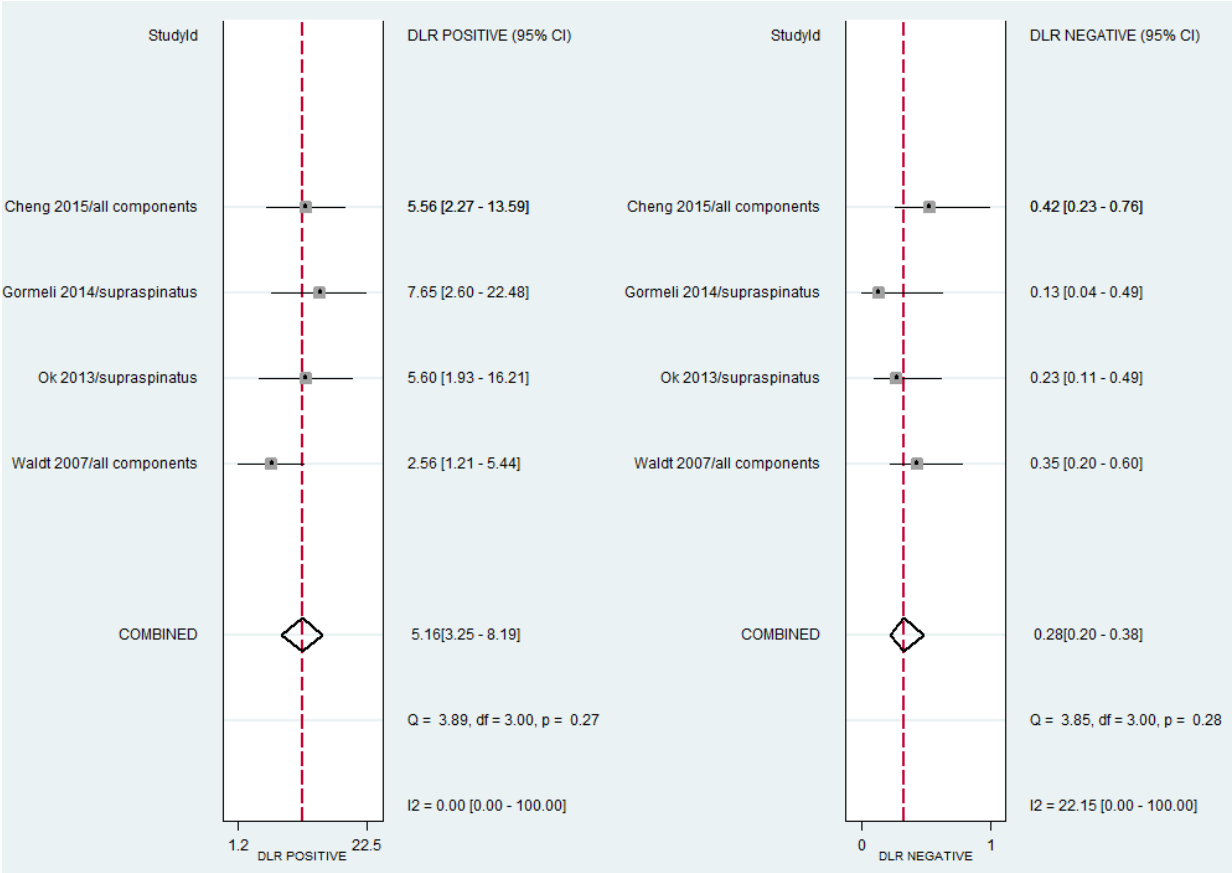

Figure 6: MRA full thickness vs partial or no tear- meta analysis statistics and ROC curve

Log likelihood = -17.230301 Number of studies = 4

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Bivariate						
E(logitSe)	2.155879	.720133			.7444444	3.567314
E(logitSp)	3.03576	.7036919			1.65655	4.414971
Var(logitSe)	1.419557	1.26792			.2465338	8.173897
Var(logitSp)	1.114547	1.490911			.0809955	15.33686
Corr(logits)	-1	.			.	.
HSROC						
Lambda	5.254378	.6782248			3.925082	6.583674
Theta	-.597821	.9477732			-2.455422	1.25978
beta	-.1209483	.6870301	-0.18	0.860	-1.467503	1.225606
s2alpha	0	.			.	.
s2theta	1.257841	1.140115			.2128585	7.432935
Summary pt.						
Se	.8962169	.0669811			.677967	.9725436
Sp	.9541638	.0307762			.8397743	.9880496
DOR	179.7631	109.1513			54.68332	590.9435
LR+	19.55259	12.25018			5.726712	66.75796
LR-	.1087687	.0680196			.0319298	.37052
1/LR-	9.193825	5.749455			2.69891	31.31873

Covariance between estimates of E(logitSe) & E(logitSp) -.3225439

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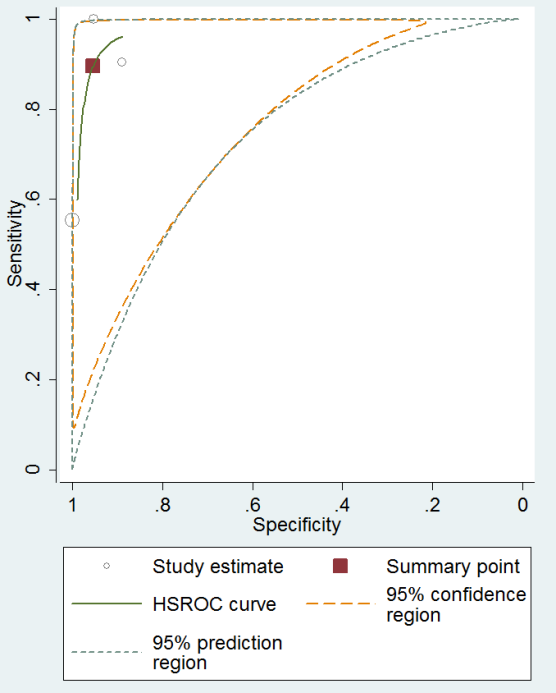


Figure 7: Meta-analysis forest plot-MRA full thickness vs partial or no tear

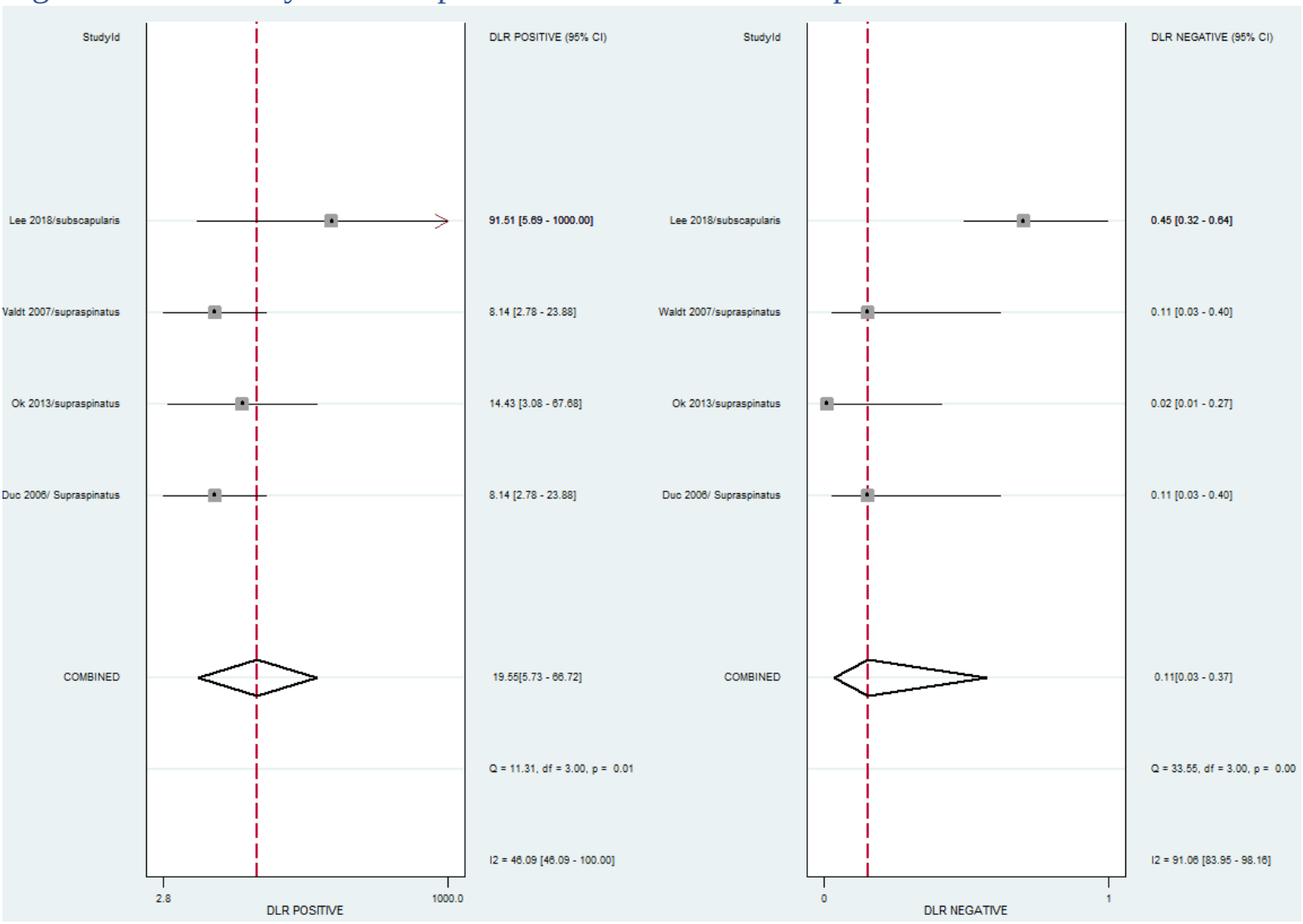


Figure 8: MRI partial tear vs no tear- Meta-analysis statistics and summary ROC curve

Log likelihood = -29.240889 Number of studies = 5

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
Bivariate						
E(logitSe)	.423735	.4192472			-.3979744	1.245444
E(logitSp)	1.527372	.2535934			1.030338	2.024406
Var(logitSe)	.6590317	.4946268			.1513732	2.869217
Var(logitSp)	.1809274	.2124755			.0181084	1.807711
Corr(logits)	-.274689	.6762194			-.937314	.8182844
HSROC						
Lambda	2.416783	.7286405			.9886741	3.844892
Theta	-.9016704	.4606783			-1.804583	.0012425
beta	-.6463379	.6814054	-0.95	0.343	-1.981868	.6891921
s2alpha	.5009099	.6157811			.0450149	5.57395
s2theta	.2200795	.1856321			.0421318	1.149606
Summary pt.						
Se	.6043767	.1002443			.4017991	.7765103
Sp	.8216214	.0371666			.7369814	.8833358
DOR	7.03647	3.155922			2.921346	16.94832
LR+	3.388168	.8179019			2.110986	5.438067
LR-	.4815154	.1199483			.2955091	.7846021
1/LR-	2.076777	.5173373			1.274531	3.38399

Covariance between estimates of E(logitSe) & E(logitSp) -.0194586

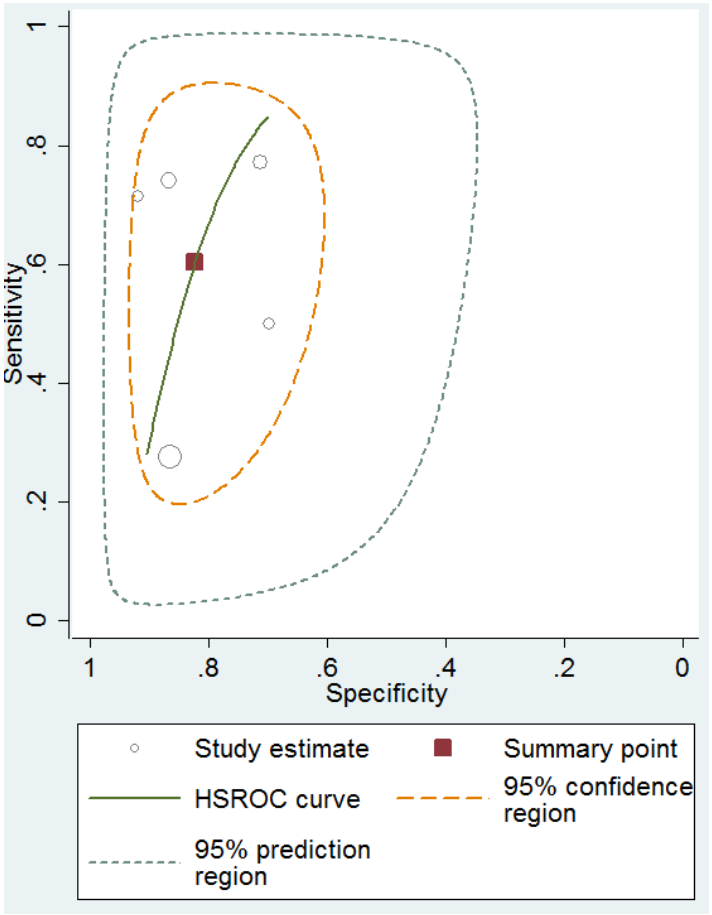
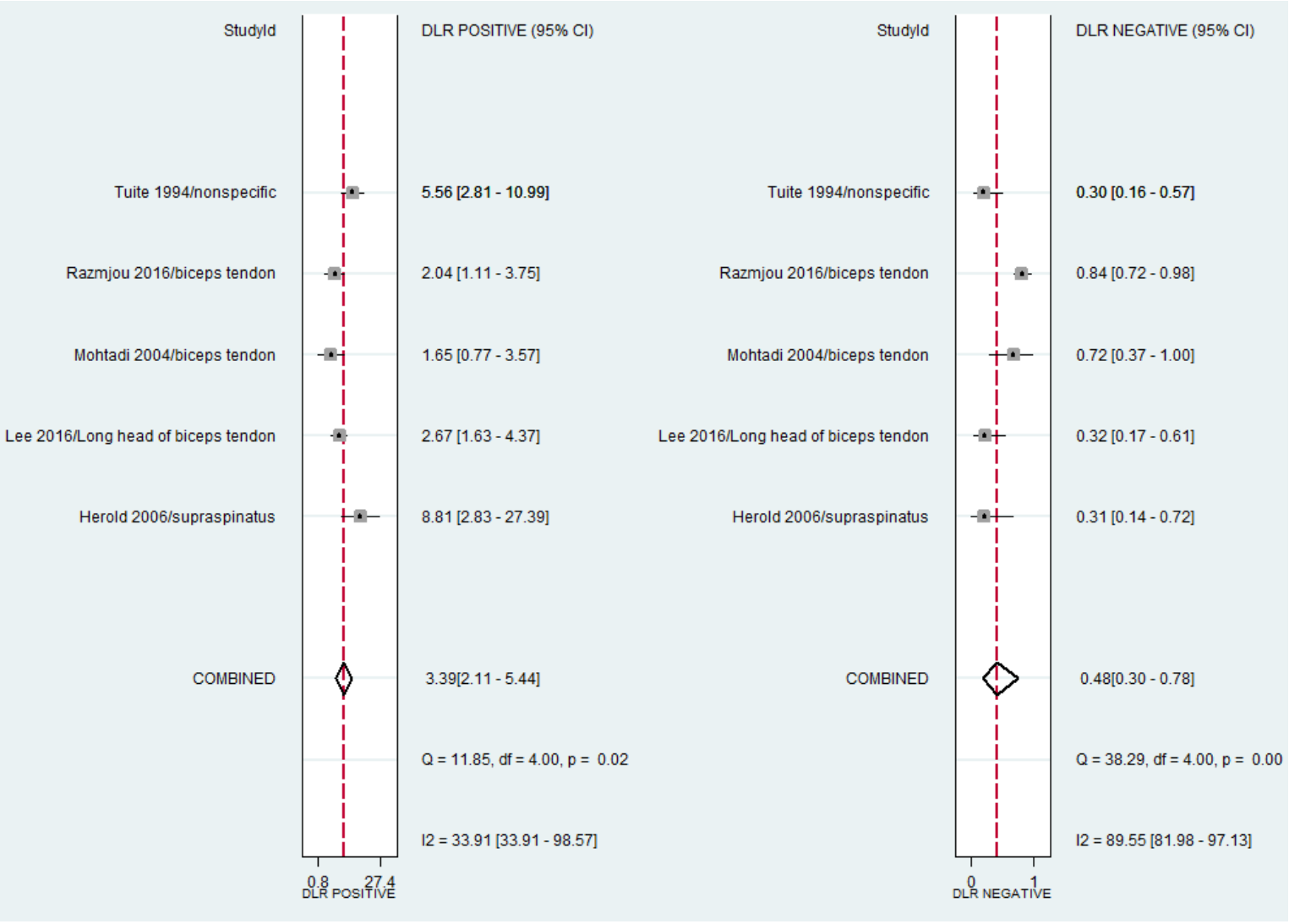


Figure 9 Meta-analysis forest plot- MRI partial tear vs no tear



Summary of Findings Table 2: Physical Exams

index test	number of studies/ quality *	positive liklihood ratio	negative likelihood ratio	sensitivity	specificity
External rotator lag sign (Partial tear)	1H	6.44-6.44	0.89-0.89	0.12-0.12	0.98-0.98
IRLS test (any tear)	1H	4.21-4.21	0.74-0.74	0.32-0.32	0.92-0.92
IRRT test (any tear)	1H	2.59-2.59	0.51-0.51	0.61-0.61	0.76-0.76
IRRTM (any tear)	1H	3.91-3.91	0.29-0.29	0.77-0.77	0.8-0.8
Jobe test (any tear)	1H	7.43-7.43	0.21-0.21	0.81-0.81	0.89-0.89
Supraspinatus test, external rotation weakness, pain on impingement combined with age if over 60	1H	4.69-4.69	0.48-0.48	0.58-0.58	0.88-0.88
Jobe test(Full-thickness tear)	1H	1.36-1.36	0.84-0.84	0.41-0.41	0.7-0.7
Jobe test(Partial tear)	2H	1.34-9.5	0.26-0.71	0.62-0.76	0.54-0.92
Patte test(Partial tear)	1H	19-19	0.63-0.63	0.38-0.38	0.98-0.98
painful arc sign + drop arm sign + infraspinitus test(1 of 3 tests positive)	1M	2.19-2.19	.16-.16	.91-.91	.58-.58
painful arc sign + drop arm sign + infraspinitus test(2 of 3 tests positive)	1M	5.71-5.71	.37-.37	.67-.67	.88-.88
painful arc sign + drop arm sign + infraspinitus test(3 of 3 tests positive)	1M	15.93-15.93	.69-.69	.33-.33	.98-.98
Litaker scale of 4 or higher, incorporating incorporating weakness on external rotation, night pain, and age over 65	1L	4.99-9.85	.69-.7	.33-.36	.93-.97
Yocum test(Partial tear)	1H	19.5-19.5	0.23-0.23	0.78-0.78	0.96-0.96
bear hug test (any tear)	1H	3.49-3.49	0.37-0.37	0.7-0.7	0.8-0.8
belly press test (any tear)	1H	3.18-3.18	0.45-0.45	0.64-0.64	0.8-0.8
empty can test (any tear)	1H	3.3-3.3	0.21-0.21	0.84-0.84	0.74-0.74
full can test (any tear)	1H	4.1-4.1	0.27-0.27	0.78-0.78	0.81-0.81
hawkins test (any tear)	1H	2.82-2.82	0.73-0.73	0.36-0.36	0.87-0.87
hawkins test(Partial tear)	1H	10.25-10.25	0.2-0.2	0.82-0.82	0.92-0.92
hug-up test (any tear)	1H	4.02-4.02	0.08-0.08	0.94-0.94	0.77-0.77
jerk test (any tear)	1H	34.71-34.71	0.27-0.27	0.73-0.73	0.98-0.98
lift off test (any tear)	1H	1.92-1.92	0.58-0.58	0.6-0.6	0.69-0.69
neer test (any tear)	1H	5.9-5.9	0.42-0.42	0.63-0.63	0.89-0.89

index test	number of studies/ quality *	positive liklihood ratio	negative likelihood ratio	sensitivity	specificity
neer test(Partial tear)	1H	7-7	0.75-0.75	0.28-0.28	0.96-0.96
subacromial grind test (any tear)	1H	12.59-12.59	0.39-0.39	0.63-0.63	0.95-0.95
subacromial grind test(Full-thickness tear)	1H	6.18-6.18	0.2-0.2	0.82-0.82	0.87-0.87

* Range presented when fewer than four studies or when meta-analysis indicated heterogeneity
positive LR key: Strong Rule-out= ≥10 ; Moderate= ≥5 but <10; Weak=>2 but <5, Poor=≤2
negative LR key: Strong Rule-in= ≤.1 ; Moderate= >.1 but ≤.2; Weak= >.2 but <.5, Poor=≥.5

Summary of Findings Table 3: Ultrasound

index test	number of studies/ quality*	positive liklihood ratio	negative likelihood ratio	sensitivity	specificity
Ultrasound (Any tear)	4H	3.6(2.1,6.0)	0.07-0.53	0.53-0.95	0.71-0.95
Ultrasound (Full-thickness tear vs. Non-Full-thickness tear or no tear)	4H	5.2(3.2,8.2)	0.28(0.20,0.38)	0.63-0.95	0.71-1

* Range presented when fewer than four studies or when meta-analysis indicated heterogeneity
positive LR key: Strong Rule-out= ≥10 ; Moderate= ≥5 but <10; Weak=>2 but <5, Poor=≤2
negative LR key: Strong Rule-in= ≤.1 ; Moderate= >.1 but ≤.2; Weak= >.2 but <.5, Poor=≥.5

Summary of Findings Table 4: MRA

index test	number of studies/ quality*	positive liklihood ratio	negative likelihood ratio	sensitivity	specificity
MRA (Any tear)	5H	1.6-53.57	0-0.65	0.46-1	0.54-1
MRA (Full-thickness tear vs. non-full-thickness tear or no tear)	4H	19.55(5.73,55.72)	0-0.68	0.32-1	0.59-1
MRA (Full-thickness tear)	3H	7.33-100	0-0.25	0.77-1	0.88-1
MRA (Partial tear)	2H	4.16-13.42	0.03-0.44	0.58-0.97	0.81-0.96

* Range presented when fewer than four studies or when meta-analysis indicated heterogeneity
positive LR key: Strong Rule-in= ≥10 ; Moderate= ≥5 but <10; Weak=>2 but <5, Poor=≤2
negative LR key: Strong Rule-out= ≤.1 ; Moderate= >.1 but ≤.2; Weak= >.2 but <.5, Poor=≥.5

Summary of Findings Table 5: MRI

index test	number of studies/ quality*	positive liklihood ratio	negative likelihood ratio	sensitivity	specificity
MRI (Any tear)	7H	1.18-97.06	0.03-0.79	0.24-0.97	0.4-1
MRI (Full-thickness tear)	6H	6.82-100	0-0.47	0.54-1	0.87-1
MRI (Partial tear)	5H	3.4(2.1,5.4)	0.27-0.84	0.28-0.8	0.7-0.92

* Range presented when fewer than four studies or when meta-analysis indicated heterogeneity
positive LR key: Strong Rule-in= ≥10 ; Moderate= ≥5 but <10; Weak=>2 but <5, Poor=≤2
negative LR key: Strong Rule-out= ≤.1 ; Moderate= >.1 but ≤.2; Weak= >.2 but <.5, Poor=≥.5

Table 20: PICO 3.1a:Physical Exam (Any tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Liu, Y. L., 2016	High Quality	200	FTT/PTT vs. No tear (Empty Can Test)	Arthroscopic findings	0.84|0.74	3.3|0.21	WEAK	WEAK
Liu, Y. L., 2016	High Quality	200	FTT/PTT vs. No tear (Neer Impingement Sign)	Arthroscopic findings	0.63|0.89	5.9|0.42	**MODERATE**	WEAK
Gillooly, J. J., 2010	High Quality	175	FTT/PTT vs. No tear (Combined Test)	Arthroscopic findings	0.58|0.88	4.69|0.48	WEAK	WEAK
Liu, Y. L., 2016	High Quality	200	FTT/PTT vs. No tear (Hawkins Kennedy)	Arthroscopic findings	0.36|0.87	2.82|0.73	WEAK	POOR
Lin, L., 2015	High Quality	235	FTT/PTT vs. No tear (IRRTM Test)	Arthroscopic/surgical findings(Arthroscopy)	0.77|0.8	3.91|0.29	WEAK	WEAK
Liu, Y. L., 2016	High Quality	200	FTT/PTT vs. No tear (Hug-up Test)	Arthroscopic findings	0.94|0.77	4.02|0.08	WEAK	**STRONG**
Gillooly, J. J., 2010	High Quality	175	FTT/PTT vs. No tear (Lateral Jobe Test)	Arthroscopic findings	0.81|0.89	7.43|0.21	**MODERATE**	WEAK
Lin, L., 2015	High Quality	235	FTT/PTT vs. No tear (Bear Hug Test)	Arthroscopic/surgical findings(Arthroscopy)	0.7|0.8	3.49|0.37	WEAK	WEAK
Lin, L., 2015	High Quality	235	FTT/PTT vs. No tear (Belly Press Test)	Arthroscopic/surgical findings(Arthroscopy)	0.64|0.8	3.18|0.45	WEAK	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Lin, L., 2015	High Quality	235	FTT/PTT vs. No tear (Lift Off Test)	Arthroscopic/surgical findings(Arthroscopy)	0.6|0.69	1.92|0.58	POOR	POOR
Sawalha, S., 2015	High Quality	47	FTT/PTT vs. No tear (subacromial grind test) - supraspinatus	Arthroscopic findings	0.63|0.95	12.59|0.39	**STRONG**	WEAK
Lin, L., 2015	High Quality	235	FTT/PTT vs. No tear (IRRT Test)	Arthroscopic/surgical findings(Arthroscopy)	0.61|0.76	2.59|0.51	WEAK	POOR
Liu, Y. L., 2016	High Quality	200	FTT/PTT vs. No tear (Full Can Test)	Arthroscopic findings	0.78|0.81	4.1|0.27	WEAK	WEAK
Lin, L., 2015	High Quality	235	FTT/PTT vs. No tear (IRLS Test)	Arthroscopic/surgical findings(Arthroscopy)	0.32|0.92	4.21|0.74	WEAK	POOR

Table 21: PICO 3.1b:Physical Exam (Full-thickness tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Sawalha, S., 2015	High Quality	47	FTT vs. No tear (subacromial grind test) - supraspinatus	Arthroscopic findings	0.82|0.87	6.18|0.2	**MODERATE**	WEAK
Holtby, R., 2004	High Quality	50	FTT vs no FTT(Jobe test)- Supraspinatus	Arthroscopic/surgical findings	0.41|0.7	1.36|0.84	POOR	POOR

Table 22: PICO 3.1c:Physical Exam (Partial tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Villafane, J. H., 2015	High Quality	100	PTT vs. No tear (Neer Test) - supraspinatus	MR arthrography(NON-Arthroscopy)	0.28|0.96	7|0.75	**MODERATE**	POOR
Villafane, J. H., 2015	High Quality	100	PTT vs. No tear (Hawkins Test) - supraspinatus	MR arthrography(NON-Arthroscopy)	0.82|0.92	10.25|0.2	**STRONG**	**MODERATE**
Holtby, R., 2004	High Quality	50	PTT vs no PTT(Jobe test)-Supraspinatus	Arthroscopic/surgical findings	0.62|0.54	1.34|0.71	POOR	POOR
Villafane, J. H., 2015	High Quality	100	PTT vs. No tear (Yocum Test) - supraspinatus	MR arthrography(NON-Arthroscopy)	0.78|0.96	19.5|0.23	**STRONG**	WEAK
Castoldi, F., 2009	High Quality	222	PTT vs no Tear(Physical Exam-External rotator lag sign for partial tear) supraspinatus	Arthroscopic/surgical findings	0.12|0.98	6.44|0.89	**MODERATE**	POOR
Villafane, J. H., 2015	High Quality	100	PTT vs. No tear (Jobe Test) - supraspinatus	MR arthrography(NON-Arthroscopy)	0.76|0.92	9.5|0.26	**MODERATE**	WEAK
Villafane, J. H., 2015	High Quality	100	PTT vs. No tear (Patte Test) - supraspinatus	MR arthrography(NON-Arthroscopy)	0.38|0.98	19|0.63	**STRONG**	POOR

Table 23: combination of physical/history exams

study	Study quality	Tests	Tear type	criteria for positive test	sensitivity	specificity	positive LR	Negative LR	rule in strength	rule out strength
Park, H. B. 2005	Moderate	painful arc sign + drop arm sign + infraspinitus test	Full thickness vs partial,bursitis or no impingement	1 of 3 tests positive	91%	58%	2.19	0.16	**Weak**	**Moderate**
Park, H. B. 2005	Moderate	painful arc sign + drop arm sign + infraspinitus test	Full thickness vs partial,bursitis or no impingement	2 of 3 tests positive	67%	88%	5.71	0.37	**Moderate**	**Weak**
Park, H. B. 2005	Moderate	painful arc sign + drop arm sign + infraspinitus test	Full thickness vs partial,bursitis or no impingement	All 3 tests are positive	33%	98%	15.93	0.69	**Strong**	**Poor**
Gillooly J., 2010	High	Supraspinatus test, external rotation weakness, pain on impingement combined with age if over 60	full/partial vs no tear	weakness on supraspinatus testing, weakness in external rotation and pain on impingement or a combination of two of these and an age greater than 60 years	57.84%	87.675	4.692	0.481	**Weak**	**Weak**

study	Study quality	Tests	Tear type	criteria for positive test	sensitivity	specificity	positive LR	Negative LR	rule in strength	rule out strength
Litaker D., 2000	Low	1 to 7 scale incorporating weakness on external rotation, night pain, and age over 65	full/partial vs no tear (**in test data set**)	Score of 4 or greater on scale chosen as optimal cutoff (AUC=: (0.825 +- 0.035)	33%	97%	9.85	.7	**Moderate**	**Poor**
Litaker D., 2000	Low	1 to 7 scale incorporating weakness on external rotation, night pain, and age over 65	full/partial vs no tear (**in validation data set**)	Score of 4 or greater on scale chosen as optimal cutoff (AUC=: (0.75 +- 0.038)	36%	93%	4.99	.69	**Weak**	**Poor**
Litaker D., 2000	Low	1 to 7 scale incorporating weakness on external rotation, night pain, and age over 65	full/partial vs no tear (**combined test and validation dataset**)	Score of 4 or greater on scale chosen as optimal cutoff (AUC not given)	34%	95%	6.37	.69	**Moderate**	**Poor**

Table 24: PICO 3.2a:Ultrasound (Any tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Day, M, 2016	High Quality	74	FTT/PTT vs. No tear (Ultrasound) - Reader 2	MR arthrography	0.53|0.88	4.5|0.53	WEAK	POOR
Day, M, 2016	High Quality	74	FTT/PTT vs. No tear (Ultrasound) - Reader 1	MR arthrography	0.75|0.71	2.56|0.35	WEAK	WEAK
Waldt, S., 2007	High Quality	826	FTT/PTT vs no tear(Ultrasound)-all components	Arthroscopic/surgical findings(Arthroscopy)	0.75|0.71	2.56|0.35	WEAK	WEAK
Moosmayer, S., 2007	High Quality	58	FTT/PTT vs no tear(Sonograph)-nonspecific	Arthroscopy/surgical findings	0.66|0.95	13.16|0.36	**STRONG**	WEAK
Gormeli, C., 2014	High Quality	50	FTT/PTT vs. No tear/tendinosis (Ultrasonography) - supraspinatus	Ultrasonography (full-tear vs. PT/no tear)	0.95|0.73	3.48|0.07	WEAK	**STRONG**

Table 25: PICO 3.2b:Ultrasound (Full-thickness tear vs. Non-Full-thickness tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Gormeli, C., 2014	High Quality	50	FTT vs. PTT/No tear (Ultrasonography) - supraspinatus	Ultrasonography (full-tear vs. PT/no tear)	0.88|0.88	7.65|0.13	**MODERATE**	**MODERATE**
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear (Ultrasound)-all components	Arthroscopic/surgical findings(Arthroscopy)	0.75|0.71	2.56|0.35	WEAK	WEAK
Gormeli, C., 2014	High Quality	50	FTT vs. PTT/No tear/tendinosis (Ultrasonography) - supraspinatus	Ultrasonography (full-tear vs. PT/no tear)	0.88|0.91	9.71|0.13	**MODERATE**	**MODERATE**
Cheng, X., 2015	High Quality	63	FTT vs. PTT/No tear (2D Ultrasound)	Arthroscopic/surgical findings(NON-Arthroscopy)	0.63|0.89	5.56|0.42	**MODERATE**	WEAK
Cheng, X., 2015	High Quality	63	FTT vs. PTT/No tear (US-guided subacromial bursography)	Arthroscopic/surgical findings(NON-Arthroscopy)	0.95|1	94.74|0.05	**STRONG**	**STRONG**
Ok, J. H., 2013	High Quality	.	FTT vs PTT/no tear (Ultrasound)-supraspinatus		0.8|0.86	5.71|0.23	**MODERATE**	WEAK

Table 26: PICO 3.3a:MRA (Any tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Dae, K. O., 2009	High Quality	36	FTT/PTT vs no tear(3D isotropic MR arthography)-SSP-ISP	Arthroscopic/surgical findings	0.93|0.95	20.43|0.07	**STRONG**	**STRONG**
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.5|0.98	26|0.51	**STRONG**	POOR
Pfirrmann, C. W., 1999	High Quality	50	FTT/PTT vs no tear(MR arthography-parasagittal) - Subscapularis - Reader 2	Arthroscopic/surgical findings(Arthroscopy)	0.9|0.9	8.75|0.11	**MODERATE**	**MODERATE**
Dae, K. O., 2009	High Quality	36	FTT/PTT vs no tear(conventional MR arthography)-SSP-ISP	Arthroscopic/surgical findings	0.93|0.95	20.43|0.07	**STRONG**	**STRONG**
Dae, K. O., 2009	High Quality	36	FTT/PTT vs no tear(3D isotropic MR arthography)-superior labrum)	Arthroscopic/surgical findings	0.7|0.85	4.52|0.36	WEAK	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Schreinemachers, S. A., 2009	High Quality	92	FTT/PTT vs no tear(MR arthrogram w ABER)-supraspinatus-Reader 3	Individual partial and individual full tear data not extracted - unclear?	0.61|0.8	3|0.49	WEAK	WEAK
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.54|1	53.57|0.46	**STRONG**	WEAK
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - supraspinatus - Reader 1	Arthroscopic/surgical findings	0.68|0.58	1.6|0.56	POOR	POOR
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - supraspinatus - Reader 2	Arthroscopic/surgical findings	0.46|0.83	2.68|0.65	WEAK	POOR
Schreinemachers, S. A., 2009	High Quality	92	FTT/PTT vs no tear(MR arthrogram)-supraspinatus-Reader 3	Individual partial and individual full tear data not extracted - unclear?	0.52|0.93	7.2|0.52	**MODERATE**	POOR
Probyn, L. J., 2007	High Quality	37	FTT/PTT vs no tear(MR arthography)-supraspinatus tear	Arthroscopic/surgical findings(Arthroscopy)	1|0.89	9|0	**MODERATE**	**STRONG**
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - Long heads of biceps tendon - Reader 2	Arthroscopic/surgical findings	0.86|0.98	44.57|0.15	**STRONG**	**MODERATE**

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Pfirrmann, C. W., 1999	High Quality	50	FTT/PTT vs no tear(MR arthography-transverse) - Subscapularis-Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.95|0.55	2.12|0.09	WEAK	**STRONG**
Pfirrmann, C. W., 1999	High Quality	50	FTT/PTT vs no tear(MR arthography-both transverse & parasagittal) - Subscapularis - Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.9|0.86	6.56|0.11	**MODERATE**	**MODERATE**
Schreinemachers, S. A., 2009	High Quality	92	FTT/PTT vs no tear(MR arthrogram)-supraspinatus-Reader 1	Individual partial and individual full tear data not extracted - unclear?	0.7|0.96	16|0.32	**STRONG**	WEAK
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - Long heads of biceps tendon - Reader 1	Arthroscopic/surgical findings	0.89|0.96	23.21|0.11	**STRONG**	**MODERATE**
Pfirrmann, C. W., 1999	High Quality	50	FTT/PTT vs no tear(MR arthography-transverse) - Subscapularis-Reader 2	Arthroscopic/surgical findings(Arthroscopy)	1|0.62	2.64|0	WEAK	**STRONG**
Dae, K. O., 2009	High Quality	36	FTT/PTT vs no tear(3D isotropic MR arthography)-subscapularis	Arthroscopic/surgical findings	0.67|0.87	5|0.38	**MODERATE**	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Pfirrmann, C. W., 1999	High Quality	50	FTT/PTT vs no tear(MR arthography-both transverse & parasagittal) - Subscapularis - Reader 2	Arthroscopic/surgical findings(Arthroscopy)	0.9|0.79	4.37|0.12	WEAK	**MODERATE**
Probyn, L. J., 2007	High Quality	37	FTT/PTT vs no tear(MR arthography)-FTT/PTT vs no tear(MR arthography)-any rotator cuff tear	Arthroscopic/surgical findings(Arthroscopy)	0.94|0.82	5.18|0.07	**MODERATE**	**STRONG**
Dae, K. O., 2009	High Quality	36	FTT/PTT vs no tear(conventional MR arthography)-subscapularis)	Arthroscopic/surgical findings	0.67|0.87	5|0.38	**MODERATE**	WEAK
Probyn, L. J., 2007	High Quality	37	FTT/PTT vs no tear(MR arthography)-any labral tear	Arthroscopic/surgical findings(Arthroscopy)	0.96|0.82	5.29|0.05	**MODERATE**	**STRONG**
Pfirrmann, C. W., 1999	High Quality	50	FTT/PTT vs no tear(MR arthography-parasagittal) - Subscapularis - Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.9|0.76	3.75|0.13	WEAK	**MODERATE**
Dae, K. O., 2009	High Quality	36	FTT/PTT vs no tear(conventional MR arthography)-superior labrum)	Arthroscopic/surgical findings	0.74|0.54	1.6|0.48	POOR	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - supraspinatus - Reader 3	Arthroscopic/surgical findings	0.57|0.87	4.24|0.5	WEAK	WEAK
Schreinemachers, S. A., 2009	High Quality	92	FTT/PTT vs no tear(MR arthrogram w ABER)- supraspinatus- Reader 1	Individual partial and individual full tear data not extracted - unclear?	0.57|0.94	9.75|0.46	**MODERATE**	WEAK
Schaeffeler, C., 2012	High Quality	36	FTT/PTT vs. No tear (MRA) - subscapularis - Reader 3	Arthroscopic/surgical findings	0.68|0.92	8.82|0.35	**MODERATE**	WEAK
Schreinemachers, S. A., 2009	High Quality	92	FTT/PTT vs no tear(MR arthrogram w ABER)- supraspinatus- Reader 2	Individual partial and individual full tear data not extracted - unclear?	0.48|0.84	3|0.62	WEAK	POOR
Probyn, L. J., 2007	High Quality	37	FTT/PTT vs no tear(MR arthography)- superior labral tear	Arthroscopic/surgical findings(Arthroscopy)	0.94|0.86	6.56|0.07	**MODERATE**	**STRONG**
Schreinemachers, S. A., 2009	High Quality	92	FTT/PTT vs no tear(MR arthrogram)- supraspinatus- Reader 2	Individual partial and individual full tear data not extracted - unclear?	0.61|0.91	7|0.43	**MODERATE**	WEAK

Table 27: PICO 3.3b:MRA (Full-thickness tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRA) - SLAP Tear - Reader 1	Arthroscopic/surgical findings	0.98|1	98.08|0.02	**STRONG**	**STRONG**
Anbar, A., 2015	High Quality	46	FTT vs. No tear (MRA) - LCHL - Reader 1	MR arthrography vs. arthroscopy(Arthroscopy)	0.89|0.88	7.33|0.13	**MODERATE**	**MODERATE**
Anbar, A., 2015	High Quality	46	FTT vs. No tear (MRA) - SGHL/MCHL complex - Reader 2	MR arthrography vs. arthroscopy(Arthroscopy)	0.77|0.91	8.46|0.25	**MODERATE**	WEAK
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRA) - SLAP Tear - Reader 2	Arthroscopic/surgical findings	0.96|1	96.15|0.04	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRA) - Posterior Labral Tear - Reader 1	Arthroscopic/surgical findings	0.97|1	97.06|0.03	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRA) - Posterior Labral Tear - Reader 2	Arthroscopic/surgical findings	0.91|1	91.18|0.09	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRA) - Anterior Labral Tear - Reader 1	Arthroscopic/surgical findings	0.94|1	93.55|0.06	**STRONG**	**STRONG**

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRA) - Anterior Labral Tear - Reader 2	Arthroscopic/surgical findings	0.97|1	96.77|0.03	**STRONG**	**STRONG**
Magee, T., 2014	High Quality	150	FTT vs. No tear (MRA) - supraspinatus	Arthroscopic/surgical findings(Arthroscopy)	1|1	100|0	**STRONG**	**STRONG**
Anbar, A., 2015	High Quality	46	FTT vs. No tear (MRA) - SGHL/MCHL complex - Reader 1	MR arthrography vs. arthroscopy(Arthroscopy)	0.85|0.94	13.96|0.16	**STRONG**	**MODERATE**
Anbar, A., 2015	High Quality	46	FTT vs. No tear (MRA) - LCHL - Reader 2	MR arthrography vs. arthroscopy(Arthroscopy)	0.83|0.91	9.17|0.18	**MODERATE**	**MODERATE**

Table 28: PICO 3.3c:MRA (Full-thickness tear vs. non-full-thickness tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Duc, S. R., 2006	High Quality	48	FTT vs PT/no tear (MRA) - Infraspinatus - Observer 2	Arthroscopic/surgical findings	0.79|0.94	13.36|0.23	**STRONG**	WEAK
Duc, S. R., 2006	High Quality	48	FTT vs PT/no tear (MRA) - Infraspinatus - Observer 1	Arthroscopic/surgical findings	1|1	100|0	**STRONG**	**STRONG**
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear (MRA)-supraspinatus)-Observer 1	Arthroscopic/surgical findings(Arthroscopy)	0.9|0.89	8.14|0.11	**MODERATE**	**MODERATE**
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear(MRA)-subscapularis-Observer 1	Arthroscopic/surgical findings(Arthroscopy)	0.47|1	47.37|0.53	**STRONG**	POOR
Duc, S. R., 2006	High Quality	48	FTT vs PT/no tear (MRA) - subscapularis - Observer 1	Arthroscopic/surgical findings	0.82|1	81.82|0.18	**STRONG**	**MODERATE**
Duc, S. R., 2006	High Quality	48	FTT vs PT/no tear (MRA) - Supraspinatus - Observer 2	Arthroscopic/surgical findings	0.86|0.59	2.1|0.24	WEAK	WEAK
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear(MRA)-subscapularis-Observer 2	Arthroscopic/surgical findings(Arthroscopy)	0.91|0.92	11.21|0.1	**STRONG**	**STRONG**

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Lee, H., 2018	High Quality	120	FTT vs. PTT/No tear - 3T MRA (T2 TSE) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.34|1	34.21|0.66	**STRONG**	POOR
Lee, H., 2018	High Quality	120	FTT vs. PTT/No tear - 3T MRA (T2 TSE) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.32|1	31.58|0.68	**STRONG**	POOR
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear (MRA)-supraspinatus)-Observer 2	Arthroscopic/surgical findings(Arthroscopy)	0.86|0.59	2.1|0.24	WEAK	WEAK
Duc, S. R., 2006	High Quality	48	FTT vs PT/no tear (MRA) - subscapularis - Observer 2	Arthroscopic/surgical findings	0.91|0.92	11.21|0.1	**STRONG**	**STRONG**
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear (MRA)-infraspinatus-Observer 2	Arthroscopic/surgical findings(Arthroscopy)	0.79|0.94	13.36|0.23	**STRONG**	WEAK
Lee, H., 2018	High Quality	120	FTT vs. PTT/No tear - 3T MRA (T1 SPIR) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.55|1	55.26|0.45	**STRONG**	WEAK
Lee, H., 2018	High Quality	120	FTT vs. PTT/No tear - 3T MRA (T1 SPIR) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.55|1	55.26|0.45	**STRONG**	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Duc, S. R., 2006	High Quality	48	FTT vs PT/no tear (MRA) - Supraspinatus - Observer1	Arthroscopic/surgical findings	0.9|0.89	8.14|0.11	**MODERATE**	**MODERATE**
Waldt, S., 2007	High Quality	826	FTT vs PTT/no tear (MRA)- infraspinatus- Observer 1	Arthroscopic/surgical findings(Arthroscopy)	1|1	100|0	**STRONG**	**STRONG**
Ok, J. H., 2013	High Quality	51	FTT vs PTT/no tear (MRA)- supraspinatus	Arthroscopic/surgical findings(Arthroscopy)	1|0.95	21|0	**STRONG**	**STRONG**

Table 29: PICO 3.3d:MRA (Partial tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Lee, H., 2018	High Quality	120	PTT vs. No tear - 3T MRA (T2 TSE) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.58|0.96	13.42|0.44	**STRONG**	WEAK
Lee, H., 2018	High Quality	120	PTT vs. No tear - 3T MRA (T1 SPIR) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.97|0.83	5.59|0.03	**MODERATE**	**STRONG**
Dae, K. O., 2009	High Quality	36	PTT/no tear (3D isotropic MR arthography)- SSP-ISP	Arthroscopic/surgical findings	0.8|0.81	4.16|0.25	WEAK	WEAK
Lee, H., 2018	High Quality	120	PTT vs. No tear - 3T MRA (T1 SPIR) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.92|0.87	7.03|0.1	**MODERATE**	**STRONG**
Lee, H., 2018	High Quality	120	PTT vs. No tear - 3T MRA (T2 TSE) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.61|0.91	7.03|0.43	**MODERATE**	WEAK
Dae, K. O., 2009	High Quality	36	PTT/no tear (conventional MR arthography SSP-ISP)	Arthroscopic/surgical findings	0.8|0.81	4.16|0.25	WEAK	WEAK

Table 30: PICO 3.4a:MRI (Any tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - glenoid; grades 3-4 - Reader 2	Arthroscopic/surgical findings	0.38|1	38.46|0.62	**STRONG**	POOR
Shellock, F. G., 2001	High Quality	47	FTT/PTT vs. No tear (MRI)	Labral lesions not included due to only 9 confirmed tears. Thus, listed as "nonspecific"	0.89|1	89.29|0.11	**STRONG**	**MODERATE**
Ryu, H. Y., 2016	High Quality	364	FTT/PTT vs. No tear (MRI) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.7|0.84	4.48|0.35	WEAK	WEAK
Lee, H., 2018	High Quality	120	FTT/PTT vs. No tear - 3T MRA (T2 TSE) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.72|0.91	8.24|0.31	**MODERATE**	WEAK
Lee, H., 2018	High Quality	120	FTT/PTT vs. No tear - 3T MRA (T2 TSE) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.76|0.96	17.41|0.25	**STRONG**	WEAK
YÄ±ldÄ±z, F., 2017	High Quality	132	FTT/PTT vs. No tear (MRI) - SLAP Lesions	Arthroscopy/surgical findings(Arthroscopy)	0.71|0.4	1.18|0.74	POOR	POOR

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Ryu, H. Y., 2016	High Quality	364	FTT/PTT vs. No tear (MRI) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.72|0.77	3.1|0.37	WEAK	WEAK
Lee, H., 2018	High Quality	120	FTT/PTT vs. No tear - 3T MRA (T1 SPIR) - subscapularis - Reader 1	Arthroscopic/surgical findings	0.95|0.87	7.25|0.06	**MODERATE**	**STRONG**
Lee, H., 2018	High Quality	120	FTT/PTT vs. No tear - 3T MRA (T1 SPIR) - subscapularis - Reader 2	Arthroscopic/surgical findings	0.96|0.83	5.52|0.05	**MODERATE**	**STRONG**
Tuite, M. J., 1994	High Quality	87	FTT/PTT vs no tear (MRI)-nonspecific	Supraspinatus + other tendons(Arthroscopy)	0.82|0.84	5.17|0.22	**MODERATE**	WEAK
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - humeral; grades 1-4 - Reader 1	Arthroscopic/surgical findings	0.61|0.82	3.38|0.48	WEAK	WEAK
Herold, T., 2006	High Quality	51	FTT/PTT vs no tear(ABER position/MR arthrography)-supraspinatus-Reader 2	Arthroscopic/surgical findings(Arthroscopy)	0.94|0.94	16|0.06	**STRONG**	**STRONG**
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - humeral; grades 3-4 - Reader 2	Arthroscopic/surgical findings	0.29|1	29.41|0.71	**STRONG**	POOR

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - humeral; grades 1-4 - Reader 2	Arthroscopic/surgical findings	0.26|1	26.09|0.74	**STRONG**	POOR
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - glenoid; grades 3-4 - Reader 1	Arthroscopic/surgical findings	0.31|0.99	21.85|0.7	**STRONG**	POOR
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - humeral; grades 3-4 - Reader 1	Arthroscopic/surgical findings	0.24|0.97	7.88|0.79	**MODERATE**	POOR
Herold, T., 2006	High Quality	51	FTT/PTT vs no tear(Neutral position/MR arthography)-supraspinatus-Reader 2	Arthroscopic/surgical findings(Arthroscopy)	0.85|0.88	7.25|0.17	**MODERATE**	**MODERATE**
Herold, T., 2006	High Quality	51	FTT/PTT vs no tear(Neutral position/MR arthography)-supraspinatus-Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.88|0.88	7.5|0.13	**MODERATE**	**MODERATE**
Herold, T., 2006	High Quality	51	FTT/PTT vs no tear(ABER position/MR arthrography)-supraspinatus-Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.97|1	97.06|0.03	**STRONG**	**STRONG**

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
VanBeek, C., 2014	High Quality	84	FTT/PTT vs. No tear (Non-contrast MRI) - glenoid; grades 1-4 - Reader 2	Arthroscopic/surgical findings	0.5|0.95	10.67|0.52	**STRONG**	POOR

Table 31: PICO 3.4b:MRI (Full-thickness tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 2	Arthroscopic/surgical findings	0.96|1	96.08|0.04	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 1	Arthroscopic/surgical findings	1|1	100|0	**STRONG**	**STRONG**
Binkert, C. A., 2001	High Quality	52	FTT vs. No tear (MRI w/ 4mmol/L gadoteridol) - supraspinatus - Reader 2	Arthroscopic findings(Arthroscopy)	1|0.93	15|0	**STRONG**	**STRONG**
Binkert, C. A., 2001	High Quality	52	FTT vs. No tear (MRI w/ 2mmol/L gadoteridol) - supraspinatus - Reader 2	Arthroscopic findings(Arthroscopy)	1|1	100|0	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 2	Arthroscopic/surgical findings	0.96|1	95.92|0.04	**STRONG**	**STRONG**
Mohtadi, N. G., 2004	High Quality	58	FTT vs. No tear (MRI) - supraspinatus	Arthroscopic/surgical findings(Arthroscopy)	1|0.92	12|0	**STRONG**	**STRONG**

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Magee, T., 2014	High Quality	150	FTT vs. No tear (MRI) - supraspinatus	Arthroscopic/surgical findings(Arthroscopy)	0.95|1	94.96|0.05	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 1	Arthroscopic/surgical findings	0.96|1	96.08|0.04	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 2	Arthroscopic/surgical findings	1|1	100|0	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 1	Arthroscopic/surgical findings	1|1	100|0	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 2	Arthroscopic/surgical findings	1|1	100|0	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - SLAP Tear - Reader 2	Arthroscopic/surgical findings	0.81|1	80.77|0.19	**STRONG**	**MODERATE**
Tuite, M. J., 1994	High Quality	87	FTT vs no tear (MRI)- nonspecific	Supraspinatus + other tendons(Arthroscopy)	0.91|0.95	19.7|0.1	**STRONG**	**STRONG**
Razmjou, H., 2016	High Quality	183	FTT vs. No tear (Non-contrast MRI) - biceps tendon - Reader 1	noncontrast MRI	0.54|0.98	25.85|0.47	**STRONG**	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Binkert, C. A., 2001	High Quality	52	FTT vs. No tear (MRI w/ 2mmol/L gadoteridol) - supraspinatus - Reader 1	Arthroscopic findings(Arthroscopy)	0.92|0.94	16.5|0.09	**STRONG**	**STRONG**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - Anterior Labral Tear - Reader 2	Arthroscopic/surgical findings	0.77|1	77.42|0.23	**STRONG**	WEAK
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - Posterior Labral Tear - Reader 1	Arthroscopic/surgical findings	0.82|1	82.35|0.18	**STRONG**	**MODERATE**
Binkert, C. A., 2001	High Quality	52	FTT vs. No tear (MRI w/ 4mmol/L gadoteridol) - supraspinatus - Reader 1	Arthroscopic findings(Arthroscopy)	0.91|0.87	6.82|0.1	**MODERATE**	**MODERATE**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - SLAP Tear - Reader 1	Arthroscopic/surgical findings	0.83|1	82.69|0.17	**STRONG**	**MODERATE**
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - Posterior Labral Tear - Reader 2	Arthroscopic/surgical findings	0.76|1	76.47|0.24	**STRONG**	WEAK
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - supraspinatus - Reader 1	Arthroscopic/surgical findings	0.96|1	95.92|0.04	**STRONG**	**STRONG**

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Magee, T., 2016	High Quality	100	FTT vs. No tear (MRI) - Anterior Labral Tear - Reader 1	Arthroscopic/surgical findings	0.74|1	74.19|0.26	**STRONG**	WEAK

Table 32: PICO 3.4c:MRI (Partial tear)

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Lee, R. W., 2016	High Quality	80	PTT vs. No tear (MRI) - Long head of biceps tendon - Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.77|0.71	2.67|0.32	WEAK	WEAK
Mohtadi, N. G., 2004	High Quality	58	PTT vs. No tear (MRI) - biceps tendon	Arthroscopic/surgical findings(Arthroscopy)	0.5|0.7	1.65|0.72	POOR	POOR
Herold, T., 2006	High Quality	51	PTT vs no tear (Neutral position/MR arthography) - supraspinatus-Reader 2	Arthroscopic/surgical findings(Arthroscopy)	0.57|0.84	3.52|0.51	WEAK	POOR
Tuite, M. J., 1994	High Quality	87	PTT vs no tear (MRI)-nonspecific	Supraspinatus + other tendons(Arthroscopy)	0.74|0.87	5.56|0.3	**MODERATE**	WEAK
Herold, T., 2006	High Quality	51	PTT vs no tear (Neutral position/MR arthography) - supraspinatus-Reader 1	Arthroscopic/surgical findings(Arthroscopy)	0.71|0.92	8.81|0.31	**MODERATE**	WEAK
Lee, R. W., 2016	High Quality	80	PTT vs. No tear (MRI) - Long head of biceps tendon - Reader 2	Arthroscopic/surgical findings(Arthroscopy)	0.8|0.73	3|0.27	WEAK	WEAK

Reference Title	Quality	N	Index Test	Reference Standard	Sens|Spec	LR+|LR-	Rule In Test	Rule Out Test
Razmjou, H., 2016	High Quality	183	PTT vs. No tear (Non-contrast MRI) - biceps tendon - Reader 1	noncontrast MRI	0.28|0.86	2.04|0.84	WEAK	POOR

Quality Evaluation Table 5: post op mobilization timing-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Cuff, Dj, 2012	●	●	●	●	●	●	●	●	●	Include	High Quality
Duzgun, Ä°, 2014	○	◑	●	●	●	●	●	●	●	Include	High Quality
De Roo, P. J., 2015	◑	◑	◑	●	●	●	●	●	●	Include	High Quality
Keener, Jd, 2014	●	●	●	◑	●	○	●	●	●	Include	High Quality
Koh, Kh, 2014	●	●	●	◑	●	●	●	●	●	Include	High Quality
Mazzocca, A. D., 2017	●	◑	●	●	◑	○				Include	Moderate Quality

Table 33: Summary of Findings-Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization

	High Quality					
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Cuff, Dj, 2012	De Roo, P. J., 2015	Duzgun, I, 2014	Keener, Jd, 2014	Koh, Kh, 2014	Mazzocca, A. D., 2017
Complications						
Adverse events/complications(Complications)	●					
Healing rate(RC healing)	●					
Adverse events/complications(Retears)				●		
RC Tear (specify component)(Retears)					●	
Composite						
PROs (specify)(Constant)					●	
PROs (specify)(Relative constant)				●		
PROs (specify)(CMS)		●				
PROs (specify)(ASES)	↓			●	●	
PROs (specify)(UCLA)		●				
PROs (specify)(SPADI)		●				
Clinical outcomes (specify)(ASES score)						●
Function						
PROs (specify)(SST)	●	●		●		
Clinical outcomes (specify)(External rotation (degrees))	●	↓	↑		●	
Clinical outcomes (specify)(Internal rotation (degrees))		●	↑		●	
Clinical outcomes (specify)(external rotation)				●		
Clinical outcomes (specify)(Forward elevation (degrees))	↑					
Clinical outcomes (specify)(Full internal rotation (percent))	●					
Clinical outcomes (specify)(Abduction (degrees))		●	↑			
Clinical outcomes (specify)(Abduction Strength)		●				
Clinical outcomes (specify)(Anteflexion (degrees))		●				
Clinical outcomes (specify)(Anteflexion Strength)		●				
Clinical outcomes (specify)(External Rotation Strength)		●				
Clinical outcomes (specify)(Internal Rotation Strength)		●				
Clinical outcomes (specify)(Active elevation (degrees))			↑			
Clinical outcomes (specify)(Flexion (degrees))			↓			
Clinical outcomes (specify)(Spine level internal rotation (cm))			↓			
Clinical outcomes (specify)(Abduction Strength (kg))				●		
Clinical outcomes (specify)(Elevation (degrees))				↑		
Clinical outcomes (specify)(External Rotation Strength (kg))				●		
Clinical outcomes (specify)(External flexion (degrees))					●	
Pain						
PROs (specify)(VAS)				●	●	
PROs (specify)(Pain on VAS)						↑
Quality of life						
WORC						↑
Post-op pain control						
Medication use (length of time)(narcotics use)						●

Table 34: Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cuff, Dj, 2012	High Quality	Adverse events/complications(Complications)	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	0.00%	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Cuff, Dj, 2012	High Quality	Healing rate(RC healing)	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	84.85%	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	91.43%	RR	0.93(0.78,1.11)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Adverse events/complications(Retears)	1 year	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	9.84%	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	5.66%	RR	1.74(0.46,6.61)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koh, Kh, 2014	High Quality	RC Tear (specify component)(Retears)	1 year	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	12.50%	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	8.33%	RR	1.50(0.43,5.21)	Not Significant (P-value>.05)

Table 35: Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cuff, Dj, 2012	High Quality	PROs (specify)(ASES)	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	91.1(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	92.8(.)	Author Reported	NA	delayed Significant (P-value<.05)
De Roo, P. J., 2015	High Quality	PROs (specify)(CMS)	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	75.98(12.47)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	75.16(15.26)	MeanDif	0.82(-4.19,5.83)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	PROs (specify)(SPADI)	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	21.01(20.95)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	18.9(18.73)	MeanDif	2.11(-4.80,9.02)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	PROs (specify)(UCLA)	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	26.9(5.41)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	26.51(5.79)	MeanDif	0.39(-1.60,2.38)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(ASES)	1 year	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	88.1(15.80)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	89.1(14.10)	MeanDif	-1(-6.49,4.49)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(ASES)	2 years	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	91(15.30)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	93.3(10.60)	MeanDif	-2.3(-7.08,2.48)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(ASES)	6 months	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	81.1(16.20)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	84.3(15.10)	MeanDif	-3.2(-8.95,2.55)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(Relative Constant)	1 year	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	79.1(10.00)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	79.9(12.30)	MeanDif	-0.8(-4.95,3.35)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(Relative Constant)	2 years	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	83.2(11.50)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	84.3(10.80)	MeanDif	-1.1(-5.20,3.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Keener, Jd, 2014	High Quality	PROs (specify)(Relative Constant)	6 months	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	74.4(13.30)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	74.6(11.30)	MeanDif	-0.2(-4.72,4.32)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	PROs (specify)(ASES)	2 years	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	88.9(16.20)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	92.1(10.20)	MeanDif	-3.2(-8.99,2.59)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	PROs (specify)(ASES)	6 months	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	68(17.40)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	68(17.60)	MeanDif	0(-7.34,7.34)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	PROs (specify)(Constant)	2 years	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	85.6(15.60)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	88.7(9.70)	MeanDif	-3.1(-8.66,2.46)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	PROs (specify)(Constant)	6 months	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	65.1(17.50)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	63.7(16.90)	MeanDif	1.4(-5.83,8.63)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	Clinical outcomes (specify)(ASES score)	1 years	g2(early) (early motion (postoperative day 2-3))	31	90(15.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	84(19.00)	MeanDif	6(-2.90,14.90)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	Clinical outcomes (specify)(ASES score)	1.4 months	g2(early) (early motion (postoperative day 2-3))	31	47(18.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	44(18.00)	MeanDif	3(-6.29,12.29)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mazzocca, A. D., 2017	Moderate Quality	Clinical outcomes (specify)(ASES score)	3 months	g2(early) (early motion (postoperative day 2-3))	31	70(13.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	64(18.00)	MeanDif	6(-2.19,14.19)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	Clinical outcomes (specify)(ASES score)	6 months	g2(early) (early motion (postoperative day 2-3))	31	88(16.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	80(19.00)	MeanDif	8(-1.12,17.12)	Not Significant (P-value>.05)

Table 36: Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cuff, Dj, 2012	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	46(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	45(.)	Author Reported	NA	Not Significant (P-value>.05)
Cuff, Dj, 2012	High Quality	Clinical outcomes (specify)(External rotation (degrees))	6 months	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	44(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	43(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cuff, Dj, 2012	High Quality	Clinical outcomes (specify)(Forward elevation (degrees))	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	174(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	173(.)	Author Reported	NA	Not Significant (P-value>.05)
Cuff, Dj, 2012	High Quality	Clinical outcomes (specify)(Forward elevation (degrees))	6 months	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	172(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	165(.)	Author Reported	NA	Early Significant (P-value<.05)
Cuff, Dj, 2012	High Quality	Clinical outcomes (specify)(Full internal rotation (percent))	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	94(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	91(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cuff, Dj, 2012	High Quality	Clinical outcomes (specify)(Full internal rotation (percent))	6 months	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	79(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	60(.)	Author Reported	NA	Not Significant (P-value>.05)
Cuff, Dj, 2012	High Quality	PROs (specify)(SST)	1 year	G1 (Early) (Early ROM (2 days post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	33	11.1(.)	G2 (Delayed) (Delayed ROM (6 weeks post-op); all pts had arthroscopic repair w/transosseous equiv. suture-bridge technique along w/subacromial decompression of SSP)	35	11.1(.)	Author Reported	NA	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	100.15(15.08)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	96.74(13.25)	MeanDif	3.41(-1.52,8.34)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Abduction (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	127.96(20.19)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	129.57(18.74)	MeanDif	-1.61(-8.41,5.19)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Abduction Strength)	4 months	*G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	97.61(36.18)	*G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	91.22(41.27)	MeanDif	6.39(-7.46,20.24)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Anteflexion (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	109.22(18.06)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	107.82(15.56)	MeanDif	1.4(-4.44,7.24)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Anteflexion (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	139.22(16.75)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	141.33(17.73)	MeanDif	-2.11(-8.22,4.00)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Anteflexion Strength)	4 months	*G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	74.04(29.77)	*G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	74.96(42.27)	MeanDif	-0.92(-14.25,12.41)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	29.89(16.36)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	27.43(12.05)	MeanDif	2.46(-2.43,7.35)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	30.29(17.06)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	31.9(14.05)	MeanDif	-1.61(-7.00,3.78)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	29.89(16.36)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	31.9(14.05)	MeanDif	-2.01(-7.29,3.27)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	30.29(17.06)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	27.43(12.05)	MeanDif	2.86(-2.15,7.87)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	64.24(17.38)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	63.53(16.60)	MeanDif	0.71(-5.24,6.66)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	46.18(17.34)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	63.53(16.60)	MeanDif	-17.35(-23.30,-11.40)	**Treatment 2 Significant (P-value<.05)**
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	64.24(17.38)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	46.27(14.67)	MeanDif	17.97(12.41,23.53)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External rotation (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	46.18(17.34)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	46.27(14.67)	MeanDif	-0.09(-5.64,5.46)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(External Rotation Strength)	4 months	*G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	70.71(25.51)	*G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	66.06(25.13)	MeanDif	4.65(-4.25,13.55)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	1.4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	44.92(15.93)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	42.59(17.60)	MeanDif	2.33(-3.64,8.30)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	62.47(16.83)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	64.49(21.34)	MeanDif	-2.02(-8.95,4.91)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	Clinical outcomes (specify)(Internal Rotation Strength)	4 months	*G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	122.8(37.09)	*G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	112.53(44.85)	MeanDif	10.27(-4.51,25.05)	Not Significant (P-value>.05)
De Roo, P. J., 2015	High Quality	PROs (specify)(SST)	4 months	G1 (Early) (Immediate passive mobilization; All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	79	9.44(2.19)	G2 (Delayed) (Delayed mobilization (4 weeks); All pts RCTs repaired by either single or double row technique, acromioplasty performed at all times)	51	9.02(2.52)	MeanDif	0.42(-0.42,1.26)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1.2 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	122.5(6.80)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	108.3(6.10)	MeanDif	14.2(10.18,18.22)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1.8 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	148.5(7.30)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	126.5(6.60)	MeanDif	22(17.67,26.33)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Abduction (degrees))	3 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	166(5.90)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	151.9(5.30)	MeanDif	14.1(10.61,17.59)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Abduction (degrees))	5.5 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	173.6(3.40)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	171(3.10)	MeanDif	2.6(0.58,4.62)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Active elevation (degrees))	1.2 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	126.3(9.80)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	95.6(9.20)	MeanDif	30.7(24.79,36.61)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Active elevation (degrees))	1.8 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	145.9(6.30)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	116.4(8.30)	MeanDif	29.5(24.96,34.04)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Active elevation (degrees))	3 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	154.4(2.20)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	141.4(5.90)	MeanDif	13(10.29,15.71)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Active elevation (degrees))	5.5 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	158.9(1.80)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	153.7(4.00)	MeanDif	5.2(3.31,7.09)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1.2 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	48.2(5.60)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	38.5(5.10)	MeanDif	9.7(6.37,13.03)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1.8 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	55.8(6.00)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	47.9(5.40)	MeanDif	7.9(4.35,11.45)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(External rotation (degrees))	3 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	68.3(5.30)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	58.6(4.70)	MeanDif	9.7(6.58,12.82)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(External rotation (degrees))	5.5 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	86.3(2.40)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	84.1(2.20)	MeanDif	2.2(0.77,3.63)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Flexion (degrees))	1.2 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	150.1(5.60)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	131.7(5.00)	MeanDif	18.4(15.10,21.70)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Flexion (degrees))	1.8 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	159.6(5.30)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	146.9(4.80)	MeanDif	12.7(9.55,15.85)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Flexion (degrees))	3 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	159.6(5.30)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	161.8(2.80)	MeanDif	-2.2(-4.87,0.47)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Flexion (degrees))	5.5 months	*G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	171.3(3.10)	*G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	174.2(1.60)	MeanDif	-2.9(-4.45,-1.35)	**Treatment 2 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	1.2 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	61.3(4.30)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	54.9(3.90)	MeanDif	6.4(3.85,8.95)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	1.8 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	72.7(3.70)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	57.2(3.40)	MeanDif	15.5(13.29,17.71)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	3 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	80(3.70)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	68.2(3.30)	MeanDif	11.8(9.62,13.98)	**Treatment 1 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	5.5 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	88.2(2.10)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	86.5(1.90)	MeanDif	1.7(0.45,2.95)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Spine level internal rotation (cm))	1.2 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	29.5(2.90)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	31.5(2.60)	MeanDif	-2(-3.71,-0.29)	**Treatment 2 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Spine level internal rotation (cm))	1.8 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	19.7(2.60)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	24.8(2.30)	MeanDif	-5.1(-6.63,-3.57)	**Treatment 2 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Spine level internal rotation (cm))	3 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	13(2.90)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	17.6(2.50)	MeanDif	-4.6(-6.29,-2.91)	**Treatment 2 Significant (P-value<.05)**
Duzgun, I, 2014	High Quality	Clinical outcomes (specify)(Spine level internal rotation (cm))	5.5 months	G1 (Early) (Rehab protocol begins 3rd week; pts underwent arthroscopic RC repair)	19	6.3(2.20)	G2 (Delayed) (Rehab protocol begins 6th week; pts underwent arthroscopic RC repair)	21	10.5(2.00)	MeanDif	-4.2(-5.51,-2.89)	**Treatment 2 Significant (P-value<.05)**
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Abduction Strength (kg))	1 year	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	2.6(1.90)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	2.2(1.20)	MeanDif	0.4(-0.18,0.98)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Abduction Strength (kg))	2 years	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	2.9(1.90)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	2.7(1.60)	MeanDif	0.2(-0.44,0.84)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Abduction Strength (kg))	6 months	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	2.8(1.80)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	2.3(1.70)	MeanDif	0.5(-0.14,1.14)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Elevation (degrees))	1 year	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	161(13.40)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	159(22.80)	MeanDif	2(-5.00,9.00)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Elevation (degrees))	2 years	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	164(13.40)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	163(15.80)	MeanDif	1(-4.42,6.42)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Elevation (degrees))	3 months	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	136(23.60)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	123(30.60)	MeanDif	13(2.85,23.15)	**Treatment 1 Significant (P-value<.05)**
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(Elevation (degrees))	6 months	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	155(18.10)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	154(17.80)	MeanDif	1(-5.60,7.60)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(External Rotation Strength (kg))	1 year	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	7.3(3.20)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	6.9(2.80)	MeanDif	0.4(-0.70,1.50)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(External Rotation Strength (kg))	2 years	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	7.2(3.00)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	7(3.20)	MeanDif	0.2(-0.94,1.34)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(External Rotation Strength (kg))	6 months	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	6.7(3.60)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	6(1.90)	MeanDif	0.7(-0.34,1.74)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(External Rotation)	1 year	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	64.1(15.20)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	67.3(15.90)	MeanDif	-3.2(-8.93,2.53)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(External Rotation)	2 years	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	62(16.40)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	66.2(14.00)	MeanDif	-4.2(-9.78,1.38)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	Clinical outcomes (specify)(External Rotation)	6 months	*G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	61.6(17.80)	*G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	63.9(15.10)	MeanDif	-2.3(-8.34,3.74)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Keener, Jd, 2014	High Quality	PROs (specify)(SST)	1 year	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	10.3(2.30)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	10(3.10)	MeanDif	0.3(-0.71,1.31)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(SST)	2 years	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	10.8(1.80)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	10.6(2.50)	MeanDif	0.2(-0.61,1.01)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(SST)	6 months	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	9.1(2.70)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	9.3(2.90)	MeanDif	-0.2(-1.23,0.83)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	Clinical outcomes (specify)(External flexion (degrees))	2 years	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	143.7(23.50)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	141.7(25.20)	MeanDif	2(-8.19,12.19)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	Clinical outcomes (specify)(External flexion (degrees))	6 months	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	126.9(28.30)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	129.5(22.10)	MeanDif	-2.6(-13.37,8.17)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	33.1(18.80)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	29.5(21.20)	MeanDif	3.6(-4.76,11.96)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	Clinical outcomes (specify)(External rotation (degrees))	6 months	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	18.6(16.50)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	18.9(15.40)	MeanDif	-0.3(-7.02,6.42)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koh, Kh, 2014	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	2 years	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	9.1(2.90)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	9.4(2.90)	MeanDif	-0.3(-1.52,0.92)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	6 months	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	10.6(4.20)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	11.5(3.60)	MeanDif	-0.9(-2.55,0.75)	Not Significant (P-value>.05)

Table 37: Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Keener, Jd, 2014	High Quality	PROs (specify)(VAS)	1 year	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	1.1(1.70)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	0.9(1.20)	MeanDif	0.2(-0.34,0.74)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(VAS)	2 years	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	0.9(1.70)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	0.6(1.10)	MeanDif	0.3(-0.22,0.82)	Not Significant (P-value>.05)
Keener, Jd, 2014	High Quality	PROs (specify)(VAS)	6 months	G1 (Early) (Traditional rehabilitation group (PT began at 1st post-op visit))	61	1.4(1.60)	G2 (Delayed) (Immobilization group (PT began 6 weeks post-op))	53	1.1(1.40)	MeanDif	0.3(-0.25,0.85)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	PROs (specify)(VAS)	2 years	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	1.3(1.80)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	0.8(1.00)	MeanDif	0.5(-0.13,1.13)	Not Significant (P-value>.05)
Koh, Kh, 2014	High Quality	PROs (specify)(VAS)	6 months	G1 (Early) (Immobilization for 4 weeks followed by rehab)	40	2.7(1.50)	G2 (Delayed) (Immobilization for 8 weeks followed by rehab)	48	2.7(1.80)	MeanDif	0(-0.69,0.69)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	PROs (specify)(Pain on VAS)	1 years	g2(early) (early motion (postoperative day 2-3))	31	7(15.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	9(15.00)	MeanDif	-2(-9.74,5.74)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	PROs (specify)(Pain on VAS)	1.4 months	g2(early) (early motion (postoperative day 2-3))	31	25(21.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	31(22.00)	MeanDif	-6(-17.11,5.11)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mazzocca, A. D., 2017	Moderate Quality	PROs (specify)(Pain on VAS)	3 months	g2(early) (early motion (postoperative day 2-3))	31	16(14.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	27(23.00)	MeanDif	-11(-20.98,-1.02)	**Treatment 1 Significant (P-value<.05)**
Mazzocca, A. D., 2017	Moderate Quality	PROs (specify)(Pain on VAS)	6 months	g2(early) (early motion (postoperative day 2-3))	31	10(17.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	14(23.00)	MeanDif	-4(-14.54,6.54)	Not Significant (P-value>.05)

Table 38: Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mazzocca, A. D., 2017	Moderate Quality	Medication use (length of time)(narcotics use)	1.4 months	g2(early) (early motion (postoperative day 2-3))	31	51.61%	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	74.07%	RR	0.70(0.46,1.05)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	Medication use (length of time)(narcotics use)	3 months	g2(early) (early motion (postoperative day 2-3))	31	35.48%	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	44.44%	RR	0.80(0.42,1.51)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	Medication use (length of time)(narcotics use)	5.5 months	g2(early) (early motion (postoperative day 2-3))	31	12.90%	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	22.22%	RR	0.58(0.18,1.84)	Not Significant (P-value>.05)

Table 39: Pico 4 Part 1: Early passive motion/mobilization vs. Delayed motion/mobilization - (Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mazzocca, A. D., 2017	Moderate Quality	WORC	1 years	g2(early) (early motion (postoperative day 2-3))	31	157(306.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	439(540.00)	MeanDiff	-282(-512.42,-51.58)	**Treatment 1 Significant (P-value<.05)**
Mazzocca, A. D., 2017	Moderate Quality	WORC	1.4 months	g2(early) (early motion (postoperative day 2-3))	31	1107(417.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	1259(310.00)	MeanDiff	-152(-339.68,35.68)	Not Significant (P-value>.05)
Mazzocca, A. D., 2017	Moderate Quality	WORC	3 months	g2(early) (early motion (postoperative day 2-3))	31	734(346.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	942(374.00)	MeanDiff	-208(-394.38,-21.62)	**Treatment 1 Significant (P-value<.05)**
Mazzocca, A. D., 2017	Moderate Quality	WORC	6 months	g2(early) (early motion (postoperative day 2-3))	31	325(400.00)	g1(delayed) (delayed motion (postoperative day 28) rehabilitation protocol)	27	529(472.00)	MeanDiff	-204(-430.99,22.99)	Not Significant (P-value>.05)

Quality Evaluation Table 6: supervised exercise vs non-supervised exercise-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Chou, Ct, 2015	●	◑	●	●	◑	○				Include	Moderate Quality
Christiansen, D. H., 2016	●	◑	●	◑	◑	◑				Include	Moderate Quality
Hayes, K., 2004	●	◑	●	○	◑	◑				Include	Moderate Quality
Holmgren, T., 2012	◑	●	●	◑	◑	○				Include	Moderate Quality
Lisinski, P., 2012	◑	◑	◑	●	◑	○				Include	Moderate Quality

Table 40: Summary of Findings-Pico 5 Part 1: Supervised exercise program vs. Unsupervised exercise program

	Moderate Quality				
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Chou, Ct, 2015	Christiansen, D. H., 2016	Hayes, K., 2004	Holmgren, T., 2012	Lisinski, P., 2012
Complications					
Adverse events/complications(Rotator Cuff retear)	●				
Composite					
PROs (specify)(ASES)	●				
PROs (specify)(UCLA)	●				
Clinical outcomes (specify)(DASH score)				↑	
PROs (specify)(Constant-Murley (Pain/Function))	●	●			
PROs (specify)(DASH)	●				
PROs (specify)(OSS (Pain and QOL))		↑			
PROs (specify)(Constant-Murley (pain/function)				↑	
Function					
Clinical outcomes (specify)(Flexion (degrees))			↑		
Clinical outcomes (specify)(Positive Pain Provocation Signs Test)		↑			
Clinical outcomes (specify)(Scapular dykinesis)		↑			
Clinical outcomes (specify)(Abduction (degrees); difference b/w groups)			●		
Clinical outcomes (specify)(External Rotation (degrees); difference b/w groups)			●		
Clinical outcomes (specify)(Muscle force (elevation); difference b/w groups)			●		
Clinical outcomes (specify)(Muscle force (external rotation); difference b/w two groups)			●		
Clinical outcomes (specify)(Muscle force (Internal rotation))			●		
Clinical outcomes (specify)(Flexion w/ abduction)					↑
Clinical outcomes (specify)(Flexion w/ adduction)					↑
Pain					
PROs (specify)(VAS)	●				↑
PROs (specify)(VAS rest)				●	
Quality of life					
Clinical outcomes (specify)(Maximum Oxygen Uptake)		↑			
PROs (specify)(EQ-5D)		↑			
PROs (specify)(FABQ (Fear-Avoidance Belief Questionnaire))		↑			
PROs (specify)(PGIC (Better))		●			
PROs (specify)(PGIC (Much Better))		↑			
PROs (specify)(PGIC (No Change))		●			
PROs (specify)(PGIC (Worse))		●			
PROs (specify)(EQ-5D index)				●	

Table 41: Pico 5 Part 1: Supervised exercise program vs. Unsupervised exercise program -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N		Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chou, Ct, 2015	Moderate Quality	Adverse events/complications(Rotator Cuff retear)	3 months	G1 (Informed physiotherapy) (Pendulum exercises post surgery under supervision (Week 2-5))	14	14.29%	G2 (Uninformed physiotherapy) (Unsupervised pendulum exercise post surgery (Week 2-5))	22		45.45%	RR	0.31(0.08,1.23)	Not Significant (P-value>.05)

Table 42: Pico 5 Part 1: Supervised exercise program vs. Unsupervised exercise program -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chou, Ct, 2015	Moderate Quality	PROs (specify)(ASES)	3 months	G1 (Informed physiotherapy) (Pendulum exercises post surgery under supervision (Week 2-5))	12	73.2(.)	G2 (Uninformed physiotherapy) (Unsupervised pendulum exercise post surgery (Week 2-5))	12	62.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Chou, Ct, 2015	Moderate Quality	PROs (specify)(Constant-Murley (Pain/Function))	3 months	G1 (Informed physiotherapy) (Pendulum exercises post surgery under supervision (Week 2-5))	12	22.6(.)	G2 (Uninformed physiotherapy) (Unsupervised pendulum exercise post surgery (Week 2-5))	12	27.7(.)	Author Reported	NA	Not Significant (P-value>.05)
Chou, Ct, 2015	Moderate Quality	PROs (specify)(DASH)	3 months	G1 (Informed physiotherapy) (Pendulum exercises post surgery under supervision (Week 2-5))	12	42.4(.)	G2 (Uninformed physiotherapy) (Unsupervised pendulum exercise post surgery (Week 2-5))	12	45.5(.)	Author Reported	NA	Not Significant (P-value>.05)
Chou, Ct, 2015	Moderate Quality	PROs (specify)(UCLA)	3 months	G1 (Informed physiotherapy) (Pendulum exercises post surgery under supervision (Week 2-5))	12	24.2(.)	G2 (Uninformed physiotherapy) (Unsupervised pendulum exercise post surgery (Week 2-5))	12	17.9(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(Constant-Murley (Pain/Function))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist–supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	54	70.4(17.50)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	59	63.9(19.10)	MeanDif	6.5(-0.25,13.25)	Not Significant (P-value>.05)
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(OSS (Pain and QOL))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist–supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	51	41.2(7.10)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	53	34.2(11.30)	MeanDif	7(3.39,10.61)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(OSS (Pain and QOL))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist–supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	37.7(7.90)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	35(9.50)	MeanDif	2.7(-0.47,5.87)	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	Clinical outcomes (specify)(DASH score)	2 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	29(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	32(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	Clinical outcomes (specify)(DASH score)	2 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	22(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	30(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	Clinical outcomes (specify)(DASH score)	3 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	16(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	27(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Holmgren, T., 2012	Moderate Quality	Clinical outcomes (specify)(DASH score)	6 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	13	12(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	16	25(.)	Author Reported	NA	PT group Significant (P-value<.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(Constant-Murley (pain/function)	2 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	62(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	54(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(Constant-Murley (pain/function)	3 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	51(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	45(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(Constant-Murley (pain/function)	3 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	63(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	49(.)	Author Reported	NA	PT group Significant (P-value<.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(Constant-Murley (pain/function)	6 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	13	73(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	16	59(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 43: Pico 5 Part 1: Supervised exercise program vs. Unsupervised exercise program -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	Clinical outcomes (specify)(Positive Pain Provocation Signs Test)	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist–supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	77	29.87%	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	55	65.45%	RR	0.46(0.31,0.68)	**Treatment 1 Significant (P-value<.05)**
Christiansen, D. H., 2016	Moderate Quality	Clinical outcomes (specify)(Scapular dykinesis)	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist–supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	54	7.41%	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	52	25.00%	RR	0.30(0.10,0.85)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees); difference b/w groups)	1.4 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	22	108(35.90)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	31	95(28.41)	MeanDif	13(-5.03,31.03)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees); difference b/w groups)	3 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	24	125(37.49)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	29	119(35.72)	MeanDif	6(-13.85,25.85)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees); difference b/w groups)	5.5 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	20	142(27.38)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	20	130(29.66)	MeanDif	12(-5.69,29.69)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(External Rotation (degrees); difference b/w groups)	1.4 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	22	34(19.14)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	31	31(14.20)	MeanDif	3(-6.43,12.43)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(External Rotation (degrees); difference b/w groups)	3 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	24	42(20.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	29	41(19.23)	MeanDif	1(-9.63,11.63)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(External Rotation (degrees); difference b/w groups)	5.5 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	20	51(11.41)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	20	43(15.97)	MeanDif	8(-0.60,16.60)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Flexion (degrees))	1.4 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	22	130(28.72)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	31	111(34.09)	MeanDiff	19(2.03,35.97)	**Treatment 1 Significant (P-value<.05)**
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Flexion (degrees))	3 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	24	141(29.99)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	29	136(30.22)	MeanDiff	5(-11.28,21.28)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Flexion (degrees))	5.5 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	20	150(18.25)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	20	144(27.38)	MeanDiff	6(-8.42,20.42)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (elevation); difference b/w groups)	1.4 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	19	4.5(1.11)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	29	4.5(0.00)	MeanDif	0(-0.50,0.50)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (elevation); difference b/w groups)	3 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	23	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	27	4.5(1.33)	MeanDif	0.5(-0.00,1.00)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (elevation); difference b/w groups)	5.5 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	19	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	18	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (external rotation); difference b/w two groups)	1.4 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	19	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	29	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (external rotation); difference b/w two groups)	3 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	23	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	27	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (external rotation); difference b/w two groups)	5.5 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	19	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	18	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (Internal rotation))	1.4 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	19	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	29	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (Internal rotation))	3 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	23	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	27	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)
Hayes, K., 2004	Moderate Quality	Clinical outcomes (specify)(Muscle force (Internal rotation))	5.5 months	G1 Physiotherapy Group (Supervised physiotherapy treatment in addition the the standardized home exercise regime and cryotherapy; (24 weeks))	19	5(0.00)	G2 Home Exercise Group (Unsupervised home exercise regime and cryotherapy (24 weeks))	18	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lisinski, P., 2012	Moderate Quality	Clinical outcomes (specify)(Flexion w/ abduction)	9 months	G1 (Supervised Rehabilitation) (Supervised; postisometric relaxation technique, proprioceptive neuromuscluar facilitation method (PNF), isostonic/repeated stretches, and elastic band exercises; 40 days)	11	95.5(7.60)	G2 (Unsupervised Rehabilitation (Unsupervised;Instructed to perform simple painless exercises in front of the mirror. (flexion w/ adduction and flexion w/ abduction); 40 days)	11	81.1(10.70)	MeanDif	14.4(6.64,22.16)	**Treatment 1 Significant (P-value<.05)**
Lisinski, P., 2012	Moderate Quality	Clinical outcomes (specify)(Flexion w/ adduction)	1.3 months	G1 (Supervised Rehabilitation) (Supervised; postisometric relaxation technique, proprioceptive neuromuscluar facilitation method (PNF), isostonic/repeated stretches, and elastic band exercises; 40 days)	11	101.5(10.30)	G2 (Unsupervised Rehabilitation (Unsupervised;Instructed to perform simple painless exercises in front of the mirror. (flexion w/ adduction and flexion w/ abduction); 40 days)	11	78.4(11.00)	MeanDif	23.1(14.19,32.01)	**Treatment 1 Significant (P-value<.05)**

Table 44: Pico 5 Part 1: Supervised exercise program vs. Unsupervised exercise program -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chou, Ct, 2015	Moderate Quality	PROs (specify)(VAS)	3 months	G1 (Informed physiotherapy) (Pendulum exercises post surgery under supervision (Week 2-5))	12	25(.)	G2 (Uninformed physiotherapy) (Unsupervised pendulum exercise post surgery (Week 2-5))	12	33.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(VAS rest)	2 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	3(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	6(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(VAS rest)	3 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	5(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	3(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(VAS rest)	5 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	13(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	9(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(VAS rest)	6 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	13	5.5(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	16	5.4(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lisinski, P., 2012	Moderate Quality	PROs (specify)(VAS)	1.3 months	G1 (Supervised Rehabilitation) (Supervised; postisometric relaxation technique, proprioceptive neuromuscluar facilitation method (PNF), isostonic/repeated stretches, and elastic band exercises; 40 days)	11	3.2(1.10)	G2 (Unsupervised Rehabilitation (Unsupervised;Instructed to perform simple painless exercises in front of the mirror. (flexion w/ adduction and flexion w/ abduction); 40 days)	11	4.8(1.10)	MeanDif	-1.6(-2.52,-0.68)	**Treatment 1 Significant (P-value<.05)**

Table 45: Pico 5 Part 1: Supervised exercise program vs. Unsupervised exercise program -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	Clinical outcomes (specify)(Maximum Oxygen Uptake)	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	51	32.3(9.60)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	55	27.1(7.60)	MeanDif	5.2(1.89, 8.51)	**Treatment 1 Significant (P-value< .05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(EQ-5D)	1 year	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	51	0.83(0.14)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	53	0.71(0.24)	MeanDif	0.12(0.04,0.20)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(EQ-5D)	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	0.77(0.14)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	0.72(0.21)	MeanDif	0.05(-0.01,0.11)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(FABQ (Fear-Avoidance Belief Questionnaire))	1 year	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	51	6(5.90)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	53	10.2(7.40)	MeanDif	-4.2(-6.77,-1.63)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(FABQ (Fear-Avoidance Belief Questionnaire))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	7.8(6.50)	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	10.1(7.00)	MeanDif	-2.3(-4.76,0.16)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(PGIC (Better))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	16.36 %	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	32.79 %	RR	0.50(0.25,1.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(PGIC (Much Better))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	43.64 %	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	21.31 %	RR	2.05(1.16,3.61)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(PGIC (No Change))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	34.55 %	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	34.43 %	RR	1.00(0.61,1.66)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Christiansen, D. H., 2016	Moderate Quality	PROs (specify)(PGIC (Worse))	3 months	G1: Standardized PT Exercise (The intervention was delivered as a combination of physical therapist – supervised individual training sessions and home training for 8 weeks followed by home training for an additional 4 weeks; 60 min sessions)	55	5.45%	G2: Usual Care (advised to continue treatment as directed by the hospital (12 weeks))	61	11.48 %	RR	0.48(0.13,1.75)	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(EQ-5D index)	2 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	0.69(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	0.65(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Holmgren, T., 2012	Moderate Quality	PROs (specify)(EQ-5D index)	3 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	0.82(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	0.63(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(EQ-5D index)	4 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	15	0.71(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	18	0.61(.)	Author Reported	NA	Not Significant (P-value>.05)
Holmgren, T., 2012	Moderate Quality	PROs (specify)(EQ-5D index)	6 months	PT group (supervised PT) (arthroscopic subacromial decompression and PT-supervised rehabilitation)	13	0.84(.)	home exercise group (arthroscopic subacromial decompression and home exercises)	16	0.74(.)	Author Reported	NA	Not Significant (P-value>.05)

Quality Evaluation Table 7: non op injections-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Ã?ift, H, 2015	◑	◑	◑	●	◑	●	●	●	●	Include	Moderate Quality
Alvarez, C. M., 2005	●	●	●	●	◑	●	●	●	●	Include	High Quality
Battaglia, M., 2017	●	◑	●	●	◑	●				Include	High Quality
Bertrand, H, 2016	●	◑	●	●	◑	◑				Include	High Quality
Bhayana, H., 2018	●	◑	●	●	◑	●				Include	High Quality
Boonard, M., 2018	●	●	◑	●	◑	●				Include	High Quality
Chou, W. Y., 2010	◑	●	●	●	◑	◑				Include	High Quality
Dogu, B., 2012	◑	◑	●	●	◑	●				Include	High Quality
Ekeberg, O. M., 2009	●	◑	●	●	◑	◑				Include	High Quality
Eyigor, C., 2010	●	◑	◑	●	●	●	●	●	●	Include	High Quality
Holt, Ta, 2013	●	○	○	●	●	●	●	●	●	Include	Moderate Quality
Itzkowitch, D., 1996	◑	◑	●	●	◑	◑				Include	Moderate Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Kang, H., 2016	●	●	●	●	◑	●				Include	High Quality
Karthikeyan, S, 2010	●	●	●	●	●	●	●	●	●	Include	High Quality
Kesikburun, S, 2013	●	◑	●	●	●	●	●	●	●	Include	High Quality
Lee, D. H., 2017	●	◑	○	●	●	●	●	●	●	Include	High Quality
Lim, T. K., 2014	●	●	●	◑	◑	●				Include	High Quality
Min, K. S., 2013	◑	●	●	●	◑	●	●	●	●	Include	High Quality
Moghtaderi, A. 2013	◑	◑	●	◑	◑	●				Include	Moderate Quality
Nejati, P., 2017	●	◑	●	○	◑	○				Include	Moderate Quality
Penning, L. I. F., 2012	●	●	●	◑	◑	●				Include	High Quality
Rabini, A, 2012	●	●	◑	●	◑	◑	●	●	●	Include	High Quality
Rha, D. W., 2013	●	●	●	○	●	●	●	●	●	Include	High Quality
Seven, M. M., 2017	●	◑	●	◑	◑	●				Include	High Quality

Figure 10 Pico 6 Corticosteroids , High v low dose: Pain at 6 weeks

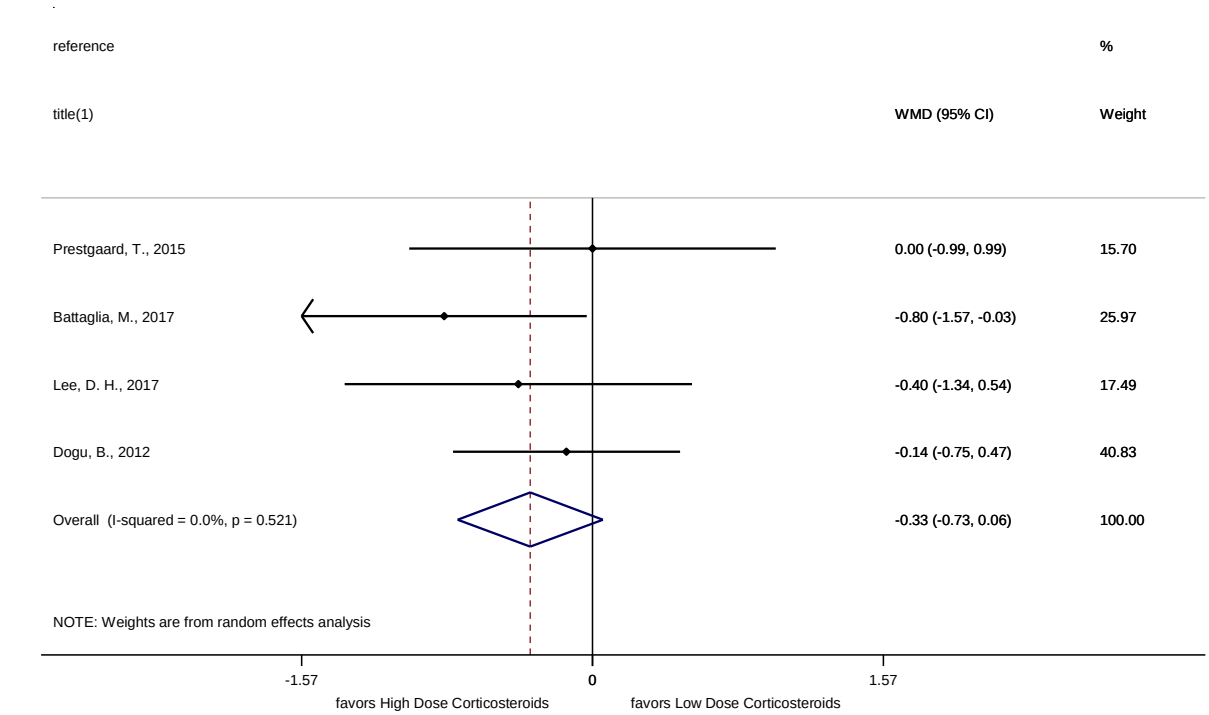


Table 46 corticosteroids vs corticosteroid comparison groups in each study

reference title(1)	steroid group1	steroid group 2
Boonard, M., 2018	high-volume corticosteroid injections (HCI) (10 mL total volume of 1% lidocaine plus 40 mg TA	low-volume corticosteroid injections (LCI) (4 mL total volume of 1% lidocaine plus 40 mg TA)
Boonard, M., 2018	high-volume corticosteroid injections (HCI) (10 mL total volume of 1% lidocaine plus 40 mg TA	received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.
Ekeberg, O. M., 2009	2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.	1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily
Ekeberg, O. M., 2009	2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.	received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.

reference title(1)	steroid group1	steroid group 2
Ekeberg, O. M., 2009	2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.	5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.
Bhayana, H., 2018	2ml of 40mg/ml Methylprednisolone acetat suspension mixed, 2ml of 1% lignocaine, and 2ml of radio opaque non-ionic contrast media iohexol	5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.
Battaglia, M., 2017	Injected with triamincinolone acetonide (TA) after US-PICT	5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.
Lee, D. H., 2017	Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks	5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.

reference title(1)	steroid group1	steroid group 2
Lee, D. H., 2017	Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks	received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.
Lee, D. H., 2017	Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks	2ml of 40mg/ml Methylprednisolone acetat suspension mixed and 2ml of 1% lignocaine.
Lee, D. H., 2017	Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks	Injected methylprednisolone acetonide (MA) with after US-PICT
Dogu, B., 2012	US-guided corticosteroid injection into subacromium	Injected methylprednisolone acetonide (MA) with after US-PICT
Dogu, B., 2012	US-guided corticosteroid injection into subacromium	Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine)
Dogu, B., 2012	US-guided corticosteroid injection into subacromium	received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.

Table 47: Summary of Findings-Pico 6 Part 1: Corticosteroid vs. Corticosteroid

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Battaglia, M., 2017	Bhayana, H., 2018	Boonard, M., 2018	Dogu, B., 2012	Ekeberg, O. M., 2009	Lee, D. H., 2017
Complications						
PROs (specify)(Change in main complaint (median)					↑	
Composite						
PROs (specify)(Constant (pain/function))	↑	●				
PROs (specify)(SPADI (Pain/Function))					●	●
Function						
Clinical outcomes (specify)(External rotation (degrees))						●
Clinical outcomes (specify)(Internal rotation (degrees))						●
Clinical outcomes (specify)(Abduction (degrees))						●
Clinical outcomes (specify)(constant ROM)				●		
Clinical outcomes (specify)(Abduction Median (degrees))					●	
Clinical outcomes (specify)(Flexion Median (Degrees))					●	
Clinical outcomes (specify)(Extension (degrees))						●
Clinical outcomes (specify)(Flexion (degrees)						●
Pain						
PROs (specify)(VAS)	●	●	●			●
PROs (specify)(VAS rest)				●		
PROs (specify)(constant general pain)				●		
PROs (specify)(VAS activity)				↑		
PROs (specify)(VAS sleep)				↑		
PROs (specify)(Pain at rest (median))					●	
PROs (specify)(Pain in activity (Median))					●	
Quality of life						
PROs (specify)(WORC)			●		●	
PROs (specify)(constant ADLs)				●		
PROs (specify)(SDQ)				●		

Table 48: Summary of Findings-Pico 6 Part 2: Corticosteroid vs. Other Injections

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality				Moderate Quality
	Alvarez, C. M., 2005	Kang, H., 2016	Lim, T. K., 2014	Penning, L. I. F., 2012	Holt, Ta, 2013
Complications					
Adverse events/complications(Adverse events/complications)		●			
Composite					
PROs (specify)(Constant)			●		
PROs (specify)(CMS)		●			
PROs (specify)(ASES)	●				
PROs (specify)(Constant-Murley (Pain/Function))				↑	
PROs (specify)(DASH)	↑				
Clinical outcomes (specify)(OSS)					●
PROs (specify)(ASES (pain/function)			●		
Function					
Clinical outcomes (specify)(External rotation (degrees))		●	●		
Clinical outcomes (specify)(Internal rotation (degrees))		●	●		
Clinical outcomes (specify)(Forward elevation (degrees))			●		
Clinical outcomes (specify)(Abduction (degrees))		●			
Clinical outcomes (specify)(Flexion (degrees))		●			
Clinical outcomes (specify)(active external rotation)	●				
Clinical outcomes (specify)(active forward elevation)	●				
Clinical outcomes (specify)(active internal rotation)	●				
Clinical outcomes (specify)(Neer impingement test)	●				
PROs (specify)(Functional Mobility Test)				↑	
Pain					
PROs (specify)(VAS)		●	●	↑	
PROs (specify)(SPS (Shoulder Pain Score))				↑	
Quality of life					
PROs (specify)(WORC(Sports domain)%)	●				
PROs (specify)(Patient satisfaction (No change, slightly worse, much worse))					●
PROs (specify)(Patient satisfaction(1st question)(No problems/much better/slightly better))					●
PROs (specify)(Patient satisfaction(2nd question)not very plased and very disappointed)					●
PROs (specify)(satisfaction- No)					●
PROs (specify)(satisfaction- Yes)					●
PROs (specify)(Patient to specific disability score)				↓	
PROs (specify)(SDQ (Shoulder Disability Questionnaire))				↑	
Post-op pain control					
Medication use (length of time)(use of Anti-inflammatory medication)					●
Medication use (length of time)(use of painkillers)					●
PROs (specify)(Patient satisfaction(2nd question) very &fairly pleased)					●

Table 49: Summary of Findings-Pico 6 Part 3: Corticosteroid vs. Non-steroidal injections

	High Quality		Moderate Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Karthikeyan, S, 2010	Min, K. S., 2013	Cift, H, 2015
Composite			
PROs (specify)(DASH (pain/QOL))			●
PROs (specify)(constant-murley shoulder score)	●		
PROs (specify)(OSS)	●		
PROs (specify)(UCLA (pain/function/QOL))		↓	
Function			
PROs (specify)(DASH)	●		
Clinical outcomes (specify)(AROM)			●
Clinical outcomes (specify)(Active Abduction (degrees))		●	
Clinical outcomes (specify)(Active Forward Flexion (degrees))		●	
Clinical outcomes (specify)(Passive Abduction (degrees))		●	
Clinical outcomes (specify)(Passive Forward Flexion (degrees))		●	
Clinical outcomes (specify)(UCLA (Forward Flexion strength))		●	
Clinical outcomes (specify)(UCLA (Forward Flexion), degrees)		●	
Clinical outcomes (specify)(UCLA (function))		●	
Pain			
PROs (specify)(VAS)		●	↑
PROs (specify)(UCLA (pain))		●	
Quality of life			
PROs (specify)(UCLA (satistfaction))		↓	

Table 50: Summary of Findings-Pico 6 Part 4: Corticosteroid vs. Physical therapy

	High Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Eyigor, C., 2010	Rabini, A, 2012
Composite		
PROs (specify)(constant-murley score)		●
PROs (specify)(QuickDASH)		●
Function		
Clinical outcomes (specify)(active external rotation)	●	
Clinical outcomes (specify)(active internal rotation)	●	
Clinical outcomes (specify)(active abduction)	↑	
Clinical outcomes (specify)(active flex)	●	
Clinical outcomes (specify)(passive abduction)	●	
Clinical outcomes (specify)(Passive external rotation)	●	
Clinical outcomes (specify)(passive flex)	↑	
Clinical outcomes (specify)(Passive Internal Rotation)	●	
Opioid consumption(paracetamol consumption (g/week))	↑	
PROs (specify)(SF-36 (physical function))	●	
PROs (specify)(SF-36 (Physical Role))	●	
Pain		
PROs (specify)(VAS)		↑
PROs (specify)(SP-36 (Bodily Pain))	●	
PROs (specify)(VAS at night)	↑	
PROs (specify)(VAS at rest)	↑	
PROs (specify)(VAS during movement)	↑	
Quality of life		
PROs (specify)(Beck's Depression Inventory (BDI))	●	
PROs (specify)(General Health)	●	
PROs (specify)(SF36: mental health)	●	
PROs (specify)(SF36: social functioning)	●	
PROs (specify)(SF36: vitality)	●	
PROs (specify)(Shoulder Disability Questionnaire (SDQ))	↑	
PROs (specify)(SP36: Emotional Role)	●	
PROs (specify)(SP36: Patient Satisfaction)	●	

Table 51: Summary of Findings-Pico 6 Part 5: Corticosteroid vs. Placebo

	High Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Penning, L. I. F., 2012**
Composite	
PROs (specify)(Constant-Murley (Pain/Function))	●
Function	
PROs (specify)(Functional Mobility Test)	●
Pain	
PROs (specify)(VAS)	●
PROs (specify)(SPS (Shoulder Pain Score))	↑
Quality of life	
PROs (specify)(Patient to specific disability score)	●

Table 52: Summary of Findings-Pico 6 Part 6: Injections (lidocaine/saline) onto entheses vs. Injections (lidocaine/saline) superficially

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Bertrand, H, 2016
Composite	
Clinical outcomes (specify)(Ultrasound Shoulder Pathology Rating)	●
Pain	
Clinical outcomes (VAS)(No. (%) w/ Clinically significant improvement)	●
PROs (specify)(NRS)	●

Table 53: Summary of Findings-Pico 6 Part 7: Hyaluronic Acid injection vs. Placebo (non-HA)

	High Quality		Moderate Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Penning, L. I. F., 2012	Chou, W. Y., 2010	Moghtaderi, A., 2015
Composite			
PROs (specify)(Constant-Murley (Pain/Function))	↓		
PROs (specify)(Constant (pain/function))		↑	↑
Function			
PROs (specify)(Functional Mobility Test)	↓		
Pain			
PROs (specify)(VAS)	↓	↑	↑
PROs (specify)(SPS (Shoulder Pain Score))	●		
Quality of life			
PROs (specify)(Patient to specific disability score)	↑		

Table 54: Summary of Findings-Pico 6 Part 8: Non-steroidal injections vs. Placebo

	Moderate Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Itzkowitch, D., 1996
Function	
Clinical outcomes (specify)(Abduction (degrees))	●
Other	
Clinical outcomes (specify)(Clinical Index)	↑
Pain	
PROs (specify)(VAS (Pain at rest))	↑
PROs (specify)(VAS (Pain on active movement))	↑
Quality of life	
Clinical outcomes (specify)(CGI (Cured))	↑
Clinical outcomes (specify)(CGI (Cured/Marked Improvement/Slight improvement))	↑

Table 55: Summary of Findings-Pico 6 Part 9: Prolotherapy vs. Injections

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Bertrand, H, 2016 High Quality
Composite	
Clinical outcomes (specify)(Ultrasound Shoulder Pathology Rating)	↑
Pain	
Clinical outcomes (VAS)(No. (%) w/ Clinically significant improvement)	↑
PROs (specify)(NRS)	●

Table 56: Summary of Findings-Pico 6 Part 10: Prolotherapy vs. Physical therapy

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Seven, M. M., 2017 High Quality
Composite	
PROs (specify)(SPADI (pain/function0)	↑
PROs (specify)(WORC (pain/QOL))	↑
Function	
Clinical outcomes (specify)(External rotation (degrees))	●
Clinical outcomes (specify)(Flexion (degrees))	↑
Clinical outcomes (specify)(Internal Rotation)	↑
PROs (specify)(Abduction (degrees))	↑
Pain	
PROs (specify)(VAS)	↑

Table 57: Summary of Findings-Pico 6 Part 11: PRP vs. Physical therapy

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Rha, D. W., 2013 High Quality	Nejati, P., 2017 Moderate Quality
Composite		
PROs (specify)(SPADI)	↑	
Clinical outcomes (specify)(DASH)		↓
Function		
Clinical outcomes (specify)(External rotation (degrees))		●
Clinical outcomes (specify)(Internal rotation (degrees))		●
Clinical outcomes (specify)(Abduction (degrees))		↓
Clinical outcomes (specify)(Flexion (degrees))		↓
Clinical outcomes (specify)(Extension (degrees))		●
Clinical outcomes (specify)(Improved Abduction)	●	
Clinical outcomes (specify)(Improved External Rotation)	↑	
Clinical outcomes (specify)(Improved Flexion)	↑	
Clinical outcomes (specify)(improved internal rotation)	↑	
Pain		
PROs (specify)(VAS)		↓
PROs (specify)(pain)	●	
Quality of life		
PROs (specify)(WORC)		↓
PROs (specify)(disability)	●	

Table 58: Summary of Findings-Pico 6 Part 12: PRP vs. Placebo

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Kesikburun, S, 2013	High Quality
Composite		
PROs (specify)(SPADI)	●	
Function		
Clinical outcomes (specify)(Internal rotation (degrees))	●	
Clinical outcomes (specify)(Abduction (degrees))	●	
Clinical outcomes (specify)(Flexion (degrees))	●	
Clinical outcomes (specify)(External Rotation (degrees_)	●	
Pain		
PROs (specify)(VAS)	●	
Quality of life		
PROs (specify)(WORC)	●	

Table 59: Pico 6 Part 1: Corticosteroid vs. Corticosteroid -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ekeberg, O. M., 2009	High Quality	PROs (specify)(Change in main complaint (median)	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	6	G2 (Systemic) (1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily)	53	2	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**

Table 60: Pico 6 Part 1: Corticosteroid vs. Corticosteroid -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Battaglia, M., 2017	High Quality	PROs (specify)(Constant (pain/function))	1.5 months	G1 (Triamicinolone acetonide) (Injected with triamincinolone acetonide (TA) after US-PICT)	22	42(10.00)	G2 (methylprednisolone acetonide) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	22	36(9)	Author Reported	.(.,.)	Not Significant (P-value>.05)
Battaglia, M., 2017	High Quality	PROs (specify)(Constant (pain/function))	6 months	G1 (Triamicinolone acetonide) (Injected with triamincinolone acetonide (TA) after US-PICT)	22	53(7.00)	G2 (methylprednisolone acetonide) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	22	44(7.00)	Author Reported	.(.,.)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bhayana, H., 2018	High Quality	PROs (specify)(Constant (pain/function))	1.4 months	G2 (Landmark Guided) (2ml of 40mg/ml Methylprednisolone acetat suspension mixed, 2ml of 1% lignocaine, and 2ml of radio opaque non-ionic contrast media iohexol)	30	73.1(7.43)	G1 (Ultrasound-Guided) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	30	78.53 (8.74)	Author Reported	.(.,.)	Not Significant (P-value>.05)
Bhayana, H., 2018	High Quality	PROs (specify)(Constant (pain/function))	3 months	G2 (Landmark Guided) (2ml of 40mg/ml Methylprednisolone acetat suspension mixed, 2ml of 1% lignocaine, and 2ml of radio opaque non-ionic contrast media iohexol)	30	73.9(7.16)	G1 (Ultrasound-Guided) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	30	78.63 (8.227)	MeanDif	-3(-11.39,5.39)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ekeberg, O. M., 2009	High Quality	PROs (specify)(SPADI (Pain/Function))	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	29(21)	G2 (Systemic) (1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily)	53	32(23)	Author Reported	.(.,.)	Not Significant (P-value>.05)
Lee, D. H., 2017	High Quality	PROs (specify)(SPADI (Pain/Function))	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	28.6(11.70)	IACI group (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	44	85.34(10.42)	MeanDif	-0.87(-5.10,3.36)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	PROs (specify)(SPADI (Pain/Function))	3 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	25.7(10.30)	IACI group (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	32	19.7 (11.5)	MeanDif	5.6(-2.80,14.00)	Not Significant (P-value>.05)

Table 61: Pico 6 Part 1: Corticosteroid vs. Corticosteroid -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Dogu, B., 2012	High Quality	Clinical outcomes (specify)(constant ROM)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	37.22(3.06)	G2 (blind injection) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	23	35.57(5.12)	MeanDif	-2.1(-14.88,10.68)	Not Significant (P-value>.05)
Ekeberg, O. M., 2009	High Quality	Clinical outcomes (specify)(Abduction Median (degrees))	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	141	G2 (Systemic) (1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily)	53	121	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ekeberg, O. M., 2009	High Quality	Clinical outcomes (specify)(Flexion Median (Degrees))	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	156	G2 (Systemic) (1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily)	53	152	Author Reported	NA	Not Significant (P-value>.05)
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	113.9(24.90)	IACI group (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	32	116 (27.2)	Author Reported	.(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1 year	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	118.1(24.30)	IACI group (Injected methylprednisolone acetonide (MA) with after US-PICT)	32	121.2(26.6)	MeanDif	6(0.38,11.62)	Not Significant (P-value>.05
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Extension (degrees))	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	43.9(10.50)	IACI group (2ml of 40mg/ml Methylprednisolone acetat suspension mixed and 2ml of 1% lignocaine.)	32	42.3 (9.6)	MeanDif	-1.53(-6.45,3.39)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Extension (degrees))	3 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	44.7(8.80)	IACI group (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	32	44.2 (9.69)	MeanDif	2.35(-0.70,5.40)	Not Significant (P-value>.05)
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	52.4(15.00)	IACI group (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	32	44.8 (12.2)	MeanDif	0(-11.60,11.60)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	3 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	53.7(15.30)	IACI group (Injected methylprednisolone acetonide (MA) with after US-PICT)	32	46.4 (10.7)	MeanDif	-0.8(-1.57,-0.03)	Not Significant (P-value>.05)
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Flexion (degrees)	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	158.2(10.70)	IACI group (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	32	154.7	Author Reported	.(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Flexion (degrees)	3 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	160.4(8.50)	IACI group (2ml of 40mg/ml Methylprednisolone acetat suspension mixed and 2ml of 1% lignocaine.)	32	156.9(10.7)	MeanDif	-2.73(-8.49,3.03)	Not Significant (P-value>.05)
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	46.3(13.30)	IACI group (2ml of 40mg/ml Methylprednisolone acetat suspension mixed and 2ml of 1% lignocaine.)	32	52.5 (16)	MeanDif	-4.73(-8.63,-0.83)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	3 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	49.5(14.60)	IACI group (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	32	55.8 (15.9)	MeanDif	-1.65(-2.46,-0.84)	Not Significant (P-value>.05)

Table 62: Pico 6 Part 1: Corticosteroid vs. Corticosteroid -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Battaglia, M., 2017	High Quality	PROs (specify)(VAS)	1.5 months	G1 (Triamicinolone acetonide) (Injected with triamincinolone acetonide (TA) after US-PICT)	22	-4.4(1.30)	G2 (methylprednisolone acetonide) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	22	-3.6 (1.3)	Author Reported	.(.,.)	Not Significant (P-value>.05)
Battaglia, M., 2017	High Quality	PROs (specify)(VAS)	6 months	G1 (Triamicinolone acetonide) (Injected with triamincinolone acetonide (TA) after US-PICT)	22	-4.9(1.10)	G2 (methylprednisolone acetonide) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	22	-3.9 (1)	Author Reported	.(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bhayana, H., 2018	High Quality	PROs (specify)(VAS)	1.4 months	G2 (Landmark Guided) (2ml of 40mg/ml Methylprednisolone acetat suspension mixed, 2ml of 1% lignocaine, and 2ml of radio opaque non-ionic contrast media iohexol)	30	20.87(8.67)	G1 (Ultrasound-Guided) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	30	22.4(10.682)	Author Reported	.(.,.)	Not Significant (P-value>.05)
Bhayana, H., 2018	High Quality	PROs (specify)(VAS)	3 months	G2 (Landmark Guided) (2ml of 40mg/ml Methylprednisolone acetat suspension mixed, 2ml of 1% lignocaine, and 2ml of radio opaque non-ionic contrast media iohexol)	30	22.97(9.41)	G1 (Ultrasound-Guided) (5 ml (10 mg/ml) lidocaine hydrochloride to the subacromial bursa and an intramuscular injection of 2 ml (10 mg/ml) triamcinolone and 2 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	30	25.7(13.044)	Author Reported	.(.,.)	Not Significant (P-value>.05)
Boonard, M., 2018	High Quality	PROs (specify)(VAS)	1.8 months	G2 (high-volume) (high-volume corticosteroid injections (HCI) (10 mL total volume of 1% lidocaine plus 40 mg TA)	26	1.2(.)	G1 (Low-volume) (low-volume corticosteroid injections (LCI) (4 mL total volume of 1% lidocaine plus 40 mg TA))	26	1.26(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Boonard, M., 2018	High Quality	PROs (specify)(VAS)	1.8 months	G2 (high-volume) (high-volume corticosteroid injections (HCI) (10 mL total volume of 1% lidocaine plus 40 mg TA)	26	81.74	G1 (Low-volume) (low-volume corticosteroid injections (LCI) (4 mL total volume of 1% lidocaine plus 40 mg TA))	26	80.12(.)	Author Reported	NA	Not Significant (P-value>.05)
Dogu, B., 2012	High Quality	PROs (specify)(constant general pain)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	10.65(3.13)	G2 (blind injection) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	23	10.22 (3.53)	MeanDif	-6.2(-13.41,1.01)	Not Significant (P-value>.05)
Dogu, B., 2012	High Quality	PROs (specify)(VAS activity)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	2.65(1.70)	G2 (blind injection) (Injected methylprednisolone acetonide (MA) with after US-PICT)	23	3.78 (2.26)	MeanDif	9(4.86,13.14)	**Treatment 1 Significant (P-value<.05)**
Dogu, B., 2012	High Quality	PROs (specify)(VAS rest)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	0.43(1.16)	G2 (blind injection) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	23	0.57 (0.95)	MeanDif	3.5(-3.05,10.05)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Dogu, B., 2012	High Quality	PROs (specify)(VAS sleep)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	1.3(1.77)	G2 (blind injection) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	23	2.35 (2.76)	MeanDif	6.3(0.00,12.60)	Not Significant (P-value>.05)
Ekeberg, O. M., 2009	High Quality	PROs (specify)(Pain at rest (median))	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	3	G2 (Systemic) (1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily)	53	5	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ekeberg, O. M., 2009	High Quality	PROs (specify)(Pain in activity (Median))	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	2	G2 (Systemic) (1 0.5mL triamcinolone + 3mL lidocaine and 1 0.5mL triamcinolone + 3mL lidocaine intra-articularily)	53	3	Author Reported	NA	Not Significant (P-value>.05)
Lee, D. H., 2017	High Quality	PROs (specify)(VAS)	1.4 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	2.1(1.70)	IACI group (Injected methylprednisolone acetonide (MA) with after US-PICT)	22	-3.9(1.00)	MeanDif	-1(-1.62,-0.38)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, D. H., 2017	High Quality	PROs (specify)(VAS)	3 months	CPHC group (Receive 1 capsule-preserving hydrodilation w/ corticosteroid injection (CPHC) w/ mixture of 1mL of 40mg/mL triamcinolone acetonide, gmL of 1% lidocaine, and normative saline at a rate of 25mL/s); followed up at 3, 6, 12 weeks)	32	1.8(1.80)	IACI group (2ml of 40mg/ml Methylprednisolone acetat suspension mixed and 2ml of 1% lignocaine.)	30	2(1.9)	MeanDif	-5.43(-9.54,-1.32)	Not Significant (P-value>.05)

Table 63: Pico 6 Part 1: Corticosteroid vs. Corticosteroid -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Boonard, M., 2018	High Quality	PROs (specify)(WORC)	1.8 months	G2 (high-volume) (high-volume corticosteroid injections (HCI) (10 mL total volume of 1% lidocaine plus 40 mg TA)	26	81.74(.)	G1 (Low-volume) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	26	80.12	MeanDif	NA	Not Significant (P-value>.05)
Boonard, M., 2018	High Quality	PROs (specify)(WORC)	1.8 months	G2 (high-volume) (high-volume corticosteroid injections (HCI) (10 mL total volume of 1% lidocaine plus 40 mg TA)	26	1.61(.)	G1 (Low-volume) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	26	1.61(.)	MeanDif	NA	Not Significant (P-value>.05)
Dogu, B., 2012	High Quality	PROs (specify)(constant ADLs)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	19.26(2.60)	G2 (blind injection) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	23	17.78 (2.56)	MeanDif	7.6(0.90,14.30)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Dogu, B., 2012	High Quality	PROs (specify)(SDQ)	1.4 months	G1 (US-guided injection) (US-guided corticosteroid injection into subacromium)	23	30.09(25.55)	G2 (blind injection) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	23	28.65 (27.46)	MeanDif	10.21(4.63,15.79)	Not Significant (P-value>.05)
Ekeberg, O. M., 2009	High Quality	PROs (specify)(WORC)	1.4 months	G1 (Local Group) (2 ml (10 mg/ml) triamcinolone (Kenacort-T, Bristol-Myers Squibb) and 5 ml (10 mg/ml) lidocaine hydrochloride (Xylocaine, AstraZeneca) to the subacromial bursa and an intramuscular injection of 4 ml (10 mg/ml) lidocaine hydrochloride to the upper gluteal region.)	53	67(21)	G2 (Systemic) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	53	60(22)	MeanDif	NA	Not Significant (P-value>.05)

Table 64: Pico 6 Part 2: Corticosteroid vs. Injections -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kang, H., 2016	High Quality	Adverse events/complications(Adverse events/complications)	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	8.33%	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	0.00%	RD	0.08(-0.02,0.19)	Not Significant (P-value>.05)

Table 65: Pico 6 Part 2: Corticosteroid vs. Injections -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	PROs (specify)(ASES)	1.4 months	*G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	58.4(20.70)	*G1 (Control) (5mL of 2% xylocaine w/o epinephrine (control))	28	55.2(22.30)	MeanDif	3.2(-7.89,14.29)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(ASES)	3 months	*G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	60.8(21.10)	*G1 (Control) (5mL of 2% xylocaine w/o epinephrine (control))	28	58.1(22.40)	MeanDif	2.7(-8.52,13.92)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(ASES)	6 months	*G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	62.3(22.90)	*G1 (Control) (5mL of 2% xylocaine w/o epinephrine (control))	28	60.4(24.20)	MeanDif	1.9(-10.25,14.05)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(DASH)	1.4 months	*G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	75.4(22.90)	*G1 (Control) (5mL of 2% xylocaine w/o epinephrine (control))	28	80.2(23.70)	MeanDif	-4.8(-16.81,7.21)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(DASH)	3 months	*G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	53.4(22.70)	*G1 (Control) (5mL of 2% xylocaine w/o epinephrine (control))	28	76.9(25.60)	MeanDif	-23.5(-35.99,-11.01)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	PROs (specify)(DASH)	6 months	*G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	81.4(25.00)	*G1 (Control) (5mL of 2% xylocaine w/o epinephrine (control))	28	74.6(28.80)	MeanDif	6.8(-7.12,20.72)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	Clinical outcomes (specify)(OSS)	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	30.6(10.80)	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	32.7(8.60)	MeanDif	-2.1(-8.19,3.99)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	Clinical outcomes (specify)(OSS)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	30.3(10.50)	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	32.7(8.60)	MeanDif	-2.4(-8.39,3.59)	Not Significant (P-value>.05)
Kang, H., 2016	High Quality	PROs (specify)(CMS)	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	86.08(8.78)	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	85.71(9.66)	MeanDif	0.37(-3.96,4.70)	Not Significant (P-value>.05)
Lim, T. K., 2014	High Quality	PROs (specify)(ASES (pain/function)	3 months	G1 (corticosteroid) (single injection with a mixture of 1mL 1% lidocaine and 1mL (40 mg) methylprednisolone acetate)	34	58.4(17.30)	G2 (Hyaluronate) (3-time, 1 week apart, 2mL injections of sodium hyaluronate at a dosage of 10 mg/mL)	34	53.8(19.40)	MeanDif	4.6(-4.14,13.34)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lim, T. K., 2014	High Quality	PROs (specify)(Constant)	3 months	G1 (corticosteroid) (single injection with a mixture of 1mL 1% lidocaine and 1mL (40 mg) methylprednisolone acetate)	34	58.7(15.20)	G2 (Hyaluronate) (3-time, 1 week apart, 2mL injections of sodium hyaluronate at a dosage of 10 mg/mL)	34	52.3(18.70)	MeanDif	6.4(-1.70,14.50)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	82.8(17.85)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	73.7(15.55)	MeanDif	9.1(2.52,15.68)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	82.2(17.49)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	74.5(16.09)	MeanDif	7.7(1.05,14.35)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	80.4(15.06)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	76(14.21)	MeanDif	4.4(-1.68,10.48)	Not Significant (P-value>.05)

Table 66: Pico 6 Part 2: Corticosteroid vs. Injections -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active external rotation)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	76.6(20.00)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	71.5(26.20)	MeanDif	5.1(-6.96,17.16)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active external rotation)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	76.6(20.00)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	71.5(26.20)	MeanDif	5.1(-6.96,17.16)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active external rotation)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	76.5(20.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	68.2(21.40)	MeanDif	8.3(-2.40,19.00)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active external rotation)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	76.5(20.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	68.2(21.40)	MeanDif	8.3(-2.40,19.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active external rotation)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	75.7(23.60)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	63.7(25.00)	MeanDif	12(-0.53,24.53)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active external rotation)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	75.7(23.60)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	63.7(25.00)	MeanDif	12(-0.53,24.53)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active forward elevation)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	137.3(29.40)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	139.7(25.30)	MeanDif	-2.4(-16.49,11.69)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active forward elevation)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	137.3(29.40)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	139.7(25.30)	MeanDif	-2.4(-16.49,11.69)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active forward elevation)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	140.6(23.50)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	141(25.10)	MeanDif	-0.4(-12.94,12.14)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active forward elevation)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	140.6(23.50)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	141(25.10)	MeanDif	-0.4(-12.94,12.14)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active forward elevation)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	139(21.80)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	143.7(27.80)	MeanDif	-4.7(-17.62,8.22)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active forward elevation)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	139(21.80)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	143.7(27.80)	MeanDif	-4.7(-17.62,8.22)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active internal rotation)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	48.6(27.20)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	43.6(26.80)	MeanDif	5(-8.90,18.90)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active internal rotation)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	48.6(27.20)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	43.6(26.80)	MeanDif	5(-8.90,18.90)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active internal rotation)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	53.4(22.70)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	45.9(24.40)	MeanDif	7.5(-4.65,19.65)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active internal rotation)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	53.4(22.70)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	45.9(24.40)	MeanDif	7.5(-4.65,19.65)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active internal rotation)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	46.4(24.00)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	49.2(27.40)	MeanDif	-2.8(-16.10,10.50)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(active internal rotation)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	46.4(24.00)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	49.2(27.40)	MeanDif	-2.8(-16.10,10.50)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(Neer impingement test)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	46.4(3.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	46.8(31.10)	MeanDif	-0.4(-11.97,11.17)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(Neer impingement test)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	46.4(3.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	46.8(31.10)	MeanDif	-0.4(-11.97,11.17)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(Neer impingement test)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	39.3(27.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	48.1(30.60)	MeanDif	-8.8(-23.72,6.12)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(Neer impingement test)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	39.3(27.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	48.1(30.60)	MeanDif	-8.8(-23.72,6.12)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(Neer impingement test)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	45.2(27.70)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	42.6(35.90)	MeanDif	2.6(-13.99,19.19)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	Clinical outcomes (specify)(Neer impingement test)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	45.2(27.70)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	42.6(35.90)	MeanDif	2.6(-13.99,19.19)	Not Significant (P-value>.05)
Kang, H., 2016	High Quality	Clinical outcomes (specify)(Abduction (degrees))	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	131.11(10.29)	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	133.35(10.18)	MeanDif	-2.24(-7.04,2.56)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kang, H., 2016	High Quality	Clinical outcomes (specify)(External rotation (degrees))	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	53.33(9.95)	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	50.65(8.94)	MeanDif	2.68(-1.75,7.11)	Not Significant (P-value>.05)
Kang, H., 2016	High Quality	Clinical outcomes (specify)(Flexion (degrees))	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	154.64(9.13)	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	154.29(8.98)	MeanDif	0.35(-3.89,4.59)	Not Significant (P-value>.05)
Kang, H., 2016	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	61.36(4.52)	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	60.24(2.91)	MeanDif	1.12(-0.65,2.89)	Not Significant (P-value>.05)
Lim, T. K., 2014	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	3 months	G1 (corticosteroid) (single injection with a mixture of 1mL 1% lidocaine and 1mL (40 mg) methylprednisolone acetate)	34	22.4(14.60)	G2 (Hyaluronate) (3-time, 1 week apart, 2mL injections of sodium hyaluronate at a dosage of 10 mg/mL)	34	26.6(16.10)	MeanDif	-4.2(-11.51,3.11)	Not Significant (P-value>.05)
Lim, T. K., 2014	High Quality	Clinical outcomes (specify)(Forward elevation (degrees))	3 months	G1 (corticosteroid) (single injection with a mixture of 1mL 1% lidocaine and 1mL (40 mg) methylprednisolone acetate)	34	122.4(18.20)	G2 (Hyaluronate) (3-time, 1 week apart, 2mL injections of sodium hyaluronate at a dosage of 10 mg/mL)	34	119(17.60)	MeanDif	3.4(-5.11,11.91)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lim, T. K., 2014	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	3 months	G1 (corticosteroid) (single injection with a mixture of 1mL 1% lidocaine and 1mL (40 mg) methylprednisolone acetate)	34	12.4(4.20)	G2 (Hyaluronate) (3-time, 1 week apart, 2mL injections of sodium hyaluronate at a dosage of 10 mg/mL)	34	13.6(3.30)	MeanDif	-1.2(-3.00,0.60)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	9.8(5.10)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	11.9(4.60)	MeanDif	-2.1(-4.01,-0.19)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	9.3(5.10)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	11.7(4.55)	MeanDif	-2.4(-4.31,-0.49)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	10.1(4.11)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	11.6(4.06)	MeanDif	-1.5(-3.20,0.20)	Not Significant (P-value>.05)

Table 67: Pico 6 Part 2: Corticosteroid vs. Injections -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kang, H., 2016	High Quality	PROs (specify)(VAS)	4 weeks	G1 (Corticosteroid) (Subacromial corticosteroid (triamcinolone) injection)	36	2.28(0.85)	G2 (Injection) (Subacromial injection of sodium bicarbonate)	34	2.44(0.82)	MeanDif	-0.16(-0.55,0.23)	Not Significant (P-value>.05)
Lim, T. K., 2014	High Quality	PROs (specify)(VAS)	3 months	G1 (corticosteroid) (single injection with a mixture of 1mL 1% lidocaine and 1mL (40 mg) methylprednisolone acetate)	34	3.6(2.00)	G2 (Hyaluronate) (3-time, 1 week apart, 2mL injections of sodium hyaluronate at a dosage of 10 mg/mL)	34	3.9(2.40)	MeanDif	-0.3(-1.35,0.75)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	14.5(6.19)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	18.7(5.30)	MeanDif	-4.2(-6.47,-1.93)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	14.9(6.56)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	18.9(5.95)	MeanDif	-4(-6.48,-1.52)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	15.2(5.82)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	18.1(5.75)	MeanDif	-2.9(-5.30,-0.50)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.2(3.28)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	5.4(2.47)	MeanDif	-2.2(-3.34,-1.06)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.1(3.28)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	5.4(2.80)	MeanDif	-2.3(-3.50,-1.10)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	3.7(3.42)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	4.3(3.05)	MeanDif	-0.6(-1.95,0.75)	Not Significant (P-value>.05)

Table 68: Pico 6 Part 2: Corticosteroid vs. Injections -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Holt, Ta, 2013	Moderate Quality	Medication use (length of time)(use of Anti-inflammatory medication)	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	31.58%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	47.62%	RR	0.66(0.30,1.48)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	Medication use (length of time)(use of Anti-inflammatory medication)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	21.05%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	33.33%	RR	0.63(0.22,1.82)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	Medication use (length of time)(use of painkillers)	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	36.84%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	52.38%	RR	0.70(0.34,1.44)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	Medication use (length of time)(use of painkillers)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	36.84%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	52.38%	RR	0.70(0.34,1.44)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction(2nd question) very &fairly pleased)	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	47.37%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	42.86%	RR	1.11(0.56,2.19)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction(2nd question) very &fairly pleased)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	42.11%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	33.33%	RR	1.26(0.57,2.82)	Not Significant (P-value>.05)

Table 69: Pico 6 Part 2: Corticosteroid vs. Injections -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	PROs (specify)(WORC(Sports domain)%)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	43.2(30.20)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	41.3(25.00)	MeanDif	1.9(-12.33,16.13)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(WORC(Sports domain)%)	1.4 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	43.2(30.20)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	41.3(25.00)	MeanDif	1.9(-12.33,16.13)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(WORC(Sports domain)%)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	46(24.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	38.3(26.60)	MeanDif	7.7(-5.39,20.79)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(WORC(Sports domain)%)	3 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	46(24.10)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	38.3(26.60)	MeanDif	7.7(-5.39,20.79)	Not Significant (P-value>.05)
Alvarez, C. M., 2005	High Quality	PROs (specify)(WORC(Sports domain)%)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	52.8(27.80)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	49.8(32.50)	MeanDif	3(-12.62,18.62)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Alvarez, C. M., 2005	High Quality	PROs (specify)(WORC(Sports domain)%)	6 months	G1 (betamethasone) (4mL of 2% xylocaine w/o epinephrine combined with 1mL (6 mg) betamethasone)	30	52.8(27.80)	G2 (control) (5mL of 2% xylocaine w/o epinephrine (control))	28	49.8(32.50)	MeanDif	3(-12.62,18.62)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction (No change, slightly worse, much worse))	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	52.63%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	33.33%	RR	1.58(0.75,3.31)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction (No change, slightly worse, much worse))	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	47.37%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	47.62%	RR	0.99(0.52,1.91)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction(1st question)(No problems/much better/slightly better))	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	47.37%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	57.14%	RR	0.83(0.45,1.51)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction(1st question)(No problems/much better/slightly better))	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	52.63%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	47.62%	RR	1.11(0.60,2.05)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction(2nd question)not very plased and very disappointed)	3 months	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	52.63%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	47.62%	RR	1.11(0.60,2.05)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(Patient satisfaction(2nd question)not very plased and very disappointed)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	47.37%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	61.90%	RR	0.77(0.43,1.37)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Holt, Ta, 2013	Moderate Quality	PROs (specify)(satisfaction-No)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	10.53%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	19.05%	RR	0.55(0.11,2.68)	Not Significant (P-value>.05)
Holt, Ta, 2013	Moderate Quality	PROs (specify)(satisfaction-Yes)	4 weeks	G1 (Methylprednisolone+lidocaine) (methylprednisolone acetate 40 mg with lidocaine 1% in 1 ml)	19	73.68%	G2 (lidocaine) (lidocaine 1% in 1 ml alone)	21	52.38%	RR	1.41(0.86,2.29)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.3(2.91)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	4.9(1.31)	MeanDiff	-1.6(-2.48,-0.72)	**Treatment 2 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.4(3.28)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	5(2.80)	MeanDiff	-1.6(-2.80,-0.40)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	3.8(3.08)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	4.6(3.05)	MeanDiff	-0.8(-2.07,0.47)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(SDQ (Shoulder Disability Questionnaire))	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	51.5(31.70)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	65.3(27.92)	MeanDiff	-13.8(-25.55,-2.05)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(SDQ (Shoulder Disability Questionnaire))	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	45.6(34.61)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	64.1(31.48)	MeanDiff	-18.5(-31.59,-5.41)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(SDQ (Shoulder Disability Questionnaire))	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	50.9(31.15)	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	62.7(29.78)	MeanDif	-11.8(-24.46,0.86)	Not Significant (P-value>.05)

Table 70: Pico 6 Part 3: Corticosteroid vs. Non-steroidal injections -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cift, H, 2015	Moderate Quality	PROs (specify)(DASH (pain/QOL))	1 years	G2 (Corticosteroid) (administered 40 mg methylprednisolone acetate just for once)	20	38.6(14.30)	G1 (tenoxicam) (e administered 20 mg tenoxicam three times by weekly intervals; given home-based exercise program (gravity assisted distraction and oscillatory pendulum))	20	44.7(7.00)	MeanDif	-6.1(-13.08,0.88)	Not Significant (P-value>.05)
Karthikeyan, S, 2010	High Quality	PROs (specify)(constant-murley shoulder score)	1.4 months	G1 (methylprednisolone) (1 injection 40mg methylprednisolone mixed w/ 5mL 1% lignocaine)	26	73.5(.)	G1 (tenoxicam) (1 injection 20mg tenoxicam mixed w/ 5mL 1% lignocaine)	30	54(.)	Author Reported	NA	Not Significant (P-value>.05)
Karthikeyan, S, 2010	High Quality	PROs (specify)(OSS)	1.4 months	G1 (methylprednisolone) (1 injection 40mg methylprednisolone mixed w/ 5mL 1% lignocaine)	27	6(23.33)	G1 (tenoxicam) (1 injection 20mg tenoxicam mixed w/ 5mL 1% lignocaine)	31	2(12.78)	MeanDif	4(-5.88,13.88)	Not Significant (P-value>.05)
Karthikeyan, S, 2010	High Quality	PROs (specify)(OSS)	4 weeks	G1 (methylprednisolone) (1 injection 40mg methylprednisolone mixed w/ 5mL 1% lignocaine)	27	11(12.73)	G1 (tenoxicam) (1 injection 20mg tenoxicam mixed w/ 5mL 1% lignocaine)	31	4.5(16.48)	MeanDif	6.5(-1.03,14.03)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Min, K. S., 2013	High Quality	PROs (specify)(UCLA (pain/function/QOL))	4 months	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	2.13(6.14)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	7.15(6.10)	MeanDif	-5.02(-9.27,-0.77)	**Treatment 2 Significant (P-value<.05)**

Table 71: Pico 6 Part 3: Corticosteroid vs. Non-steroidal injections -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cift, H, 2015	Moderate Quality	Clinical outcomes (specify)(AROM)	1 years	G2 (Corticosteroid) (administered 40 mg methylprednisolone acetate just for once)	20	68.7(51.40)	G1 (tenoxicam) (e administered 20 mg tenoxicam three times by weekly intervals; given home-based exercise program (gravity assisted distraction and oscillatory pendulum))	20	66.6(12.40)	MeanDif	2.1(-21.07,25.27)	Not Significant (P-value>.05)
Karthikeyan, S, 2010	High Quality	PROs (specify)(DASH)	1.4 months	G1 (methylprednisolone) (1 injection 40mg methylprednisolone mixed w/ 5mL 1% lignocaine)	26	13.3(34.86)	G1 (tenoxicam) (1 injection 20mg tenoxicam mixed w/ 5mL 1% lignocaine)	30	2.9(25.71)	MeanDif	10.4(-5.85,26.65)	Not Significant (P-value>.05)
Karthikeyan, S, 2010	High Quality	PROs (specify)(DASH)	4 weeks	G1 (methylprednisolone) (1 injection 40mg methylprednisolone mixed w/ 5mL 1% lignocaine)	26	16.7(31.48)	G1 (tenoxicam) (1 injection 20mg tenoxicam mixed w/ 5mL 1% lignocaine)	30	6.7(23.19)	MeanDif	10(-4.67,24.67)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(Active Abduction (degrees))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	124(36.65)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	139.41(34.00)	MeanDif	-15.41(-40.01,9.19)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(Active Forward Flexion (degrees))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	122.67(39.09)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	154.71(25.66)	MeanDif	-32.04(-55.28,-8.80)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(Passive Abduction (degrees))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	134(34.65)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	150.88(24.38)	MeanDif	-16.88(-37.90,4.14)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(Passive Forward Flexion (degrees))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	147.33(21.29)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	160.59(21.06)	MeanDif	-13.26(-27.97,1.45)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(UCLA (Forward Flexion strength))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	-0.07(0.26)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	0.26(0.53)	MeanDif	-0.33(-0.61,-0.05)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(UCLA (Forward Flexion), degrees)	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	0.2(1.21)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	0.94(1.30)	MeanDif	-0.74(-1.61,0.13)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	Clinical outcomes (specify)(UCLA (function))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	-0.4(2.64)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	0.94(1.89)	MeanDif	-1.34(-2.95,0.27)	Not Significant (P-value>.05)

Table 72: Pico 6 Part 3: Corticosteroid vs. Non-steroidal injections -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Cift, H, 2015	Moderate Quality	PROs (specify)(VAS)	1 years	G2 (Corticosteroid) (administered 40 mg methylprednisolone acetate just for once)	20	2.6(1.80)	G1 (tenoxicam) (e administered 20 mg tenoxicam three times by weekly intervals; given home-based exercise program (gravity assisted distraction and oscillatory pendulum))	20	5.2(0.60)	MeanDif	-2.6(-3.43,-1.77)	**Treatment 1 Significant (P-value<.05)**
Min, K. S., 2013	High Quality	PROs (specify)(UCLA (pain))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	1.4(2.44)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	2.06(2.19)	MeanDif	-0.66(-2.28,0.96)	Not Significant (P-value>.05)
Min, K. S., 2013	High Quality	PROs (specify)(VAS)	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	0.9(1.86)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	1.83(2.25)	MeanDif	-0.93(-2.35,0.49)	Not Significant (P-value>.05)

Table 73: Pico 6 Part 3: Corticosteroid vs. Non-steroidal injections -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Min, K. S., 2013	High Quality	PROs (specify)(UCLA (satistfaction))	4 weeks	G2 (coricosteroid) (6 cc of 1% lidocaine w/ epinephrine and 40mg triamcinolone (control)/steroid))	15	1(2.07)	G1 (NSAID) (6 cc of 1% lidocaine w/ epinephrine and 60mg ketorolac (NSAID))	17	2.94(2.54)	MeanDif	-1.94(-3.54,-0.34)	**Treatment 2 Significant (P-value<.05)**

Table 74: Pico 6 Part 4: Corticosteroid vs. Physical therapy -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rabini, A, 2012	High Quality	PROs (specify)(constant-murley score)	3 months	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	83.2(9.90)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	86.6(12.70)	MeanDif	-3.4(-121.17,114.37)	Not Significant (P-value>.05)
Rabini, A, 2012	High Quality	PROs (specify)(constant-murley score)	4 weeks	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	82.4(17.70)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	90.1(15.00)	MeanDif	-7.7(-127.68,112.28)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rabini, A, 2012	High Quality	PROs (specify)(constant-murley score)	5.5 months	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	89.9(12.60)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	88.1(20.00)	MeanDif	1.8(-111.06,114.66)	Not Significant (P-value>.05)
Rabini, A, 2012	High Quality	PROs (specify)(QuickDASH)	3 months	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	24.8(11.20)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	30.9(18.80)	MeanDif	-6.1(-44.70,32.50)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rabini, A, 2012	High Quality	PROs (specify)(QuickDASH)	4 weeks	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	29.1(13.20)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	25.2(16.80)	MeanDif	3.9(-20.05,27.85)	Not Significant (P-value>.05)
Rabini, A, 2012	High Quality	PROs (specify)(QuickDASH)	5.5 months	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	30(15.10)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	32(24.60)	MeanDif	-2(-35.90,31.90)	Not Significant (P-value>.05)

Table 75: Pico 6 Part 4: Corticosteroid vs. Physical therapy -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active abduction)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	170(13.30)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	159.3(11.80)	MeanDif	10.7(2.91,18.49)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active abduction)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	170(13.30)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	159.3(11.80)	MeanDif	10.7(2.91,18.49)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active abduction)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	163.7(16.10)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	149.8(14.60)	MeanDif	13.9(4.37,23.43)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active abduction)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	163.7(16.10)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	149.8(14.60)	MeanDif	13.9(4.37,23.43)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Active External Rotation)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	69.9(8.90)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	70.3(8.70)	MeanDif	-0.4(-5.85,5.05)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Active External Rotation)	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	68.3(10.80)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	64.5(9.90)	MeanDif	3.8(-2.62,10.22)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active flex)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	170.5(9.10)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	165.3(8.80)	MeanDif	5.2(-0.35,10.75)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active flex)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	170.5(9.10)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	165.3(8.80)	MeanDif	5.2(-0.35,10.75)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active flex)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	162.7(14.70)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	160(11.90)	MeanDif	2.7(-5.59,10.99)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(active flex)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	162.7(14.70)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	160(11.90)	MeanDif	2.7(-5.59,10.99)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Active Internal Rotation)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	68.6(7.90)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	68.4(11.80)	MeanDif	0.2(-6.02,6.42)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Active Internal Rotation)	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	66.7(14.20)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	63(11.30)	MeanDif	3.7(-4.25,11.65)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive abduction)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	177.5(7.00)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	177.3(6.00)	MeanDif	0.2(-3.84,4.24)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive abduction)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	177.5(7.00)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	177.3(6.00)	MeanDif	0.2(-3.84,4.24)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive abduction)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	174.1(12.30)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	172.8(9.20)	MeanDif	1.3(-5.43,8.03)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive abduction)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	174.1(12.30)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	172.8(9.20)	MeanDif	1.3(-5.43,8.03)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Passive external rotation)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	79.8(5.60)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	77.3(5.20)	MeanDif	2.5(-0.85,5.85)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Passive external rotation)	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	77(8.40)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	74.3(6.40)	MeanDif	2.7(-1.93,7.33)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive flex)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	178.5(3.90)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	173.3(3.40)	MeanDif	5.2(2.93,7.47)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive flex)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	178.5(3.90)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	173.3(3.40)	MeanDif	5.2(2.93,7.47)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive flex)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	174.7(9.10)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	171.8(4.30)	MeanDif	2.9(-1.51,7.31)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(passive flex)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	174.7(9.10)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	171.8(4.30)	MeanDif	2.9(-1.51,7.31)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Passive Internal Rotation)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	77.8(4.60)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	77(4.40)	MeanDif	0.8(-1.99,3.59)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	Clinical outcomes (specify)(Passive Internal Rotation)	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	76.7(8.40)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	72.8(6.00)	MeanDif	3.9(-0.62,8.42)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	Opioid consumption(paracetamol consumption (g/week))	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	2(2.38)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	4.35(3.26)	MeanDif	-2.35(-4.12,-0.58)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(SF-36 (physical function))	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	68.5(17.50)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	74.4(16.90)	MeanDif	-5.9(-16.56,4.76)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(SF-36 (Physical Role))	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	51.2(36.70)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	63.8(15.10)	MeanDif	-12.6(-29.99,4.79)	Not Significant (P-value>.05)

Table 76: Pico 6 Part 4: Corticosteroid vs. Physical therapy -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(SP-36 (Bodily Pain))	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	68.6(16.60)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	61.3(18.00)	MeanDif	7.3(-3.43,18.03)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at night)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.2(0.90)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2(0.90)	MeanDif	-0.8(-1.36,-0.24)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at night)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.2(0.90)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2(0.90)	MeanDif	-0.8(-1.36,-0.24)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at night)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.7(1.20)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.7(1.60)	MeanDif	-1(-1.88,-0.12)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at night)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.7(1.20)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.7(1.60)	MeanDif	-1(-1.88,-0.12)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at rest)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	0.2(0.40)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	1(0.70)	MeanDif	-0.8(-1.15,-0.45)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at rest)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	0.2(0.40)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	1(0.70)	MeanDif	-0.8(-1.15,-0.45)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at rest)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	0.6(0.40)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	1.8(1.50)	MeanDif	-1.2(-1.88,-0.52)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS at rest)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	0.6(0.40)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	1.8(1.50)	MeanDif	-1.2(-1.88,-0.52)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS during movement)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.2(0.70)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.1(1.30)	MeanDif	-0.9(-1.55,-0.25)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(VAS during movement)	3 months	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.2(0.70)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.1(1.30)	MeanDif	-0.9(-1.55,-0.25)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(VAS during movement)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.9(1.20)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.6(1.60)	MeanDif	-0.7(-1.58,0.18)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(VAS during movement)	4 weeks	G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	1.9(1.20)	G2 (TENS) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.6(1.60)	MeanDif	-0.7(-1.58,0.18)	Not Significant (P-value>.05)
Rabini, A, 2012	High Quality	PROs (specify)(VAS)	3 months	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	28.9(14.30)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	38.4(22.90)	MeanDif	-9.5(-58.95,39.95)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rabini, A, 2012	High Quality	PROs (specify)(VAS)	4 weeks	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	29.6(10.30)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	35.1(24.30)	MeanDif	-5.5(-47.37,36.37)	Not Significant (P-value>.05)
Rabini, A, 2012	High Quality	PROs (specify)(VAS)	5.5 months	G1 (corticosteroid) (underwent 3 local injections (1 injection every 2 weeks) of 1 mL 40 mg methylprednisolone acetate containing 10 mg lidocaine chlorhydrate)	46	29(17.30)	G2 (hyperthermia) (induced by local microwave diathermy; equipped with a 434-MHz microwave generator which heats superficial tissues around affected area; total 12 treatment sessions lasting 30 min (3 sessions/week))	46	37.6(30.00)	MeanDif	-8.6(-52.86,35.66)	Not Significant (P-value>.05)

Table 77: Pico 6 Part 4: Corticosteroid vs. Physical therapy -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(Beck's Depression Inventory (BDI))	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	4(3.80)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	4.3(2.90)	MeanDif	-0.3(-2.40,1.80)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(General Health)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	50(19.20)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	58.6(17.10)	MeanDif	-8.6(-19.87,2.67)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(SF36: mental health)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	56.1(13.90)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	55.1(16.30)	MeanDif	1(-8.39,10.39)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(SF36: social functioning)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	68.1(25.80)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	73.3(14.00)	MeanDif	-5.2(-18.06,7.66)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(SF36: vitality)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	51.5(12.10)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	54.3(12.60)	MeanDif	-2.8(-10.46,4.86)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(Shoulder Disability Questionnaire (SDQ))	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	13.7(11.50)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	28.5(13.20)	MeanDif	-14.8(-22.47,-7.13)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(Shoulder Disability Questionnaire (SDQ))	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	22.1(15.90)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	42.5(14.70)	MeanDif	-20.4(-29.89,-10.91)	**Treatment 1 Significant (P-value<.05)**
Eyigor, C., 2010	High Quality	PROs (specify)(SP36: Emotional Role)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	58.2(21.20)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	53.8(18.50)	MeanDif	4.4(-7.93,16.73)	Not Significant (P-value>.05)
Eyigor, C., 2010	High Quality	PROs (specify)(SP36: Patient Satisfaction)	3 months	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	3.2(.)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.75(.)	RR	1.00(0.24,4.14)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Eyigor, C., 2010	High Quality	PROs (specify)(SP36: Patient Satisfaction)	4 weeks	*G1 (corticosteroid) (1 injection of 0.5cc triamcinolone, 3.5cc bupivacaine, and 3cc serum into glenohumeral joint, subacromial space, and acromioclavicular joint)	20	2.9(.)	*G2 (TENs) (30 minutes for 5 times per week for 15 sessions with a mean frequency of 100 Hz)	20	2.6(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 78: Pico 6 Part 5: Corticosteroid vs. Placebo -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	82.8(17.85)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	77.8(16.12)	MeanDif	5(-1.52,11.52)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	82.2(17.49)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	78.2(15.97)	MeanDif	4(-2.44,10.44)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	80.4(15.06)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	82.3(14.85)	MeanDif	-1.9(-7.98,4.18)	Not Significant (P-value>.05)

Table 79: Pico 6 Part 5: Corticosteroid vs. Placebo -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	9.8(5.10)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	10.6(4.50)	MeanDif	-0.8(-2.64,1.04)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	9.3(5.10)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	9.9(4.46)	MeanDif	-0.6(-2.44,1.24)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	10.1(4.11)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	9.3(4.24)	MeanDif	0.8(-0.90,2.50)	Not Significant (P-value>.05)

Table 80: Pico 6 Part 5: Corticosteroid vs. Placebo -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	14.5(6.19)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	17.1(5.62)	MeanDif	-2.6(-4.87,-0.33)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	14.9(6.56)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	16.6(5.94)	MeanDif	-1.7(-4.11,0.71)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	15.2(5.82)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	16.4(6.01)	MeanDif	-1.2(-3.60,1.20)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.2(3.28)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	4.4(3.00)	MeanDif	-1.2(-2.40,0.00)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.1(3.28)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	3.7(2.97)	MeanDif	-0.6(-1.80,0.60)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	3.7(3.42)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	3.6(3.18)	MeanDif	0.1(-1.24,1.44)	Not Significant (P-value>.05)

Table 81: Pico 6 Part 5: Corticosteroid vs. Placebo -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	1.4 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.3(2.91)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	4.1(2.62)	MeanDif	-0.8(-1.86,0.26)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	3 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	51	3.4(3.28)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	4.2(2.97)	MeanDif	-0.8(-2.00,0.40)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	6 months	G2 (Corticosteriod) (Subacromial injections (8 mL lidocaine 1% and 2 mL triamcinolone acetonide 10mg/ml); repeated if necessary after 3 and 6 weeks)	45	3.8(3.08)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	4.3(3.18)	MeanDif	-0.5(-1.77,0.77)	Not Significant (P-value>.05)

Table 82: Pico 6 Part 6: Injections (lidocaine/saline) onto entheses vs. Injections (lidocaine/saline) superficially-(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	Clinical outcomes (specify)(Ultrasound Shoulder Pathology Rating)	9 months	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	-0.6(0.50)	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	-0.6(0.40)	MeanDif	0(-0.27,0.27)	Not Significant (P-value>.05)

Table 83: Pico 6 Part 6: Injections vs. Injections -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	Clinical outcomes (VAS)(No. (%) w/ Clinically significant improvement)	9 months	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	36.84%	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	26.92%	RR	1.37(0.58,3.25)	Not Significant (P-value>.05)
Bertrand, H, 2016	High Quality	PROs (specify)(NRS)	3 months	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	2.7(0.70)	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	2.7(0.60)	MeanDif	0(-0.39,0.39)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	PROs (specify)(NRS)	9 months	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	1.8(0.70)	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	1.3(0.60)	MeanDif	0.5(0.11,0.89)	Not Significant (P-value>.05)

Table 84: Pico 6 Part 7: HA Injections vs. Placebo -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chou, W. Y., 2010	High Quality	PROs (specify)(Constant (pain/function))	1.4 months	G1 ARTZ Dispo (Hyaluronate) (25 mg/wk of sodium hyaluronate into the subacromial bursa for 5 consecutive weeks)	25	79.24(13.09)	G2 (Placebo) (2.5 mL of normal saline solution with the same injection protocol as grp 1 (placebo))	26	69.07(13.29)	MeanDif	10.17(2.93,17.41)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	1.4 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	73.7(15.55)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	77.8(16.12)	MeanDif	-4.1(-10.25,2.05)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	3 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	74.5(16.09)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	78.2(15.97)	MeanDif	-3.7(-10.00,2.60)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Constant-Murley (Pain/Function))	6 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	76(14.21)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	82.3(14.85)	MeanDif	-6.3(-12.24,-0.36)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Moghtaderi, A., 2015	Moderate	PROs (specify) Constant score	12 weeks	G1 (Sodium Hyaluronate Injection)	20	70.4 (16.9)	G2 (Placebo)	20	50.7 (13.2			**Treatment 1 Significant** (P-value<.05)

Table 85: Pico 6 Part 7: Injections vs. Placebo -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	1.4 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	11.9(4.60)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	10.6(4.50)	MeanDif	1.3(-0.47,3.07)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	3 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	11.7(4.55)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	9.9(4.46)	MeanDif	1.8(0.03,3.57)	**Treatment 2 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(Functional Mobility Test)	6 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	11.6(4.06)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	9.3(4.24)	MeanDif	2.3(0.60,4.00)	**Treatment 2 Significant (P-value<.05)**

Table 86: Pico 6 Part 7: Injections vs. Placebo -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Chou, W. Y., 2010	High Quality	PROs (specify)(VAS)	1.4 months	G1 ARTZ Dispo (Hyaluronate) (25 mg/wk of sodium hyaluronate into the subacromial bursa for 5 consecutive weeks)	25	3.04(2.03)	G2 (Placebo) (2.5 mL of normal saline solution with the same injection protocol as grp 1 (placebo))	26	5.12(2.42)	MeanDif	-2.08(-3.30,-0.86)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	1.4 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	18.7(5.30)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	17.1(5.62)	MeanDif	1.6(-0.52,3.72)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	3 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	18.9(5.95)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	16.6(5.94)	MeanDif	2.3(-0.03,4.63)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(SPS (Shoulder Pain Score))	6 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	18.1(5.75)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	16.4(6.01)	MeanDif	1.7(-0.70,4.10)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	1.4 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	5.4(2.47)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	4.4(3.00)	MeanDif	1(-0.06,2.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	3 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	5.4(2.80)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	3.7(2.97)	MeanDif	1.7(0.57,2.83)	**Treatment 2 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(VAS)	6 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	4.3(3.05)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	3.6(3.18)	MeanDif	0.7(-0.57,1.97)	Not Significant (P-value>.05)

Table 87: Pico 6 Part 7: Injections vs. Placebo -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	1.4 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	48	4.9(1.31)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	54	4.1(2.62)	MeanDif	0.8(0.01,1.59)	**Treatment 1 Significant (P-value<.05)**
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	3 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	47	5(2.80)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	53	4.2(2.97)	MeanDif	0.8(-0.33,1.93)	Not Significant (P-value>.05)
Penning, L. I. F., 2012	High Quality	PROs (specify)(Patient to specific disability score)	6 months	G1 (Hyaluronic acid) (Subacromial injections (8 mL lidocaine 1% and 2 mL HA); repeated if necessary after 3 and 6 weeks)	44	4.6(3.05)	G3 (Placebo) (Subacromial injections (8 mL lidocaine 1% with 2 mL NaCL 0/9); repeated if necessary after 3 and 6 weeks)	48	4.3(3.18)	MeanDif	0.3(-0.97,1.57)	Not Significant (P-value>.05)

Table 88: Pico 6 Part 8: Non-steroidal injections vs. Placebo -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Itzkowitch, D., 1996	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees))	6 months	G1 (tenoxicam) (1-4 weeks with 1 weekly periarticular anterior injection of tenoxicam 20 mg)	38	141.8(35.40)	G2 (Placebo) (1-4 weeks with 1 weekly periarticular anterior injection of placebo)	39	129(40.10)	MeanDif	12.8(-4.08,29.68)	Not Significant (P-value>.05)

Table 89: Pico 6 Part 8: Non-steroidal injections vs. Placebo -(Other)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Itzkowitch, D., 1996	Moderate Quality	Clinical outcomes (specify)(Clinical Index)	4 weeks	G1 (tenoxicam) (1-4 weeks with 1 weekly periarticular anterior injection of tenoxicam 20 mg)	38	6.23(6.23)	G2 (Placebo) (1-4 weeks with 1 weekly periarticular anterior injection of placebo)	39	11(6.49)	MeanDif	-4.77(-7.61,-1.93)	**Treatment 1 Significant (P-value<.05)**

Table 90: Pico 6 Part 8: Non-steroidal injections vs. Placebo -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Itzkowitch, D., 1996	Moderate Quality	PROs (specify)(VAS (Pain at rest))	2.3 years	G1 (tenoxicam) (1-4 weeks with 1 weekly periarticular anterior injection of tenoxicam 20 mg)	38	1.73(2.41)	G2 (Placebo) (1-4 weeks with 1 weekly periarticular anterior injection of placebo)	39	3.18(2.73)	MeanDif	-1.45(-2.60,-0.30)	**Treatment 1 Significant (P-value<.05)**
Itzkowitch, D., 1996	Moderate Quality	PROs (specify)(VAS (Pain on active movement))	4 weeks	G1 (tenoxicam) (1-4 weeks with 1 weekly periarticular anterior injection of tenoxicam 20 mg)	38	2.38(2.65)	G2 (Placebo) (1-4 weeks with 1 weekly periarticular anterior injection of placebo)	39	4.99(2.95)	MeanDif	-2.61(-3.86,-1.36)	**Treatment 1 Significant (P-value<.05)**

Table 91: Pico 6 Part 8: Non-steroidal injections vs. Placebo -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Itzkowitch, D., 1996	Moderate Quality	Clinical outcomes (specify)(CGI (Cured))	4 weeks	G1 (tenoxicam) (1-4 weeks with 1 weekly periarticular anterior injection of tenoxicam 20 mg)	38	36.84%	G2 (Placebo) (1-4 weeks with 1 weekly periarticular anterior injection of placebo)	39	10.26%	RR	3.59(1.30,9.94)	**Treatment 1 Significant (P-value<.05)**
Itzkowitch, D., 1996	Moderate Quality	Clinical outcomes (specify)(CGI (Cured/Marked Improvement/Slight improvement))	4 weeks	G1 (tenoxicam) (1-4 weeks with 1 weekly periarticular anterior injection of tenoxicam 20 mg)	38	84.21%	G2 (Placebo) (1-4 weeks with 1 weekly periarticular anterior injection of placebo)	39	48.72%	RR	1.73(1.22,2.45)	**Treatment 1 Significant (P-value<.05)**

Table 92: Pico 6 Part 9: Prolotherapy vs. Injections -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	Clinical outcomes (specify)(Ultrasound Shoulder Pathology Rating)	9 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	-0.3(0.50)	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	-0.6(0.50)	MeanDif	0.3(0.01,0.59)	**Treatment 1 Significant (P-value<.05)**
Bertrand, H, 2016	High Quality	Clinical outcomes (specify)(Ultrasound Shoulder Pathology Rating)	9 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	-0.3(0.50)	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	-0.6(0.40)	MeanDif	0.3(0.06,0.54)	**Treatment 1 Significant (P-value<.05)**

Table 93: Pico 6 Part 9: Prolotherapy vs. Injections -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	Clinical outcomes (VAS)(No. (%) w/ Clinically significant improvement)	9 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	59.26%	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	36.84%	RR	1.61(0.83,3.13)	Not Significant (P-value>.05)
Bertrand, H, 2016	High Quality	Clinical outcomes (VAS)(No. (%) w/ Clinically significant improvement)	9 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	59.26%	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	26.92%	RR	2.20(1.09,4.46)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	PROs (specify)(NRS)	3 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	3(0.50)	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	2.7(0.70)	MeanDif	0.3(-0.07,0.67)	Not Significant (P-value>.05)
Bertrand, H, 2016	High Quality	PROs (specify)(NRS)	3 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	3(0.50)	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	2.7(0.60)	MeanDif	0.3(0.00,0.60)	Not Significant (P-value>.05)
Bertrand, H, 2016	High Quality	PROs (specify)(NRS)	9 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	2.9(0.60)	G2 (Enth-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	19	1.8(0.70)	MeanDif	1.1(0.71,1.49)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bertrand, H, 2016	High Quality	PROs (specify)(NRS)	9 months	G1 (Enth-Dex) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection onto painful entheses w/ 25% dextrose and 0.1% lidocaine/saline; two sessions of PT after each injection)	27	2.9(0.60)	G3 (Superfic-Saline) (4 (1mL) injections (supraspinatus, infraspinatus, teres minor and coracoid process insertions); Injection superficial to painful enthese w/ 0.1% lidocaine/saline; two sessions of PT after each injection)	26	1.3(0.60)	MeanDif	1.6(1.28,1.92)	Not Significant (P-value>.05)

Table 94: Pico 6 Part 10: Prolotherapy vs. Physical therapy -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	PROs (specify)(SPADI (pain/function0)	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	7.66(10.64)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	44	34.94(19.14)	MeanDif	-1.05(-2.39,0.29)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	PROs (specify)(SPADI (pain/function0)	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	31.3(14.19)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	44	41.97(16.42)	MeanDif	0.43(-1.50,2.36)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	PROs (specify)(SPADI (pain/function0)	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	16.12(12.82)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	37.25(20.32)	MeanDif	6(0.65,11.35)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	PROs (specify)(WORC (pain/QOL))	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	90.37(10.12)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	44	69.08 (16.7)	MeanDif	1.65(-0.79,4.09)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	PROs (specify)(WORC (pain/QOL))	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	72.07(14.48)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	59.98(16.03)	MeanDif	0.5(-4.19,5.19)	Not Significant (P-value>.05)
Seven, M. M., 2017	High Quality	PROs (specify)(WORC (pain/QOL))	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	84.98(12.13)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	66.14(17.11)	MeanDif	7.3(0.83,13.77)	**Treatment 1 Significant (P-value<.05)**

Table 95: Pico 6 Part 10: Prolotherapy vs. Physical therapy -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	88.94(4.09)	G1 (Physiotherapy) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	44	86.59 (9.69)	MeanDif	21.29(15.70,26.88)	Not Significant (P-value>.05)
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	84.47(11.20)	G1 (Physiotherapy) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	44	85.34(10.42)	MeanDif	10.61(4.45,16.77)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	87.71(5.98)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	86.5 (9.69)	MeanDif	-0.2(-1.11,0.71)	Not Significant (P-value>.05)
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(Flexion (degrees))	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	176.57(9.50)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	23	166.36(16.95)	MeanDif	-0.14(-0.75,0.47)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(Flexion (degrees))	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	167.19(20.93)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	23	161.59(21.66)	MeanDif	-1.13(-2.29,0.03)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(Flexion (degrees))	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	173.5(14.57)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	32	165 (18.26)	MeanDif	3.5(-1.23,8.23)	Not Significant (P-value>.05)
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(Internal Rotation)	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	68.77(4.25)	G1 (Physiotherapy) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	44	66.02 (7.11)	MeanDif	2.07(-0.61,4.75)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(Internal Rotation)	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	65.78(8.59)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	65 (7.92)	MeanDif	-6.3(-13.78,1.18)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	Clinical outcomes (specify)(Internal Rotation)	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	67.63(5.98)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	44	65.56 (7.4)	MeanDif	-8.56(-23.89,6.77)	Not Significant (P-value>.05)
Seven, M. M., 2017	High Quality	PROs (specify)(Abduction (degrees))	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	175.26(12.15)	G1 (Physiotherapy) (blind corticosteroid injection into subacromium)	44	17.87(2.56)	MeanDif	1.39(-0.10,2.88)	Not Significant (P-value>.05)
Seven, M. M., 2017	High Quality	PROs (specify)(Abduction (degrees))	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	163.77(24.66)	G1 (Physiotherapy) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	44	158.29(22.54)	MeanDif	-27.28(-33.57,-20.99)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	PROs (specify)(Abduction (degrees))	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	170.78(19.38)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	162.38(20.55)	MeanDif	-3.1(-15.58,9.38)	**Treatment 1 Significant (P-value<.05)**

Table 96: Pico 6 Part 10: Prolotherapy vs. Physical therapy -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Seven, M. M., 2017	High Quality	PROs (specify)(VAS)	1 years	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	0.89(1.64)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	3.77(2.15)	MeanDif	1.6(-3.33,6.53)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	PROs (specify)(VAS)	1.4 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	3.35(1.67)	G1 (Physiotherapy) (Receive 1 of intra-articular corticosteroid injection (IACI) alone w/ 1 mL of 40mg/mL triamcinolone acetonide and 3mL of 1% Iidocaine))	44	4.39 (1.92)	MeanDif	-0.4(-1.34,0.54)	**Treatment 1 Significant (P-value<.05)**
Seven, M. M., 2017	High Quality	PROs (specify)(VAS)	3 months	G1 (Prolotherapy) (Prolotherapy a injection; 4 mL of prolotherapy solution 3.6 mL of 25% dextrose and 0.4 mL lidocaine) was injected to the subacromial bursa)	57	2.35(1.98)	G1 (Physiotherapy) (received a physiotherapy protocol; consisted of 3 sessions (30 minutes) per week for 12 weeks at a sports medicine department.)	44	4 (2.11)	MeanDif	-10.67(-16.76,-4.58)	**Treatment 1 Significant (P-value<.05)**

Table 97: Pico 6 Part 11: PRP vs. Physical therapy -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(DASH)	2 months	*G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	45.1(3.90)	*G1 (Exercise) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	35 (4.1)	MeanDif	5.1(2.67,7.53)	**Treatment 2 Significant (P-value<.05)**
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(DASH)	3 months	*G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	44.3(3.90)	*G1 (Exercise) (5 mL injection of saline)	20	30.7 (4.1)	Author Reported	0(.,.)	Exercise over PRP Significant (P-value<.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(DASH)	6 months	*G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	33(3.90)	*G1 (Exercise) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	26.2 (7.4)	MeanDif	-20.3(-24.88,-15.72)	**Treatment 2 Significant (P-value<.05)**
Rha, D. W., 2013	High Quality	PROs (specify)(SPADI)	1.4 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	27.4(.)	G2 (dry needling) (5 mL injection of saline)	20	41.2(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	PROs (specify)(SPADI)	3 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	21.1(.)	G2 (dry needling) (5 mL injection of saline)	20	34.6 (.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Rha, D. W., 2013	High Quality	PROs (specify)(SPADI)	4 weeks	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	39.2(.)	G2 (dry needling) (5 mL injection of saline)	20	45.8(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(SPADI)	6 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	17.7(.)	G2 (dry needling) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	29.5(.)	MeanDif	NA	**Treatment 1 Significant (P-value<.05)**

Table 98: Pico 6 Part 11: PRP vs. Physical therapy -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees))	1 month	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	103.5(8.70)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	129.2 (9.2)	Author Reported	3.4(.,.)	**Treatment 2 Significant (P-value<.05)**
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees))	3 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	103.4(8.70)	G2 (Exercise) (5 mL injection of saline)	20	138.5 (9.2)	Author Reported	0(.,.)	**Treatment 2 Significant (P-value<.05**
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Abduction (degrees))	6 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	118.8(8.70)	G2 (Exercise) (5 mL injection of saline)	20	146.5 (9.2)	Author Reported	0(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Extension (degrees))	1 month	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	54.6(2.50)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	53.9	Author Reported	3.6(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Extension (degrees))	3 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	57.2(2.50)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	59.7 (2.7)	Author Reported	-5.5(.,.)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Extension (degrees))	6 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	56.5(2.50)	G2 (Exercise) (5 mL injection of saline)	20	59.6 (2.7)	Author Reported	0(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(External rotation (degrees))	1 month	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	93.1(3.90)	G2 (Exercise) (5 mL injection of saline)	20	88 (4.1)	Author Reported	4.9(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(External rotation (degrees))	3 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	91.1(3.90)	G2 (Exercise) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	95 (4.1)	MeanDif	-13.7(-16.28,-11.12)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(External rotation (degrees))	6 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	92(3.90)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	95.5 (4.1)	Author Reported	0.9(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Flexion (degrees))	1 month	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	126.8(7.40)	G2 (Exercise) (5 mL injection of saline)	20	147.1 (7.7)	Author Reported	5.1(.,.)	**Treatment 2 Significant (P-value<.05)**
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Flexion (degrees))	3 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	129.8(7.40)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	147.1 (7.7)	Author Reported	-13.5(.,.)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Flexion (degrees))	6 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	143.6(7.40)	G2 (Exercise) (5 mL injection of saline)	20	158.4 (7.7)	Author Reported	-15(.,.)	**Treatment 2 Significant (P-value<.05)**
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Internal rotation (degrees))	3 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	43.5(5.10)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	55.5 (5.3)	Author Reported	-6.6(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Internal rotation (degrees))	6 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	57.4(5.10)	G2 (Exercise) (5 mL injection of saline)	20	62.2 (5.3)	Author Reported	-5(.,.)	Not Significant (P-value>.05)
Nejati, P., 2017	Moderate Quality	Clinical outcomes (specify)(Internal rotation (degrees))	1 month	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	35(5.10)	G2 (Exercise) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	43.2 (53.3)	MeanDif	-14.8(-19.38,-10.22)	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Abduction)	1.4 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	3.5(.)	*G2 (dry needling) (5 mL injection of saline)	19	3.9(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Abduction)	3 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	7.8(.)	*G2 (dry needling) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	5(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Abduction)	4 weeks	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	4.5(.)	*G2 (dry needling) (5 mL injection of saline)	20	3.4(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Abduction)	6 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	9(.)	*G2 (dry needling) (5 mL injection of saline)	19	5.4(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved External Rotation)	1.4 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	2.8(.)	*G2 (dry needling) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	19	3.2(0.40)	MeanDif	NA	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved External Rotation)	3 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	6.3(.)	*G2 (dry needling) (5 mL injection of saline)	19	4(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved External Rotation)	4 weeks	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	3.5(.)	*G2 (dry needling) (5 mL injection of saline)	19	2.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved External Rotation)	6 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	6.9(.)	*G2 (dry needling) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	4.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Flexion)	1.4 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	2.5(.)	*G2 (dry needling) (5 mL injection of saline)	19	3.2(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Flexion)	3 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	7.2(.)	*G2 (dry needling) (5 mL injection of saline)	19	3.8(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Flexion)	4 weeks	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	2.5(.)	*G2 (dry needling) (5 mL injection of saline)	19	2.4(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(Improved Flexion)	6 months	*G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	8.4(.)	*G2 (dry needling) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	4.3(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(improved internal rotation)	1.4 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	2.8(.)	G2 (dry needling) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	2.4(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(improved internal rotation)	3 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	5.6(.)	G2 (dry needling) (5 mL injection of saline)	20	2.5(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(improved internal rotation)	4 weeks	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	3.5(.)	G2 (dry needling) (5 mL injection of saline)	20	2.9(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	Clinical outcomes (specify)(improved internal rotation)	6 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	6.3(.)	G2 (dry needling) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	3.9(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 99: Pico 6 Part 11: PRP vs. Physical therapy -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Nejati, P., 2017	Moderate Quality	PROs (specify)(VAS)	1 month	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	6.2(0.40)	G2 (Exercise) (5 mL injection of saline)	20	4.8 (0.4)	Author Reported	0(.,.)	Exercise over PRP Significant (P-value<.05)
Nejati, P., 2017	Moderate Quality	PROs (specify)(VAS)	3 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	6.5(0.40)	G2 (Exercise) (5 mL injection of saline)	20	5.2 (0.4)	Author Reported	0(.,.)	Exercise over PRP Significant (P-value<.05)
Nejati, P., 2017	Moderate Quality	PROs (specify)(VAS)	6 months	G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	4.5(0.40)	G2 (Exercise) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	4.2 (0.4)	Author Reported	0.6(.,.)	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(pain)	1.4 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	10.9(.)	G2 (dry needling) (5 mL injection of saline)	19	16.4(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(pain)	3 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	7.6(.)	G2 (dry needling) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	12.8(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	PROs (specify)(pain)	4 weeks	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	15.5(.)	G2 (dry needling) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	19	18.1(.)	MeanDif	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(pain)	6 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	6.2(.)	G2 (dry needling) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	19	10.9(.)	MeanDif	NA	**Treatment 1 Significant (P-value<.05)**

Table 100: Pico 6 Part 11: PRP vs. Physical therapy -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Nejati, P., 2017	Moderate Quality	PROs (specify)(WORC)	1 month	*G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	45.9(4.10)	*G1 (Exercise) (5 mL injection of saline)	20	59.6 (4.4)	Author Reported	-0.8(.,.)	**Treatment 2 Significant (P-value<.05)**
Nejati, P., 2017	Moderate Quality	PROs (specify)(WORC)	3 months	*G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	46.4(4.10)	*G1 (Exercise) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	68.4 (4.4)	MeanDif	-3.1(-4.68,-1.52)	**Treatment 2 Significant (P-value<.05)**
Nejati, P., 2017	Moderate Quality	PROs (specify)(WORC)	6 months	*G1 (PRP) (PRP injection once at beginning of study, once 1 month after first visit)	22	58.7(4.10)	*G1 (Exercise) (5 mL injection of saline)	20	73.1 (4.4)	Author Reported	0(.,.)	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(disability)	1.4 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	16.5(.)	G2 (dry needling) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	19	24.8(5.3)	MeanDif	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(disability)	3 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	13.5(.)	G2 (dry needling) (5 mL injection of saline)	19	21.8(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rha, D. W., 2013	High Quality	PROs (specify)(disability)	4 weeks	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	23.7(.)	G2 (dry needling) (5 mL injection of saline)	19	27.7(.)	Author Reported	NA	Not Significant (P-value>.05)
Rha, D. W., 2013	High Quality	PROs (specify)(disability)	6 months	G1 (PRP) (3 mL of platelet-rich plasma was infiltrated into the lesion of the supraspinatus tendon under ultrasound guidance)	20	11.6(.)	G2 (dry needling) (5 mL injection of saline)	19	18.6(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 101: Pico 6 Part 12: PRP vs. Placebo -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kesikburun, S, 2013	High Quality	PROs (specify)(SPADI)	1 years	G1 (PRP) (5 mL injection of PRP)	20	14.6(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	15.4(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(SPADI)	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	35.5(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	42.4(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(SPADI)	3 months	G1 (PRP) (5 mL injection of PRP)	20	27.6(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	45.3(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(SPADI)	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	21.7(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	40.9(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 102: Pico 6 Part 12: PRP vs. Placebo -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1 years	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	180(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Abduction (degrees))	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	180(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Abduction (degrees))	3 months	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	180(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Abduction (degrees))	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	180(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(External Rotation (degrees_)	1 years	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	90(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(External Rotation (degrees_)	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	90(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(External Rotation (degrees_)	3 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	90(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(External Rotation (degrees_)	3 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	90(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(External Rotation (degrees_)	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	90(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(flexion (degrees))	1 years	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	180(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(flexion (degrees))	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	180(.)	MeanDif	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(flexion (degrees))	3 months	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	180(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(flexion (degrees))	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	180(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	180(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	1 years	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	90(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	90(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	3 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	90(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	Clinical outcomes (specify)(Internal Rotation (degrees))	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	90(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	90(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 103: Pico 6 Part 12: PRP vs. Placebo -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kesikburun, S, 2013	High Quality	PROs (specify)(VAS)	1 years	G1 (PRP) (5 mL injection of PRP)	20	7.5(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	10(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(VAS)	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	40(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	35(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(VAS)	3 months	G1 (PRP) (5 mL injection of PRP)	20	30(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	35(.)	MeanDif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(VAS)	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	25(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	19	40(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 104: Pico 6 Part 12: PRP vs. Placebo -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean 1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean 2/P2 (SD2)	effect measure	Result (95 % CI)	Favored Treatment
Kesikburun, S, 2013	High Quality	PROs (specify)(WORC)	1 years	G1 (PRP) (5 mL injection of PRP)	20	84.6(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	79.7(.)	Mean Dif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(WORC)	1.4 months	G1 (PRP) (5 mL injection of PRP)	20	64.9(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	59.8(.)	Mean Dif	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(WORC)	3 months	G1 (PRP) (5 mL injection of PRP)	20	79.1(.)	G2 (saline) (dry needling; percutaneous microtenotomy; change a chronic, non-healing injury into an acute lesion that may have greater healing potential)	20	58.5(.)	Author Reported	NA	Not Significant (P-value>.05)
Kesikburun, S, 2013	High Quality	PROs (specify)(WORC)	5.5 months	G1 (PRP) (5 mL injection of PRP)	20	82.5(.)	G2 (saline) (Supervised/unsupervised exercise therapy for 3 months, followed by 6 months unsupervised exercise therapy)	20	69.9(.)	Mean Dif	NA	Not Significant (P-value>.05)

Quality Evaluation Table 8: partial tear repair vs debridement-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Abbot, A. E., 2009	◑	●	●	○	◑	●	●	●	●	Include	Moderate Quality
Castagna, A, 2015	●	◑	◑	○	●	●				Include	Moderate Quality
Franceschi, F., 2013	◑	◑	◑	●	◑	●				Include	Moderate Quality
Kim, Y. S., 2015	●	●	◑	●	◑	●				Include	High Quality

Table 105: Summary of Findings-Pico 7 Part 1: Conversion to full-thickness vs. Transtendinous/In-situ

	High Quality		Moderate Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Kim, Y. S., 2015	Shin, S., 2012	Castagna, A, 2015	Franceschi, F., 2013
Complications				
RC Tear (specify component)(Retear rate)	●			
Composite				
PROs (specify)(Constant)	●	●		
PROs (specify)(CMS)				●
PROs (specify)(ASES)	↑	●		●
PROs (specify)(Constant score)			↓	
Function				
PROs (specify)(SST)	↑			
Clinical outcomes (specify)(External rotation (degrees))		●		●
Clinical outcomes (specify)(Forward flexion (degrees))		●		●
PROs (specify)(KSS)	●			
Pain				
PROs (specify)(VAS)	●	↓		
PROs (specify)(VAS score)			●	

Table 106: Summary of Findings-Pico 7 Part 2: Repair vs. Debride

	Moderate Quality	Low Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Abbot, A. E., 2009	Weber S.C., 1999	Ogilvie-Harris, D., 1993
Complications			
Adverse event/complications Reoperation		↑	
Function			
Clinical outcomes (specify)(external rotation)	↓		
Clinical outcomes (specify)(forward flexion)	●		
Clinical outcomes (specify)(range of motion(internal rotation))	↓		
Clinical outcomes (specify)(UCLA (Forward flexion))	●		●
Clinical outcomes (specify)(UCLA (Strength))	●		
PROs (specify)(UCLA (Function))	↓		↑
Quality of life			
PROs (specify)(UCLA (Satisfaction))	●		●
Composite			
PROs (specify)(UCLA)	●	↑	↑
Pain			
PROs (specify)(UCLA-pain)			●

Table 107: Pico 7 Part 1: Conversion to full-thickness vs. Transtendinous/In-situ -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Y. S., 2015	High Quality	RC Tear (specify component)(Retear rate)	2 years	G2 (Conversion to FT) (transosseous suture bridge repair; Conversion of PTRCT to FTRCT and repair)	45	15.56%	G1 (In Situ) (transosseous suture bridge repair; in situ repair including transtendinous repair for articular-sided tears or repair of bursal-sided tear)	47	4.26%	RR	3.66(0.80,16.67)	Not Significant (P-value>.05)

Table 108: Pico 7 Part 1: Conversion to full-thickness vs. Transtendinous/In-situ -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Castagna, A, 2015	Moderate Quality	PROs (specify)(Constant score)	2 years	G1 (Tear completion) (Arthroscopic completion of tear and suture anchor repair)	37	25.1(5.80)	G2 (Transtendon repair) (Arthroscopic transtendon repair)	37	29(6.20)	MeanDif	-3.9(-6.64,-1.16)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2013	Moderate Quality	PROs (specify)(ASES)	3 years	G2 (Conversion to FT) (Conversion to Full-Thickness Tear followed by traditional repair)	28	90(7.90)	G1 (Transtendon) (Transtendon repair)	32	91(6.60)	MeanDif	-1(-4.71,2.71)	Not Significant (P-value>.05)
Franceschi, F., 2013	Moderate Quality	PROs (specify)(CMS)	3 years	G2 (Conversion to FT) (Conversion to Full-Thickness Tear followed by traditional repair)	28	91(7.30)	G1 (Transtendon) (Transtendon repair)	32	92(7.10)	MeanDif	-1(-4.66,2.66)	Not Significant (P-value>.05)
Kim, Y. S., 2015	High Quality	PROs (specify)(ASES)	2 years	G2 (Conversion to FT) (transosseous suture bridge repair; Conversion of PTRCT to FTRCT and repair)	45	87.1(9.90)	G1 (In Situ) (transosseous suture bridge repair; in situ repair including transtendinous repair for articular-sided tears or repair of bursal-sided tear)	47	80.6(15.60)	MeanDif	6.5(1.18,11.82)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Y. S., 2015	High Quality	PROs (specify)(Constant)	2 years	G2 (Conversion to FT) (transosseous suture bridge repair; Conversion of PTRCT to FTRCT and repair)	45	71.1(6.10)	G1 (In Situ) (transosseous suture bridge repair; in situ repair including transtendinous repair for articular-sided tears or repair of bursal-sided tear)	47	71.1(4.10)	MeanDif	0(-2.13,2.13)	Not Significant (P-value>.05)
Shin, S., 2012	High	PROs (specify) ASES score	31 months	G1 (Transtendinous)	24	89.1 (2.1)	G2 (Tear completion)	24	86.2 (3.2)			Not Significant (P-value>.05)
Shin, S., 2012	High	PROs (specify) Constant score	31 months	G1 (Transtendinous)	24	84.8 (2.7)	G2 (Tear completion)	24	87.1 (2.4)			Not Significant (P-value>.05)

Table 109: Pico 7 Part 1: Conversion to full-thickness vs. Transtendinous/In-situ -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2013	Moderate Quality	Clinical outcomes (specify)(External rotation (degrees))	3 years	G2 (Conversion to FT) (Conversion to Full-Thickness Tear followed by traditional repair)	28	61.1(10.20)	G1 (Transtendon) (Transtendon repair)	32	59.8(9.60)	MeanDif	1.3(-3.73,6.33)	Not Significant (P-value>.05)
Franceschi, F., 2013	Moderate Quality	Clinical outcomes (specify)(Forward flexion (degrees))	3 years	G2 (Conversion to FT) (Conversion to Full-Thickness Tear followed by traditional repair)	28	169(10.90)	G1 (Transtendon) (Transtendon repair)	32	171(10.40)	MeanDif	-2(-7.41,3.41)	Not Significant (P-value>.05)
Kim, Y. S., 2015	High Quality	PROs (specify)(KSS)	2 years	G2 (Conversion to FT) (transosseous suture bridge repair; Conversion of PTRCT to FTRCT and repair)	45	80.7(25.80)	G1 (In Situ) (transosseous suture bridge repair; in situ repair including transtendinous repair for articular-sided tears or repair of bursal-sided tear)	47	70.5(28.20)	MeanDif	10.2(-0.84,21.24)	Not Significant (P-value>.05)
Kim, Y. S., 2015	High Quality	PROs (specify)(SST)	2 years	G2 (Conversion to FT) (transosseous suture bridge repair; Conversion of PTRCT to FTRCT and repair)	45	88.2(13.40)	G1 (In Situ) (transosseous suture bridge repair; in situ repair including transtendinous repair for articular-sided tears or repair of bursal-sided tear)	47	79.2(21.40)	MeanDif	9(1.74,16.26)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, S., 2012	High	Clinical outcomes (specify) Forward flexion (degrees)	31 months	G1 (Transtendinous)	24	167.8 (5)	G2 (Tear completion)	24	170.4 (3.2)			Not Significant (P-value>.05)
Shin, S., 2012	High	Clinical outcomes (specify) External rotation (degrees)	31 months	G1 (Transtendinous)	24	65.2 (4.4)	G2 (Tear completion)	24	66.6 (2)			Not Significant (P-value>.05)

Table 110: Pico 7 Part 1: Conversion to full-thickness vs. Transtendinous/In-situ -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Castagna, A, 2015	Moderate Quality	PROs (specify)(VAS score)	2 years	G1 (Tear completion) (Arthroscopic completion of tear and suture anchor repair)	37	3.4(1.20)	G2 (Transtendon repair) (Arthroscopic transtendon repair)	37	3.6(1.70)	MeanDif	-0.2(-0.87,0.47)	Not Significant (P-value>.05)
Kim, Y. S., 2015	High Quality	PROs (specify)(VAS)	2 years	G2 (Conversion to FT) (transosseous suture bridge repair; Conversion of PTRCT to FTRCT and repair)	45	1.9(1.60)	G1 (In Situ) (transosseous suture bridge repair; in situ repair including transtendinous repair for articular-sided tears or repair of bursal-sided tear)	47	2.6(2.20)	MeanDif	-0.7(-1.48,0.08)	Not Significant (P-value>.05)
Shin, S., 2012	High	PROs (specify) VAS (pain)	31 months	G1 (Transtendinous)	24	5.9 (0.4)	G2 (Tear completion)	24	2.8 (0.5)			**Treatment 2 Significant** (P-value<.05)

Table 111: Pico 7 Part 2: Repair vs. Debride -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(external rotation)	1 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	68.6(12.80)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	84.3(9.80)	MeanDif	-15.7(-23.01,-8.39)	**Treatment 2 Significant (P-value<.05)**
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(external rotation)	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	69.7(12.50)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	84.8(9.00)	MeanDif	-15.1(-22.09,-8.11)	**Treatment 2 Significant (P-value<.05)**
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(forward flexion)	1 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	161.9(10.50)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	166(4.80)	MeanDif	-4.1(-9.39,1.19)	Not Significant (P-value>.05)
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(forward flexion)	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	163.1(10.00)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	166.5(4.90)	MeanDif	-3.4(-8.49,1.69)	Not Significant (P-value>.05)
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(range of motion(internal rotation))	1 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	36.1(23.90)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	69.3(11.30)	MeanDif	-33.2(-45.30,-21.10)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(range of motion(internal rotation))	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	37.8(23.80)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	69.8(11.80)	MeanDif	-32(-44.15,-19.85)	**Treatment 2 Significant (P-value<.05)**
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(UCLA (Forward flexion))	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	4.8(0.40)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	4.9(0.30)	MeanDif	-0.1(-0.33,0.13)	Not Significant (P-value>.05)
Abbot, A. E., 2009	Moderate Quality	Clinical outcomes (specify)(UCLA (Strength))	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	4.7(0.50)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	4.9(0.30)	MeanDif	-0.2(-0.47,0.07)	Not Significant (P-value>.05)
Abbot, A. E., 2009	Moderate Quality	PROs (specify)(UCLA (Function))	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	8.8(1.00)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	9.6(0.80)	MeanDif	-0.8(-1.38,-0.22)	**Treatment 2 Significant (P-value<.05)**
Ogilvie-Harris, D., 1993	Low	PROs (specify) UCLA (Function Score)	4 years	G1 (open repair)	23	0.78	G2 (Debridement)	22	0.64			**Treatment 1 Significant** (P-value<.05
Ogilvie-Harris, D., 1993	Low	PROs (specify) UCLA (Active forward flexion)	4 years	G1 (open repair)	23	0.91	G2 (Debridement)	22	0.82			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ogilvie-Harris, D., 1993	Low	PROs (specify) UCLA (strength forward flexion)	4 years	G1 (open repair)	23	0.91	G2 (Debridement)	22	0.68			**Treatment 1 Significant** (P-value<.05

Table 112: Pico 7 Part 2: Repair vs. Debride -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Abbot, A. E., 2009	Moderate Quality	PROs (specify)(UCLA (Satisfaction))	2 years	g2(slap repair) (Rotator cuff repair +anchor placement and suture repair of their type II SLAP tears)	18	5(0.00)	g1(slap debridement) (Rotator cuff repair + arthroscopic debridement of their type II SLAP tears)	20	5(0.00)	MeanDif	0(0.00,0.00)	Not Significant (P-value>.05)
Ogilvie-Harris, D., 1993	Low Quality	PROs (specify) UCLA (Patient satisfaction)	4 years	G1 (open repair)	23	0.91	G2 (Debridement)	22	0.77			Not Significant (P-value>.05)

Table 113: Pico 7 Part 2: Repair vs. Debride -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ogilvie-Harris, D., 1993	Low Quality	PROs (specify) UCLA (Total score)	4 years	G1 (open repair)	23	0.87	G2 (Debridement)	22	0.59			**Treatment 1 Significant** (P-value<.05

Table 114: Pico 7 Part 2: Repair vs. Debride -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Weber S.C., 1999	Low Quality	Adverse event/complications Reoperation	4 years	G1 (Mini open repair)	33	0	G2 (Debridement)	33	0.19			**Treatment 1 Significant** (P-value<.05)

Quality Evaluation Table 9: risk factors for surgical outcomes-prognostic studies

Study	Representative Population	Reason for Follow Up Loss	Prognostic Factor Measured	Outcome Measurement	Confounders	Appropriate Statistical Analysis	Inclusion	Strength
Chalmers, P. N., 2018	●	●	●	●	●	●	Include	High Quality
Cho, C. H., 2015	●	●	●	●	●	●	Include	High Quality
Chung, S. W., 2012	●	●	●	●	●	●	Include	High Quality
Chung, S. W., 2013	●	●	●	●	●	●	Include	High Quality
Deniz, G., 2014	●	●	●	●	●	●	Include	High Quality
Djahangiri, A., 2013	●	◑	◑	●	○	◑	Include	Low Quality
Godeneche, A., 2017	●	●	●	●	●	●	Include	High Quality
Henn, R. F., 3rd, 2007	●	●	●	●	●	●	Include	High Quality
Heyer, J. H., 2018	●	●	◑	●	●	●	Include	High Quality
Jung, S. W., 2016	●	●	●	●	◑	●	Include	High Quality
Kim, D. H., 2016	●	●	●	●	●	●	Include	High Quality
Kim, I. B., 2016	●	●	●	●	●	●	Include	High Quality

Study	Representative Population	Reason for Follow Up Loss	Prognostic Factor Measured	Outcome Measurement	Confounders	Appropriate Statistical Analysis	Inclusion	Strength
Kim, Y. K., 2018	●	●	●	●	●	●	Include	High Quality
Milano, G., 2010	●	●	●	●	◑	●	Include	High Quality
Millett, P. J., 2017	●	●	●	●	●	●	Include	High Quality
Namdari, S., 2010	●	●	●	●	●	●	Include	High Quality
Neyton L., 2013	●	◑	◑	●	○	◑	Include	Low Quality
Park, J. S., 2015	●	●	●	●	●	●	Include	High Quality
Passaretti, D., 2016	●	●	●	●	●	●	Include	High Quality
Potter, M. Q., 2015	●	●	●	●	●	●	Include	High Quality
Rashid, M. S., 2017	●	●	●	●	●	●	Include	High Quality
Rhee, Y. G., 2014	●	●	●	●	●	●	Include	High Quality
Robinson, P. M., 2013	●	◑	●	●	●	●	Include	High Quality
Schairer, W. W., 2018	●	●	●	●	◑	●	Include	High Quality
Tashjian, R. Z., 2006	●	●	●	●	●	●	Include	High Quality
Wylie, J. D., 2018	●	●	◑	●	●	●	Include	High Quality

Table 115: Summary of Findings- modifiable risk factor: BMI

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Chalmers, P. N., 2018	Kim, Y. K., 2018	Namdari, S., 2010	Potter, M. Q., 2015	Wylie, J. D., 2018
Complications					
Radiographic tear(retear rate)		↓			
Composite					
PROs (specify)(ASES improvement from baseline)	↑				●
PROs (specify)(Change in ASES (Pain/function))				●	
Function					
PROs (specify)(SST)					●
PROs (specify)(DASH score)			●		
PROs (specify)(Change in SST)				●	
PROs (specify)(VAS function)					●
Pain					
PROs (specify)(Visual analog scale (VAS) improvement from baseline)	↑				
PROs (specify)(VAS pain score)					●
PROs (specify)(Change in VAS (pain))				●	

Table 116: Summary of Findings- modifiable risk factor: Behavioral health (anxiety, depression)

	High Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Cho, C. H., 2015	Wylie, J. D., 2018
Composite		
PROs (specify)(UCLA score)	●	
PROs (specify)(ASES score)	●	↓
Function		
PROs (specify)(SST)		●
PROs (specify)(VAS function)		●
Pain		
PROs (specify)(VAS pain score)	●	↓

Table 117: Summary of Findings- modifiable risk factor: Comorbidities

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality				
	Jung, S. W., 2016	Namdari, S., 2010	Park, J. S., 2015	Tashjian, R. Z., 2006	Wylie, J. D., 2018
Composite					
PROs (specify)(ASES)					●
Clinical outcomes (specify)(Constant (Fair/Poor clinical outcomes))	●				
PROs (specify)(DASH (Pain/QOL))				●	
Function					
PROs (specify)(SST)				●	●
PROs (specify)(VAS (function))				●	
PROs (specify)(DASH score)		↓			
PROs (specify)(VAS function)					●
Pain					
PROs (specify)(VAS pain score)					●
PROs (specify)(VAS (pain))				●	
Quality of life					
PROs (specify)(VAS (QOL))				●	
PROs (specify)(SF-36 (physical function))				●	
PROs (specify)(SF-36 (Role Physical))				●	
PROs (specify)(SF-36 (Bodily Pain))				↓	
PROs (specify)(SF-36 (Vitality))				↓	
PROs (specify)(Sf-36 (Social Function))				●	
PROs (specify)(SF-36 (Role Emotional))				↓	
PROs (specify)(SF-36 (Mental Health))				●	
Healing rate(Rotator Cuff Healing)			●		
PROs (specify)(SF-36 (General Health))				↓	

Table 118: Summary of Findings- modifiable risk factor: Diabetes

	High Quality		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Chung, S. W., 2012	Kim, Y. K., 2018	Park, J. S., 2015
Complications			
Radiographic tear(retear rate)		↓	
Quality of life			
PROs (specify)(HRQOL (Physical health-related quality of life))	↓		
Healing rate(Rotator Cuff Healing)			●

Table 119: Summary of Findings- modifiable risk factor: Workers Compensation/Litigation

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality	
	Millett, P.J., 2017	Namdari, S., 2010
Composite		
PROs (specify)(ASES (Function/pain))	↓	
Function		
PROs (specify)(DASH score)		↓
PROs (specify)(SF-12 (Physical component summary))	↓	

Table 120: Summary of Findings- modifiable risk factor: Nicotine products

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality		Low Quality	
	Potter, M. Q., 2015	Wylie, J. D., 2018	Neyton L., 2013	Djahangiri A., 2013
Composite				
PROs (specify)(ASES)		●		
PROs (specify)(Change in ASES (Pain/function))	●			
Function				
PROs (specify)(SST)		●		
PROs (specify)(Change in SST)	●			
PROs (specify)(VAS function)		●		
Pain				
PROs (specify)(Visual analog scale (VAS))				
PROs (specify)(VAS pain score)		●		
PROs (specify)(Change in VAS (pain))	●			
healing				
Rotator Cuff Healing			↓	●

Table 121: Summary of Findings- modifiable risk factor: Patient expectations/motivations

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Henn, R. F., 3rd, 2007 High Quality
Function	
PROs (specify)(SST)	↑
PROs (specify)(VAS (function))	↑
PROs (specify)(SF-36 (physical function))	↑
Pain	
PROs (specify)(VAS (pain))	↑
Quality of life	
PROs (specify)(VAS (QOL))	↑
PROs (specify)(SF-36 (Role Physical))	↑
PROs (specify)(SF-36 (Bodily Pain))	↑
PROs (specify)(SF-36 (General Healht))	↑
PROs (specify)(SF-36 (Vitality))	↑
PROs (specify)(Sf-36 (Social Function))	↑
PROs (specify)(SF-36 (Role Emotional))	↑
PROs (specify)(SF-36 (Mental Health))	↑

Table 122:Summary of Findings- Non-modifiable risk factor: Age

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality												
	Chung, S. W., 2012	Chung, S. W., 2013	Deniz, G., 2014	Godeneche, A., 2017	Kim, D. H., 2016	Kim, I. B., 2016	Milano, G., 2010	Millett, P. J., 2017	Park, J. S., 2015	Potter, M. Q., 2015	Rashid, M. S., 2017	Rhee, Y. G., 2014	Robinson, P. M., 2013	Wylie, J. D., 2018
Complications														
Adverse events/complications(Postoperative shoulder stiffness (ASES and VAS))		●												
Composite														
PROs (specify)(ASES)														●
PROs (specify)(Constant score)				●										
PROs (specify)(DASH score)							↓							
PROs (specify)(ASES (Function/pain))								●						
PROs (specify)(Change in ASES (Pain/function))										●				
PROs (specify)(Constant (Pain/function))													↓	
Function														
PROs (specify)(Change in Constant)			↓											
PROs (specify)(SST)														●
PROs (specify)(SF-12 (Physical component summary))								●						
PROs (specify)(Change in SST)										●				
PROs (specify)(VAS function)														●
Healing														
Healing rate(Healing)					●				↓		↓			
Cuff integrity			↓											
rotator cuff retear				●		●						●		
Pain														
PROs (specify)(VAS pain score)														●
PROs (specify)(Change in VAS (pain))										●				
Quality of life														
PROs (specify)(HRQOL (Physical health-related quality of life))	↓													

Table 123: Summary of Findings- Non-modifiable risk factor: Sex (male vs. female)

(Up arrow favors male; down arrow favors female)

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Chung, S. W., 2012	Deniz, G., 2014	Godeneche, A., 2017	Kim, D. H., 2016	Kim, I. B., 2016	Millett, P. J., 2017	Potter, M. Q., 2015	Rhee, Y. G., 2014	Robinson, P. M., 2013	Wylie, J. D., 2018
Complications										
Adverse events/complications(retear rate (Sugaya Classification))			●							
Radiographic tear(Rotator Cuff Retear)					●			●		
PROs (specify)(Constant (Pain/function))									↓	
Composite										
PROs (specify)(ASES)										●
PROs (specify)(Constant score)			↓							
PROs (specify)(ASES (Function/pain))						●				
PROs (specify)(Change in ASES (Pain/function))							●			
Function										
PROs (specify)(Change in Constant)		●								
PROs (specify)(SST)										●
PROs (specify)(SF-12 (Physical component summary))						●				
PROs (specify)(Change in SST)							●			
PROs (specify)(VAS function)										●
Pain										
PROs (specify)(VAS pain score)										●
PROs (specify)(Change in VAS (pain))							●			
Quality of life										
PROs (specify)(HRQOL (Physical health-related quality of life))	↑									
Clinical outcomes (specify)(Cuff integrity)		●								
Healing rate(anatomic outcome of repair (healing))				●						

Table 124: BMI

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Chalmers, P. N., 2018	High Quality	PROs (specify) (Visual analog scale (VAS))	1 year	85	PICO 8: Risk Factor (arthroscopic RCR)	BMI 25-30 VS BMI <25(ref)	BMI, biceps treatment, smoking	(Multivariate Analysis)ordinary least squares Coefficient (95% CI), p value	-0.91(-2.63 to 0.81), .294	NS
Chalmers, P. N., 2018	High Quality	PROs (specify) (Visual analog scale (VAS))	1 year	85	PICO 8: Risk Factor (arthroscopic RCR)	BMI >30 VS BMI<25(ref)	BMI, biceps treatment, smoking	(Multivariate Analysis)ordinary least squares Coefficient (95% CI), p value	-2.79 (-0.94 to -4.65), 0.004	obesity is a significant predictor of greater improvement in VAS-pain score
Chalmers, P. N., 2018	High Quality	PROs (specify) (ASES)	1 year	85	PICO 8: Risk Factor (arthroscopic RCR)	BMI 25-30 VS BMI <25(ref)	Biceps treatments,Infraspinatus atrophy,Tear size,	(Multivariate Analysis)ordinary least squares Coefficient (95% CI), p value	7.06 (-6.82 to 20.94) .313	NS
Chalmers, P. N., 2018	High Quality	PROs (specify) (ASES)	1 year	85	PICO 8: Risk Factor (arthroscopic RCR)	BMI >30 VS BMI<25(ref)	Biceps treatments,Infraspinatus atrophy,Tear size,	(Multivariate Analysis)ordinary least squares Coefficient (95% CI), p value	15.06 (0.07 to 30.05) .049	BMI<25 Is a significant predictor of decreased improvement in ASES scores compared with BMI >30
Kim, Y. K., 2018	High Quality	Radiographic tear (retear rate)	1 year	180	PICO 8: Risk Factor (arthroscopic rotator cuff repair)	BMI(Continous)	BMI, diabetes mellitus, Dyslipidemia, Extent of retraction, Delamination, Distance from MTJ to face of glenoid,Occupation ratio,Fatty infiltration (IS),acromiohumeral interval, repair techinique	multivariate logistic regression ,odds ratio,(95% CI), p-value	1.466, (1.067,2.015), .018	BMI is a significant factor for the rate of retear

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Namdari, S., 2010	High Quality	PROs (specify) (DASH score)	1 year	154	PICO 8: Risk Factor (Rotator cuff repair (wide range of surgical teachniques))	BMI	Age, sex, BMI, comorbidities, smoking, worker's compensation, injury to dominant side	Multiple linear regression		NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in VAS (pain))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	BMI	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	-0.12,0.437	NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in SST)	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	BMI	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	-0.04, 0.633	NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in ASES (Pain/function))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	BMI	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	0.31, 0.593	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS pain score)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	bmi	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.01 (.704)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS function)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	bmi	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.01 (.567)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (SST)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	bmi	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.01 (.748)	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Wylie, J. D., 2018	High Quality	PROs (specify) (ASES)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	bmi	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.02 (.780)	NS

Table 125: Behavioral health (anxiety, depression)

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Cho, C. H., 2015	High Quality	PROs (specify) (VAS pain score)	1 year	47	PICO 8: Risk Factor (Rotator cuff repair)	Behavioral health-Depression (HADS-D score-Hospital Anxiety and Depression Scale, depression subsection)	Age, sex, involved side, duration of symptoms, tear size, preoperative stiffness, and repair technique	Coefficient, 95% CI, p value	–0.073 (–0.298 to 0.152), p=0.515	NS
Cho, C. H., 2015	High Quality	PROs (specify) (VAS pain score)	1 year	47	PICO 8: Risk Factor (Rotator cuff repair)	Behavioral health-Anxiety-Hospital Anxiety and Depression Scale, anxiety subsection	Age, sex, involved side, duration of symptoms, tear size, preoperative stiffness, and repair technique	HADS-D score is a significant factor for post-op VAS pain	0.115 (–0.053 to 0.283), p=0.174	NS
Cho, C. H., 2015	High Quality	PROs (specify) (UCLA score)	1 year	47	PICO 8: Risk Factor (Rotator cuff repair)	Behavioral health-Depression (HADS-D score-Hospital Anxiety and Depression Scale, depression subsection)	Age, sex, involved side, duration of symptoms, tear size, preoperative stiffness, and repair technique	Coefficient, 95% CI, p value	–0.027 (–0.565 to 0.511), p=0.920	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Cho, C. H., 2015	High Quality	PROs (specify) (UCLA score)	1 year	47	PICO 8: Risk Factor (Rotator cuff repair)	Behavioral health-Anxiety-Hospital Anxiety and Depression Scale, anxiety subsection	Age, sex, involved side, duration of symptoms, tear size, preoperative stiffness, and repair technique	Coefficient, 95% CI, p value	–0.089 (–0.491 to 0.313), p=0.657	NS
Cho, C. H., 2015	High Quality	PROs (specify) (ASES score)	1 year	47	PICO 8: Risk Factor (Rotator cuff repair)	Behavioral health-Depression (HADS-D score-Hospital Anxiety and Depression Scale, depression subsection)	Age, sex, involved side, duration of symptoms, tear size, preoperative stiffness, and repair technique	Coefficient, 95% CI, p value	0.235 (–1.492 to 1.963) p=0.785	NS
Cho, C. H., 2015	High Quality	PROs (specify) (ASES score)	1 year	47	PICO 8: Risk Factor (Rotator cuff repair)	Behavioral health-Anxiety-Hospital Anxiety and Depression Scale, anxiety subsection	Age, sex, involved side, duration of symptoms, tear size, preoperative stiffness, and repair technique	Coefficient, 95% CI, p value	–0.624 (–1.913 to 0.665), p=0.335	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS pain score)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	SF-36 MCS score	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.06 (.025)	Poorer SF-36 MCS score is a risk factor worse pain scores

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS function)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	SF-36 MCS score	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.03 (.123)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (SST)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	higher SF-36 MCS vs lower score	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.04 (.231)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (ASES)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	SF-36 MCS score	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	.46 (.035)	Poorer sf-36 mental component score is a risk factor for worse ASES scores

Table 126: Comorbidities

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Jung, S. W., 2016	High Quality	Clinical outcomes (specify) (Constant (Fair/Poor clinical outcomes))	2 years	32	PICO 8: Risk Factor (arthroscopic rotator cuff repair using Mason-Allen technique)	Pseudoparalysis vs. no pseudoparalysis	heavy work, joint space narrowing, fatty degeneration of SST, fatty degeneration of IST, tangent sign	multivariable logistic regression; odds ratios (upper, lower 95% CI), p-value	0.043 (0.001, 1.253), >0.05	NS
Jung, S. W., 2016	High Quality	Clinical outcomes (specify) (Constant (Fair/Poor clinical outcomes))	2 years	32	PICO 8: Risk Factor (arthroscopic rotator cuff repair using Mason-Allen technique)	joint space narrowing vs.no joint space narrowing	heavy work, pseudopralysis, fatty degeneration of SST, fatty degeneration of IST, tangent sign	multivariable logistic regression; odds ratios (upper, lower 95% CI), p-value	0.075 (0.002,3.524), <0.05	NS
Namdari, S., 2010	High Quality	PROs (specify) (DASH score)	1 year	154	PICO 8: Risk Factor (Rotator cuff repair (wide range of surgical teachniques))	Medical comorbidities	Age, sex, BMI, comorbidities, smoking, worker's compensation, injury to dominant side	Multiple linear regression	r=0.356, p<.001	Medical comorbidities significantly relates to worst postoperative DASH scores
Park, J. S., 2015	High Quality	Healing rate (Rotator Cuff Healing)	1 year	339	PICO 8: Risk Factor (arthroscopic rotator cuff repair)	Hypertension vs. no hypertension	age, fatty degeneration of infraspinatus, tear size, fatty degeneration of subscapularis, diabetes, hypertension, tear retraction	p-value	0.108	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Physical function))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Role Physical))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Bodily Pain))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	0.032	more comorbidites is significantly correlated with worse bodily pain (SF-36)
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (General Health))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	0.001	more comorbidites is significantly correlated with worse general health (SF-36)
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Vitality))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	0.033	more comorbidites is significantly correlated with worse vitality (SF-36)

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Social Function))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Role Emotional))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	0.045	more comorbidites is significantly correlated with worse role emotional (SF-36)
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SF-36 (Mental Health))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (VAS (Pain))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Tashjian, R. Z., 2006	High Quality	PROs (specify) (VAS (Function))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (VAS (QOL))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (SST)	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS
Tashjian, R. Z., 2006	High Quality	PROs (specify) (DASH (Pain/QOL))	1 year	125	PICO 8: Risk Factor (Rotator cuff repair; open repair (n=26), mini-open (n=62), arthroscopic (n=37))	more comorbidities vs. less comorbidities	patient age, sex, whether the patient had a pending, Workers' Compensation claim, the number of any previous nonshoulder surgical procedures, smoking, tear size, duration of symptoms, surgical technique (open, completely arthroscopic, or mini-open), and average patient expectation	Multivariate regression; p-value	>0.05	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS pain score)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	comorbidity vs no co orbidity	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.12 (.625)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS function)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	Medical Comorbidity vs no comorbidity	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.03 (.882)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (SST)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	Medical Comorbidity vs no comorbidity	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.13 (.660)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (ASES)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	Medical Comorbidity VS no comorbidity	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–1.45 (.496)	NS

Table 127: Diabetes

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	1 year	295	PICO 8: Risk Factor (arthroscopic RCT repair)	Diabetes vs. no diabetes	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	-3.676 (-6.907, 0.444), 0.026	diabetes is a risk factor for HRQOL (Physical health-related quality of life)
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	2 years	297	PICO 8: Risk Factor (arthroscopic RCT repair)	Diabetes vs. no diabetes	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	-3.696 (-6.936, -0.456), 0.027	diabetes is a risk factor for HRQOL (Physical health-related quality of life)
Kim, Y. K., 2018	High Quality	Radiographic tear (retear rate)	1 year	180	PICO 8: Risk Factor (arthroscopic rotator cuff repair)	diabetics vs non-diabetics	BMI, diabetes mellitus, Dyslipidemia, Extent of retraction, Delamination, Distance from MTJ to face of glenoid,Occupation ratio,Fatty infiltration (IS),acromiohumeral interval, repair techinique	multivariate logistic regression, ,odds ratio,(95% CI), p-value	2.703(1.021-24.332)	diabetes mellitus is a significant factor for the rate of retear
Park, J. S., 2015	High Quality	Healing rate (Rotator Cuff Healing)	1 year	339	PICO 8: Risk Factor (arthroscopic rotator cuff repair)	Diabetes vs. no diabetes	age, fatty degeneration of infraspinatus, tear size, fatty degeneration of subscapularis, diabetes, hypertension, tear retraction	p-value	0.09	NS

Table 128: Workers Compensation/Litigation

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Millett, P. J., 2017	High Quality	PROs (specify) (SF-12 (Physical component summary))	2 years	137	PICO 8: Risk Factor (arthroscopic rotator cuff repair using knotted suture-bridging or knotless tape-bridging)	Worker's compensation vs. no worker's compensation	age, sex, knotless tape bridging, baseline score, Log (days FU), number of anchors, prior RC surgery, workers' compensation	Multiple linear regression; correlation coefficient (upper, lower 95% CI), p-value	-9.3 (-15.1, -3.5), 0.002	Worker's compensation is a risk factor for SF-12 PCS score
Millett, P. J., 2017	High Quality	PROs (specify) (ASES (Function/pain))	2 years	137	PICO 8: Risk Factor (arthroscopic rotator cuff repair using knotted suture-bridging or knotless tape-bridging)	Worker's compensation vs. no worker's compensation	age, sex, knotless tape bridging, baseline score, Log (days FU), number of anchors, prior RC surgery, workers' compensation	Multiple linear regression; correlation coefficient (upper, lower 95% CI), p-value	-12.7 (-19.8, -5.7), 0.001	Worker's compensation is a risk factor for ASES score
Namdari, S., 2010	High Quality	PROs (specify) (DASH score)	1 year	154	PICO 8: Risk Factor (Rotator cuff repair (wide range of surgical teachniques))	Worker's compensation	Age, sex, BMI, comorbidities, smoking, worker's compensation, injury to dominant side	Multiple linear regression	p=.003	Worker's compensation significantly relates to worst postoperative DASH scores

Table 129: Nicotine products

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in VAS (pain))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	Active smoking status vs. inactive	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	0.81, 0.765	NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in SST)	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	Active smoking status vs. inactive	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	-0.28, 0.844	NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in ASES (Pain/function))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	Active smoke status vs. inactive	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	1.68, 0.872	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS pain score)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	smoking vs no smoking	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.48 (.377)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS function)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	smoking vs no smoking	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.15 (.740)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (SST)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	smoking vs no smoking	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.69 (.280)	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Wylie, J. D., 2018	High Quality	PROs (specify) (ASES)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	Smoking vs no smoking	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–4.36 (.355)	NS
Neyton L., 2013	Low Quality	Tendon Healing	1 year	107	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	Smokers vs non smokers	None	Smoker healing %/nonsmoking healing %(p value from chi squared)	78%/93%(p=.048)	Smokers had lower healing rates than non smokers
Djahangiri A., 2013	Low Quality	Cuff healed	Mean 57 month follow up	44	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	Smokers vs non smokers	None	Odds Ratio with Exact Confidence interval	0.485(0.074,3.801)	NS

Table 130: Patient expectations/motivations

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SST)	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	15.34, <0.001	Greater patient expectations are correlated with better SST score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (VAS (pain))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	9.91, 0.005	greater patient expectations are correlated with improved (lower) VAS pain score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (VAS (function))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	8.30, 0.023	Greater patient expectations are correlated with improved (lower) VAS function score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (VAS (QOL))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	14.90,<0.001	Greater patient expectations are correlated with improved (lower) VAS QOL score

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (physical function))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	19.84, <0.001	Greater patient expectations are correlated with better physical function (SF-36) score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (Role Physical))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	31.66, <0.001	Greater patient expectations are correlated with better role physical (SF-36) score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (Bodily Pain))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	15.34, <0.001	Greater patient expectations are correlated with improved bodily pain (SF-36) score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (General Healht))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	13.65, >0.001	Greater patient expectations are correlated with improved general health (SF-36) score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (Vitality))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	16.36, <0.001	Greater patient expectations are correlated with improved vitality (SF-36) score

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (Sf-36 (Social Function))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	22.47, <0.001	Greater patient expectations are correlated with improved social function (SF-36) score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (Role Emotional))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	26.96, <0.001	Greater patient expectations are correlated with improved role emotional (SF-36) score
Henn, R. F., 3rd, 2007	High Quality	PROs (specify) (SF-36 (Mental Health))	1 year	125	PICO 8: Risk Factor (unilateral primary repair of a chronic rotator cuff tear; open repair (n=26), mini-open repair (n=62), arthroscopic repair (n=37))	Greater patient expectations	age and gender matched, patient expectations	Linear Regression; multivariate correlation, p-value	15.42, <0.001	Greater patient expectations are correlated with improved mental heatlh (SF-36) score

Table 131: Age

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	1 year	295	PICO 8: Risk Factor (arthroscopic RCT repair)	age <55 vs. age >=65.	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	5.220 (2.250, 8.189), 0.008	age is a risk factor for worse HRQOL (Physical health-related quality of life)
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	1 year	295	PICO 8: Risk Factor (arthroscopic RCT repair)	age 55-60 vs age >=65	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	3.704 (0.316, 7.093), 0.008	age is a risk factor for worse HRQOL (Physical health-related quality of life)
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	1 year	295	PICO 8: Risk Factor (arthroscopic RCT repair)	age 60-65 vs. age >=65	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	3.053 (-0.068, 6.174), 0.008	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	2 years	297	PICO 8: Risk Factor (arthroscopic RCT repair)	age <55 vs. age >=65.	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	4.754 (1.777, 7.731), 0.013	age is a risk factor for worse HRQOL (Physical health-related quality of life)
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	2 years	297	PICO 8: Risk Factor (arthroscopic RCT repair)	age 55-60 vs age >=65	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	3.751 (0.354, 7.149), 0.013	age is a risk factor for worse HRQOL (Physical health-related quality of life)
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	2 years	297	PICO 8: Risk Factor (arthroscopic RCT repair)	age 60-65 vs. age >=65	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	2.168 (-0.960, 5.297), 0.013	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Chung, S. W., 2013	High Quality	Adverse events/complications (Postoperative shoulder stiffness (ASES and VAS))	2 years	288	PICO 8: Risk Factor (pts had either subacromial decompression, acromioplasty, debridement or reattachment using arthroscopic mini-open, or open repair; single or double row; standard rehabilitation post-op)	age	age, tear size of anteroposterior dimension, amount of retraction, fatty infiltration, operation technique, retear	Multivariate Logistic Regression; p-value	0.18	NS
Deniz, G., 2014	High Quality	PROs (specify) (Change in Constant)	1 year	87	PICO 8: Risk Factor (underwent single-row arthroscopic rotator cuff repair)	age	age, sex, number of torn tendons, size of the tear, follow-up duration, initial atrophy grade, final atrophy grade, change in atrophy, initial fatty degeneration, final fatty degeneration, change in fatty degeneration	Multiple linear regression; correlation coefficients, p-value	-0.275, 0.010	Age is a risk factor for Constant shoulder score
Deniz, G., 2014	High Quality	Clinical outcomes (specify) (Cuff integrity)	1 year	87	PICO 8: Risk Factor (underwent single-row arthroscopic rotator cuff repair)	age	age, sex, number of torn tendons, size of the tear, follow-up duration, initial atrophy grade, final atrophy grade, change in atrophy, initial fatty degeneration, final fatty degeneration, change in fatty degeneration	Multiple linear regression; correlation coefficients, p-value	-0.314, 0.003	age is a risk factor for cuff integrity

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Godeneche, A., 2017	High Quality	PROs (specify) (Constant score)	10 years	147	PICO 8: Risk Factor (open or arthroscopic surgery)	Age (continuous)	Age,sex,profession, Tear chronicity,FI of the SSP, FI of the ISP, Surgical technique	(Multivariable Regression), regresssion coefficient, CI, p-value	-0.1 -- 4.2 to 1.1) .260	NS
Godeneche, A., 2017	High Quality	Adverse events/complications (retear rate (Sugaya Classification))	10 years	147	PICO 8: Risk Factor (open or arthroscopic surgery)	age(continuous)	Age,sex,profession, Tear chronicity,FI of the SSP, FI of the ISP, Surgical technique	(Multivariable Regression), Odds ratio, CI, p-value	0.92 (0.47-1.8) .811	NS
Kim, D. H., 2016	High Quality	Healing rate (anatomic outcome of repair (healing))	1 year	132	PICO 8: Risk Factor (Arthroscopic rotator cuff repairs)	Age	amount of retraction, tendon quality,Fatty degeneration, sex, age, tear size	multivariable logistic regression analysis		NS
Kim, I. B., 2016	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	282	PICO 8: Risk Factor (Arthroscopic RCT repair; suture bridge technique)	age 65+ vs. age <65	sex, diabetes or smoking, symptom duration, kim classification, tendon involvment, goutallier stages 3 and 4: SST, Goutallier stages 3 and 4: IST	Multiple logistic regression; odds ratio (lower, upper 95% CI)	1.31 (0.491, 3.493)	NS
Kim, I. B., 2016	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	282	PICO 8: Risk Factor (Arthroscopic RCT repair; suture bridge technique)	age 65+ vs. age <65	sex, diabetes or smoking, symptom duration, kim classification, tendon involvment, goutallier stages 3 and 4: SST, Goutallier stages 3 and 4: IST	Multiple logistic regression; wald test, p-value	0.290, 0.590	NS
Milano, G., 2010	High Quality	PROs (specify) (DASH score)	2 years	110	PICO 8: Risk Factor (Arthroscopic rotator cuff repair)	Age	Age, fatty degeneration, sex, location, shape, retraction, fatty degeneration, repair technique, no. of anchors, treatment group	Linear Regression; p-value (upper, lower 95% CI)	0.017 (0.032, 0.327)	Age is significantly associated with worse DASH outcome

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Millett, P. J., 2017	High Quality	PROs (specify) (SF-12 (Physical component summary))	2 years	137	PICO 8: Risk Factor (arthroscopic rotator cuff repair using knotted suture-bridging or knotless tape-bridging)	age	age, sex, knotless tape bridging, baseline score, Log (days FU), number of anchors, prior RC surgery, workers' compensation	Multiple linear regression; correlation coefficient (upper, lower 95% CI), p-value	0.05 (-0.13, 0.22), 0.598	NS
Millett, P. J., 2017	High Quality	PROs (specify) (ASES (Function/pain))	2 years	137	PICO 8: Risk Factor (arthroscopic rotator cuff repair using knotted suture-bridging or knotless tape-bridging)	age	age, sex, knotless tape bridging, baseline score, Log (days FU), number of anchors, prior RC surgery, workers' compensation	Multiple linear regression; correlation coefficient (upper, lower 95% CI), p-value	0.12 (-0.10, 0.34), 0.298	NS
Park, J. S., 2015	High Quality	Healing rate (Rotator Cuff Healing)	1 year	339	PICO 8: Risk Factor (arthroscopic rotator cuff repair)	age	age, fatty degeneration of infraspinatus, tear size, fatty degeneration of subscapularis, diabetes, hypertension, tear retraction	Logistic Regression; Odds Ratio (upper, lower 95%), p-value	1.067 (1.015, 1.1220, 0.011	age is a risk factor for rotator cuff healing
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in VAS (pain))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	age	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	-0.14, 0.162	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in SST)	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	age	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	0.03, 0.560	NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in ASES (Pain/function))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	age	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	0.39, 0.315	NS
Rashid, M. S., 2017	High Quality	Healing rate (Healing)	1 year	220	PICO 8: Risk Factor (Rotator cuff repair)	Age	tear size, number of corticosteroid injections, sex, and hand dominance, age	Odds ratio, CI, p-value	0.95, 0.91–0.999, 0.04	Age is a significant factor for healing
Rhee, Y. G., 2014	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	238	PICO 8: Risk Factor (arthroscopic RCT repair)	age 70-79 vs. age 60-69	age, sex, large tear, massive tear	Logistic Regression; Wald test, p-value	1.548, 0.213	NS
Rhee, Y. G., 2014	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	238	PICO 8: Risk Factor (arthroscopic RCT repair)	age 70-79 vs. age 60-69	age, sex, large tear, massive tear	Logistic Regression; Odds Ratios (lower, upper 95% CI)	1.643 (0.752, 3.593)	NS
Robinson, P. M., 2013	High Quality	PROs (specify) (Constant (Pain/function))	1 year	51	PICO 8: Risk Factor (Arthroscopic rotator cuff repair)	Age 70-86	preop shoulder score, sex, history of injury, large/massive tear, ASA grade, Duration of symptoms, subacromial decompression, watertight repair	Coefficient (95% CI) p-value	-0.90 (-2.12 to 0.32) 0.144	Age is a risk factor for constant-murley 1 year post op

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS pain score)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	age	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.02 (.533)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS function)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	age	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.01 (.310)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (SST)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	age	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.03 (.409)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (ASES)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	age	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.07 (.792)	NS

Table 132: Sex

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	1 year	295	PICO 8: Risk Factor (arthroscopic RCT repair)	Male vs. female	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	2.408 (0.158, 4.658), 0.036	sex is a risk factor for HRQOL (Physical health-related quality of life)
Chung, S. W., 2012	High Quality	PROs (specify) (HRQOL (Physical health-related quality of life))	2 years	297	PICO 8: Risk Factor (arthroscopic RCT repair)	male vs. female	age, sex, diabetes, sports activity, initial pain, fatty infiltration of infraspinatus, fatty infiltration of subscapularis, repair integrity	Multivariate analysis of variance; coefficient, (upper, lower 95% CI), p-value	2.332 (0.076, 4.587), 0.043	sex is a risk factor for HRQOL (Physical health-related quality of life)

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Deniz, G., 2014	High Quality	PROs (specify) (Change in Constant)	1 year	87	PICO 8: Risk Factor (underwent single-row arthroscopic rotator cuff repair)	sex	age, sex, number of torn tendons, size of the tear, follow-up duration, initial atrophy grade, final atrophy grade, change in atrophy, initial fatty degeneration, final fatty degeneration, change in fatty degeneration	Multiple linear regression; correlation coefficients, p-value	-2.026, 0.814	NS
Deniz, G., 2014	High Quality	Clinical outcomes (specify) (Cuff integrity)	1 year	87	PICO 8: Risk Factor (underwent single-row arthroscopic rotator cuff repair)	sex	age, sex, number of torn tendons, size of the tear, follow-up duration, initial atrophy grade, final atrophy grade, change in atrophy, initial fatty degeneration, final fatty degeneration, change in fatty degeneration	Multiple linear regression; correlation coefficients, p-value	-0.061, 0.574	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Godenech e, A., 2017	High Quality	PROs (specify) (Constant score)	10 years	147	PICO 8: Risk Factor (open or arthroscopic surgery)	female vs male(ref)	Age,sex,profession, Tear chronicity,FI of the SSP, FI of the ISP, Surgical technique	(Multivariable Regression), regresssion coefficient, CI, p-value	-5.9 (-10.0 to -1.8) .005	Gender is a risk factor for Constant Score
Godenech e, A., 2017	High Quality	Adverse events/complications (retear rate (Sugaya Classification))	10 years	147	PICO 8: Risk Factor (open or arthroscopic surgery)	female vs male(ref)	Age,sex,profession, Tear chronicity,FI of the SSP, FI of the ISP, Surgical technique	(Multivariable Regression), Odds ratio, CI, p-value	0.91 (0.32-2.6) .861	NS
Kim, D. H., 2016	High Quality	Healing rate (anatomic outcome of repair (healing))	1 year	132	PICO 8: Risk Factor (Arthroscopic rotator cuff repairs)	female vs male	amount of retraction, tendon quality,Fatty degeneration, sex, age, tear size	multivariable logistic regression analysis		NS
Kim, I. B., 2016	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	282	PICO 8: Risk Factor (Arthroscopic RCT repair; suture bridge technique)	Female vs. Male	age, diabetes or smoking, symptom duration, kim classification, tendon involvment, goutallier stages 3 and 4: SST, Goutallier stages 3 and 4: IST	Multiple logistic regression; odds ratio (lower, upper 95% CI)	0.738 (0.318, 1.710)	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Kim, I. B., 2016	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	282	PICO 8: Risk Factor (Arthroscopic RCT repair; suture bridge technique)	female vs. male	age, diabetes or smoking, symptom duration, kim classification, tendon involvment, goutallier stages 3 and 4: SST, Goutallier stages 3 and 4: IST	Multiple logistic regression; wald test, p-value	0.503, 0.478	NS
Millett, P. J., 2017	High Quality	PROs (specify) (SF-12 (Physical component summary))	2 years	137	PICO 8: Risk Factor (arthroscopic rotator cuff repair using knotted suture-bridging or knotless tape-bridging)	male vs. female	age, sex, knotless tape bridging, baseline score, Log (days FU), number of anchors, prior RC surgery, workers' compensation	Multiple linear regression; correlation coefficient (upper, lower 95% CI), p-value	-2 (5.1, 1.1), 0.212	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Millett, P. J., 2017	High Quality	PROs (specify) (ASES (Function/pain))	2 years	137	PICO 8: Risk Factor (arthroscopic rotator cuff repair using knotted suture-bridging or knotless tape-bridging)	sex	age, sex, knotless tape bridging, baseline score, Log (days FU), number of anchors, prior RC surgery, workers' compensation	Multiple linear regression; correlation coefficient (upper, lower 95% CI), p-value	1.4 (-2.8, 5.6), 0.513	NS
Oh, J. H., 2012	High Quality	PROs (specify) (SF-36 (Mental Component summary))	1 year	128	PICO 8: Risk Factor (Rotator cuff repair)	Female vs. male	sex, MCS category in SF-36	Odds ratio	2.910 (1.28-6.61), r^2=1.068, p=.011	sex is a risk factor for SF-36 (mental health component)
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in VAS (pain))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	Female vs. Male	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	2.09, 0.244	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in SST)	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	female vs. male	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	0.66, 0.506	NS
Potter, M. Q., 2015	High Quality	PROs (specify) (Change in ASES (Pain/function))	1 year	85	PICO 8: Risk Factor (Arthroscopic RCT repair)	female vs. male	age, sex, BMI, smoking, modified zung depression scale, modified somatic perceptions questionnaire, american society of anesthesiologists classification, tear size, tear retraction	Mutlivariate analysis (correlation): regression coefficients, p-value	-7.22, 0.289	NS
Rhee, Y. G., 2014	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	238	PICO 8: Risk Factor (arthroscopic RCT repair)	female vs. male	age, sex, large tear, massive tear	Logistic Regression; Wald test, p-value	1.758, 0.185	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Rhee, Y. G., 2014	High Quality	Radiographic tear (Rotator Cuff Retear)	1 year	238	PICO 8: Risk Factor (arthroscopic RCT repair)	female vs. male	age, sex, large tear, massive tear	Logistic Regression; Odds Ratios (lower, upper 95% CI)	1.53 (0.815, 2.879)	NS
Robinson, P. M., 2013	High Quality	PROs (specify) (Constant (Pain/function))	1 year	51	PICO 8: Risk Factor (Arthroscopic rotator cuff repair)	male vs. female	preop shoulder score, age, history of injury, large/massive tear, ASA grade, Duration of symptoms, subacromial decompression, watertight repair	Coefficient (95% CI) p-value	14.13 (3.39 to 24.87) 0.011	Male is a risk factor for constant-murley 1 year post op
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS pain score)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	male vs female(ref)	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	–0.16 (.809)	NS
Wylie, J. D., 2018	High Quality	PROs (specify) (VAS function)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	male vs female(ref)	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.13 (.803)	NS

Reference Title	Quality	Outcome Details	Duration	N	Treatment (Details)	Comparison	Confounding Adjustment	Statistic	Result	Significance
Wylie, J. D., 2018	High Quality	PROs (specify) (SST)	1 year	75	PICO 8: Risk Factor (arthroscopic Rotator cuff repair)	male vs female	Age, sex, BMI, medical comorbidity, smoking, SF-36 MCS, Tendon healing	(multivariate logistic regression model) beta coefficient(p-value)	0.743 (.340)	NS

Quality Evaluation Table 10: ancillary surgical repairs-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Antuna, S., 2013	●	●	◑	●	●	◑	●	●	●	Include	High Quality
Aydin, N., 2010	●	◑	◑	●	◑	●				Include	High Quality
Barber, F. A., 2016	●	●	◑	●	●	○	●	●	●	Include	High Quality
Bryant, D. 2016	●	◑	●	●	◑	◑				Include	High Quality
Burks, T. 2009	●	●	◑	●	●	○				Include	High Quality
Carbonel, I., 2012	●	◑	◑	●	●	●	●	●	●	Include	High Quality
Carr, A. J., 2015	●	◑	●	●	●	●				Include	High Quality
Carr, A., 2017	●	◑	◑	◑	●	●	●	●	●	Include	High Quality
Castricini, R, 2011	●	●	◑	●	●	●	●	●	●	Include	High Quality
D'Ambrosi, R., 2016	●	●	◑	●	●	●	●	●	●	Include	High Quality
Flury, M. 2018	◑	◑	◑	○	◑	○				Include	Low Quality
Franceschi, F, 2016	●	●	◑	◑	●	●	●	●	●	Include	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Franceschi, F., 2007	●	●	◑	◑	●	●	●	●	●	Include	High Quality
Grasso, A., 2009	●	◑	◑	◑	●	●	●	●	●	Include	High Quality
Gumina, S., 2012	●	●	◑	●	◑	●				Include	High Quality
Gumina, S., 2012	◑	●	◑	●	◑	●				Include	High Quality
Iannotti, J. 2006	●	◑	◑	●	●	○	●	●	●	Include	Moderate Quality
Jo, C. H., 2015	●	◑	●	●	●	○	●	●	●	Include	High Quality
Kim, Y. S., 2016	●	●	●	○	◑	●				Include	High Quality
Koh, K. H., 2011	●	◑	◑	◑	●	●	●	●	●	Include	High Quality
Lapner, Pl, 2012	●	●	●	◑	●	◑	●	●	●	Include	High Quality
Liu, J., 2017	●	◑	◑	●	●	●	●	●	●	Include	High Quality
Ma, Hl, 2012	●	●	◑	◑	●	●	●	●	●	Include	High Quality
Malavolta, E. A., 2014	●	●	◑	●	●	●	●	●	●	Include	High Quality
Milano, G, 2013	●	●	◑	●	●	●	●	●	●	Include	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Mohtadi, N. G., 2008	●	●	◑	●	●	●	●	●	●	Include	High Quality
Pandey, V, 2016	◑	●	●	●	◑	◑	●	●	●	Include	High Quality
Randelli, P., 2011	●	●	●	◑	●	○	●	●	●	Include	High Quality
Randelli, P., 2017	●	●	◑	●	●	○	●	●	●	Include	High Quality
Ruiz-Moneo, P., 2013	◑	●	●	●	◑	●				Include	High Quality
Wang, A., 2015	●	◑	●	●	●	○	●	●	●	Include	High Quality
Zhang, Z., 2016	◑	◑	◑	●	●	●	●	●	●	Include	High Quality
Zumstein, M. A., 2016	●	◑	◑	●	●	●	●	●	●	Include	High Quality
Zwaal, P, 2013	●	◑	○	●	●	●	●	●	●	Include	High Quality

Quality Evaluation Table 11: Ancillary surgical repairs-randomized studies Observational studies

Study	Design	Participant Recruitment	Allocation	Confounding Variables	Follow-Up Length	Other Bias? (If retrospective comparative, mark Yes)	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Gilot, G. 2015	○	●	●	●	●	●				Include	Low Quality
Osti L. 2010	○	●	●	●	●	○				Include	Low Quality

Figure 11 Meta-Analysis- PICO 9 Biologics (with repair) vs Arthroscopic Repair (alone): Function 1 year

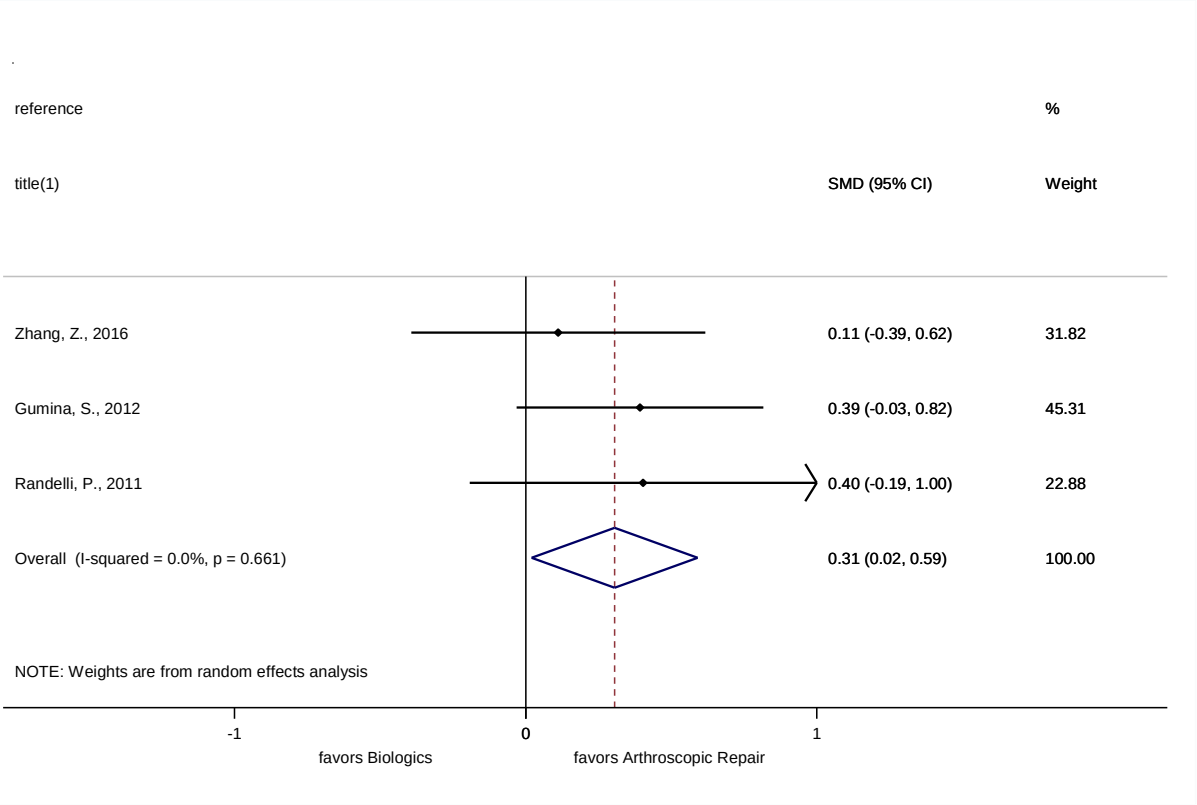


Figure 2 Meta-Analysis- PICO 9 PRP vs Control : Re-tear at 1 year

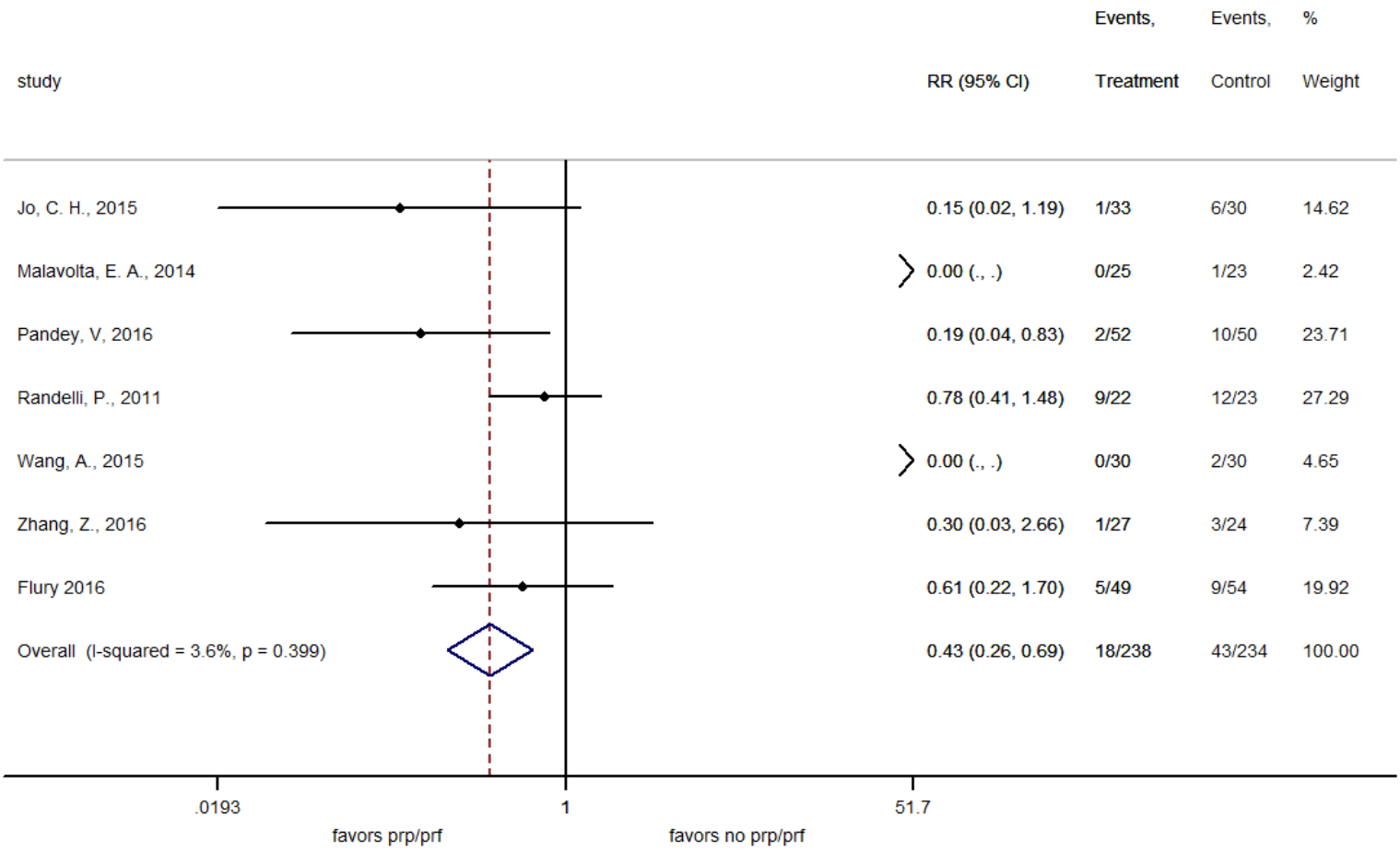


Table 133: Summary of Findings-Pico 9 Part 1: Biologics with repair (specify in details) vs. Arthroscopic repair

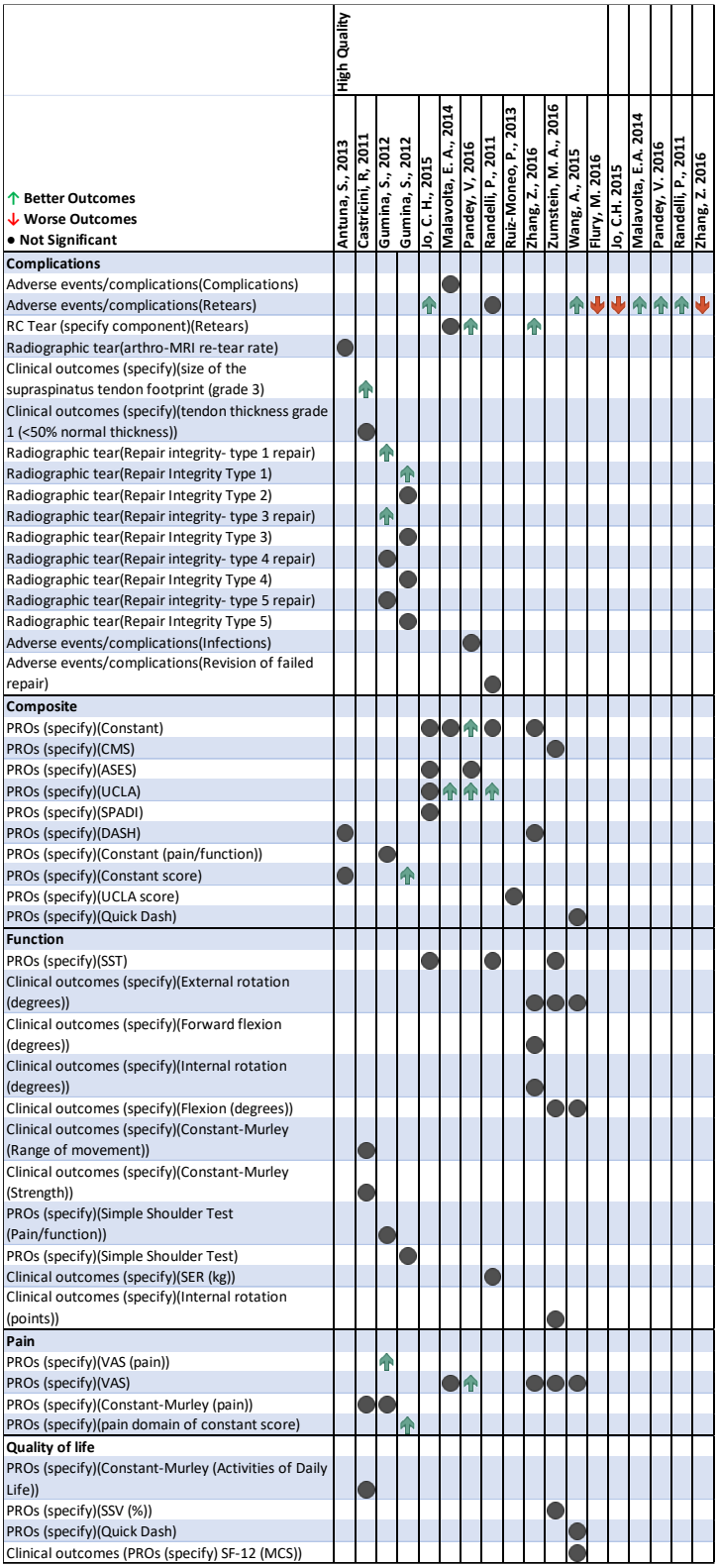


Table 134: Summary of Findings-Pico 9 Part 2: Biologics with repair vs. Open repair

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Bryant, D. 2016	Moderate Quality Iannotti, Jp, 2006	Low Quality Ciampi, P., 2015
Complications			
Clinical outcomes (specify)(Healing of RC tear)		●	↑
Clinical outcomes (specify)(re-tear)	●		
Radiographic tear	●		
Function			
PROs (specify)(PENN Shoulder questionnaire (function))		↑	
Clinical outcomes (specify) Elevation on scapular plane (degrees)			↑
Clinical outcomes (specify) Abduction strength (kg)			↑
Pain			
PROs (specify)(PENN Shoulder questionnaire (Pain))		●	
PROs (specify) VAS (pain)			●
PROs (specify) (UCLA score)			↑
Quality of life			
PROs (specify)(PENN Shoulder questionnaire (satisfaction))		●	
PROs (WORC (Physical symptoms))	●		
PROs (WORC (Sports and recreation))	●		
PROs (WORC(Work))	●		

Table 135: Summary of Findings-Pico 9 Part 3: Double row vs. Knotless

	Low Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Hug, K., 2015
Composite	
PROs (specify)(Constant score)	●
Quality of life	
PROs (specify)(SSV (%))	●
PROs (specify)(WORC (%))	●

Table 136: Summary of Findings-Pico 9 Part 4: Double row vs. Single row

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Aydin, N., 2010	Barber, F. A., 2016	Carbonel, I., 2012	Franceschi, F, 2016	Franceschi, F., 2007	Koh, K. H., 2011	Lapner, PJ, 2012	Ma, HI, 2012	Burks, R., 2012
Complications									
Adverse events/complications(Complications)				●					
Adverse events/complications(Retears)		●							●
RC Tear (specify component)(Retears)				↑					
RC Tear (specify component)(Retears (MRA))					●				
Composite									
PROs (specify)(Constant)		●	●			●	●		●
PROs (specify)(ASES)		●	↑			●	●	●	●
PROs (specify)(UCLA)			↑		●	●		●	●
Other(Constant shoulder scoring system.)	●								
Function									
PROs (specify)(ASES)			↑						
PROs (specify)(SST)		●							
Clinical outcomes (specify)(External rotation (degrees))			↑	●	●	●			●
Clinical outcomes (specify)(Forward flexion (degrees))					●				
Clinical outcomes (specify)(Internal rotation (degrees))			↑	●	●				●
Clinical outcomes (specify)(Forward elevation (degrees))						●			
Clinical outcomes (specify)(Flexion (degrees))			↑						
Clinical outcomes (specify)(Abduction Strength (kg))								●	
Clinical outcomes (specify)(External Rotation Strength (kg))								●	
Clinical outcomes (specify)(forward flexion)				●					
PROs (specify)(Rowe)		●							
PROs (specify)(SANE)		●							●
(Internal Rotation SSI-tears 30-50mm)			↑						
Clinical outcomes (specify)(Abduction SSI-tears 10-30mm)			↑						
Clinical outcomes (specify)(Abduction SSI-tears 30-50mm)			↑						
Clinical outcomes (specify)(External Rotation SSI-tears 10-30mm)			●						
Clinical outcomes (specify)(External Rotation SSI-tears 30-50mm)			↑						
Clinical outcomes (specify)(Flexion SSI)			↑						
Clinical outcomes (specify)(Internal Rotation SSI-tears 10-30mm)			↑						
PROs (specify)(modified UCLA)				●					
Clinical outcomes (specify)(Strength (kg))							●		
Pain									
PROs (specify)(PVAS (pain))						●			
Quality of life									
PROs (specify)(WORC)							●		●

Table 137: Summary of Findings-Pico 9 Part 5: Knot vs. Knotless

	High Quality	Low Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Kim, Y. S., 2016	Boyer, P., 2015	Rhee, Y. G., 2012
Complications			
Adverse events/complications(types 4 and 5 (retears))	●		
Radiographic tear(retear rate)			↓
Composite			
PROs (specify)(Constant)	●		
PROs (specify)(Constant score)		●	●
PROs (specify)(UCLA score)			●
Clinical outcomes (specify)(ASES)	●		
Function			
Clinical outcomes (specify)(SST)	●		
Clinical outcomes (specify)(Muscle strength, kg External rotation)			●
Clinical outcomes (specify)(Muscle strength, kg Forward flexion)			●
Clinical outcomes (specify)(Muscle strength, kg Internal rotation)			●
Clinical outcomes (specify)(ROM, degrees Abduction)			●
Clinical outcomes (specify)(ROM, degrees External rotation at the side)			●
Clinical outcomes (specify)(ROM, degrees Forward flexion)			●
Pain			
PROs (specify)(Visual analog scale (VAS))	↓		
PROs (specify)(pain score (VAS) at ROM)			↓

Table 138: Summary of Findings-Pico 9 Part 6: Marrow stimulation with repair vs. Arthroscopic repair

	Taniguchi, N., 2015	Low Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant		
Complications		
Radiographic tear(retear rate)		
Radiographic tear(cuff integrity score for large tears)		
Radiographic tear(cuff repair integrity score)		
Radiographic tear(Retear rate of middle tears)		

Table 139: Summary of Findings-Pico 9 Part 7: Marrow stimulation with repair vs. Single row

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Randelli, P., 2017
Complications	
Adverse events/complications(Complications)	●
Composite	
PROs (specify)(Constant)	●
PROs (specify)(QuickDASH)	↑
Pain	
PROs (specify)(NRS)	●

Table 140: Summary of Findings-Pico 9 Part 8: Open repair vs. Arthroscopic repair

	High Quality				Low Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Carr, A. J., 2015	Carr, A., 2017	Liu, J., 2017	Zwaal, P, 2013	Osti, L., 2010
Complications					
RC Tear (specify component)(Retears)				●	
Adverse events/complications(Retear)	●	●			
RC Tear (specify component)(Retears (unspecified))			●		
Composite					
PROs (specify)(Constant)				●	
PROs (specify)(CMS)			●		
PROs (specify)(DASH)				●	
PROs (specify)(Oxford Shoulder Score (OSS))		●			
PROs (specify)(Chinese DASH)			●		
PROs (specify)(UCLA score)					●
Function					
Clinical outcomes (specify)(External rotation (degrees))				↓	●
Clinical outcomes (specify)(Forward flexion (degrees))				↓	●
Clinical outcomes (specify)(OSS)	●				
Clinical outcomes (specify)(ROM External Rotation (degrees))			●		
Clinical outcomes (specify)(ROM Forward Flexion (degrees))			●		
Pain					
PROs (specify)(VAS)			●	↓	
PROs (specify)(SPADI pain)	●				
Quality of life					
Clinical outcomes (specify)(SPADI disability)	●				
PROs (specify)(European Quality of Life-5)	●				
PROs (specify)(Mental Health Inventory 5 (MHI-5))	●				
PROs (specify)(EQ-5D (EuroQol-5D))		●			
PROs (specify)(MHI-5 (mental Health Inventory))	●				
PROs (specify) SP-36 (Multiple components)					●

Table 141: Summary of Findings-Pico 9 Part 9: Open repair vs. Mini-open repair

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Mohtadi, N. G., 2008 High Quality
Complications	
Adverse events/complications(Reoperations)	●
Composite	
PROs (specify)(ASES)	●
Function	
Clinical outcomes (specify)(Forward elevation (degrees))	●
Clinical outcomes (specify)(External rotation at 90 deg (degrees))	↑
Clinical outcomes (specify)(External rotation on side (degrees))	●
PROs (specify)(FSET)	●
PROs (specify)(RC-QOL)	●
PROs (specify)(SRQ)	●

Table 10: Summary of Findings-Pico 9 Part 9: Arthroscopic repair vs. Arthroscopic repair

	Low Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Gilot, G. J., 2015	Flury, M. J, 2018
Complications		
Adverse event/complications (Retears)	↑	
Composite		
PROs (specify)(ASES (pain/function))	●	●
PROs (specify)(Constant score)	●	
PROs (specify)(Oxford Shoulder Score (OSS))		●
Function		
Clinical outcomes (specify)(Abduction (degrees)))		●
Clinical outcomes (specify)(Forward flexion (degrees))		●
Clinical outcomes (specify)(OSS)		
Clinical outcomes (specify)(External rotation in 0 degrees of abduction)		●
Clinical outcomes (specify)(External rotation in 90 degrees of abduction)		●
Clinical outcomes (specify)(Internal rotation in 90 degrees of abduction)		●
Clinical outcomes (specify)(Strength in abduction (kg))		●
Pain		
PROs (specify)(VAS-pain)	↑	
PROs (specify)(SPADI pain)		
Quality of Life		
PROs (specify)(EQ-ED utility index)		●
PROs (specify)(WORC)	●	
PROs (specify)(SP-12 (Physical Component))	↑	
PROs (specify)(SP-12 (Mental Component))	●	

Table 11: Summary of Findings-Pico 9 Part 9: Biologics with repair vs. Biologics with repair

	Low Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Ciampi, P., 2015
Complications	
Adverse event/complications (Retears)	↑
Composite	
PROs (specify)(UCLA score)	↑
PROs (specify)(Constant score)	●
Function	
Clinical outcomes (specify)(Elevation on scapular plane (degrees))	↑
Clinical outcomes (specify)(Abduction strength (kg))	↑

Table 142: Pico 9 Part 1: Biologics with repair (specify in details) vs. Arthroscopic repair -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Antuna, S., 2013	High Quality	Radiographic tear(arthro-MRI re-tear rate)	1 years	g1(PRF) (arthroscopic repair with Platelet-rich fibrin)	14	92.86%	g2(w/out PRF) (arthroscopic repair without platelet-rich fibrin)	14	71.43%	RR	1.30(0.91,1.87)	Not Significant (P-value>.05)
Castricini, R, 2011	High Quality	Clinical outcomes (specify)(size of the supraspinatus tendon footprint (grade 3)	1.6 years	g2(RCR w PRFM) (arthroscopic rotator cuff repair and augmentation with PRFM)	43	81.40%	g1(RCR w/out PRFM) (arthroscopic rotator cuff repair alone)	45	51.11%	RR	1.59(1.16,2.19)	**Treatment 1 Significant (P-value<.05)**
Castricini, R, 2011	High Quality	Clinical outcomes (specify)(tendon thickness grade 1 (<50% normal thickness))	1.6 years	g2(RCR w PRFM) (arthroscopic rotator cuff repair and augmentation with PRFM)	43	4.65%	g1(RCR w/out PRFM) (arthroscopic rotator cuff repair alone)	45	11.11%	RR	0.42(0.09,2.04)	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	Radiographic tear(Repair integrity- type 1 repair)	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	61.36%	g2(w/out supplement) (arthroscopic repair only)	43	39.53%	RR	1.55(1.00,2.40)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gumina, S., 2012	High Quality	Radiographic tear(Repair Integrity Type 1)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	58.97%	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	35.14%	RR	1.68(1.01,2.80)	**Treatment 1 Significant (P-value<.05)**
Gumina, S., 2012	High Quality	Radiographic tear(Repair Integrity Type 2)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	28.21%	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	29.73%	RR	0.95(0.47,1.92)	**Treatment 1 Significant (P-value<.05)**
Gumina, S., 2012	High Quality	Radiographic tear(Repair integrity- type 3 repair)	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	9.09%	g2(w/out supplement) (arthroscopic repair only)	43	27.91%	RR	0.33(0.11,0.93)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gumina, S., 2012	High Quality	Radiographic tear(Repair Integrity Type 3)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	12.82%	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	27.03%	RR	0.47(0.18,1.26)	**Treatment 1 Significant (P-value<.05)**
Gumina, S., 2012	High Quality	Radiographic tear(Repair integrity- type 4 repair)	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	4.55%	g2(w/out supplement) (arthroscopic repair only)	43	6.98%	RR	0.65(0.11,3.71)	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	Radiographic tear(Repair Integrity Type 4)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	0.00%	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	2.70%	RD	-0.03(-0.10,0.04)	**Treatment 1 Significant (P-value<.05)**
Gumina, S., 2012	High Quality	Radiographic tear(Repair integrity- type 5 repair)	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	0.00%	g2(w/out supplement) (arthroscopic repair only)	43	2.33%	RD	-0.02(-0.09,0.04)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gumina, S., 2012	High Quality	Radiographic tear(Repair Integrity Type 5)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	0.00%	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	5.41%	RD	-0.05(-0.14,0.03)	**Treatment 1 Significant (P-value<.05)**
Jo, C. H., 2015	High Quality	Adverse events/complications(Retears)	1 year	G1 (PRP) (PRP-augmented arthroscopic RC repair)	33	3.03%	G2 (Conventional) (Conventional arthroscopic RC repair)	30	20.00%	RR	0.15(0.02,1.19)	**Treatment 1 Significant (P-value<.05)**
Malavolta, E. A., 2014	High Quality	Adverse events/complications(Complications)	1 year	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	0.00%	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	0.00%	RD	0.00(-0.07,0.07)	Not Significant (P-value>.05)
Malavolta, E. A., 2014	High Quality	RC Tear (specify component)(Retears)	1 year	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	7.41%	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	18.52%	RR	0.40(0.08,1.89)	Not Significant (P-value>.05)
Pandey, V, 2016	High Quality	Adverse events/complications(Infections)	2 years	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	0.00%	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	0.00%	RD	0.00(-0.04,0.04)	Not Significant (P-value>.05)
Pandey, V, 2016	High Quality	RC Tear (specify component)(Retears)	2 years	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	3.85%	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	20.00%	RR	0.19(0.04,0.83)	**Treatment 1 Significant (P-value<.05)**
Randelli, P., 2011	High Quality	Adverse events/complications(Retears)	2.1 years	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	40.91%	G2 (Control) (arthroscopic repair w/o PRP application)	23	52.17%	RR	0.78(0.41,1.48)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Randelli, P., 2011	High Quality	Adverse events/complications(Revision of failed repair)	2.1 years	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	0.00%	G2 (Control) (arthroscopic repair w/o PRP application)	23	4.35%	RD	-0.04(-0.16,0.07)	Not Significant (P-value>.05)
Zhang, Z., 2016	High Quality	RC Tear (specify component)(Retears)	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	30.00%	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	13.33%	RR	2.25(0.78,6.52)	**Treatment 1 Significant (P-value<.05)**
Flury, M. 2016	High Quality	Re-tear rate @ 1 year	1 year	G1 (PRP)	49	.407	G2 (Control	54	.305			**Treatment 2 Significant (P-value<.05)**
Jo, C.H. 2015	High Quality	Re-tear rate @ 1 year	1 year	G1 (PRP)	33	0.03	G2 (Conventional)	30	0.2			**Treatment 2 Significant (P-value<.05)**
Malavolta, E.A. 2014	High Quality	Re-tear rate @ 1 year	1 year	G1 (PRP)	27	0.07	G2 (control)	27	0.19			**Treatment 1 Significant (P-value<.05)**
Pandey, V. 2016	High Quality	Re-tear rate @ 1 year	2 years	G1 (PRP)	52	0.04	G2 (control)	50	0.2			**Treatment 1 Significant (P-value<.05)**
Randelli, P., 2011	High Quality	Re-tear rate @ 1 year	1 year	G1 (PRP)	22	0.41	G2 (control)	23	0.53			**Treatment 1 Significant (P-value<.05)**
Wang, A. 2015	High Quality	Re-tear rate @ 1 year	1 year	G1 (PRP)	30	0.0	G2 (control)	30	0.07			**Treatment 1 Significant (P-value<.05)**
Zhang, Z. 2016	High Quality	Re-tear rate @ 1 year	1 year	G1 (PRP)	30	0.3	G2 (control)	30	0.13			**Treatment 2 Significant (P-value<.05)**

Table 143: Pico 9 Part 1: Biologics with repair (specify in details) vs. Arthroscopic repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Antuna, S., 2013	High Quality	PROs (specify)(Constant score)	1 years	g1(PRF) (arthroscopic repair with Platelet-rich fibrin)	14	60.8(.)	g2(w/out PRF) (arthroscopic repair without platelet-rich fibrin)	14	68(.)	Author Reported	NA	Not Significant (P-value>.05)
Antuna, S., 2013	High Quality	PROs (specify)(DASH)	1 years	g1(PRF) (arthroscopic repair with Platelet-rich fibrin)	14	25.8(.)	g2(w/out PRF) (arthroscopic repair without platelet-rich fibrin)	14	27(.)	Author Reported	NA	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	PROs (specify)(Constant (Pain/function))	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	73.6(3.70)	g2(w/out supplement) (arthroscopic repair only)	43	74.5(6.40)	MeanDif	-0.9(-3.10,1.30)	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	PROs (specify)(Constant score)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	77.9(5.70)	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	74.2(6.10)	MeanDif	3.7(1.04,6.36)	**Treatment 1 Significant (P-value<.05)**
Jo, C. H., 2015	High Quality	PROs (specify)(ASES)	1 year	G1 (PRP) (PRP-augmented arthroscopic RC repair)	37	87.96(13.10)	G2 (Conventional) (Conventional arthroscopic RC repair)	37	83.65(14.56)	MeanDif	4.31(-2.00,10.62)	Not Significant (P-value>.05)
Jo, C. H., 2015	High Quality	PROs (specify)(Constant)	1 year	G1 (PRP) (PRP-augmented arthroscopic RC repair)	37	74.67(9.17)	G2 (Conventional) (Conventional arthroscopic RC repair)	37	70.87(9.76)	MeanDif	3.8(-0.52,8.12)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jo, C. H., 2015	High Quality	PROs (specify)(SPADI)	1 year	G1 (PRP) (PRP-augmented arthroscopic RC repair)	37	10.98(12.20)	G2 (Conventional) (Conventional arthroscopic RC repair)	37	13.8(11.65)	MeanDif	-2.82(-8.26,2.62)	Not Significant (P-value>.05)
Jo, C. H., 2015	High Quality	PROs (specify)(UCLA)	1 year	G1 (PRP) (PRP-augmented arthroscopic RC repair)	37	30.73(4.15)	G2 (Conventional) (Conventional arthroscopic RC repair)	37	29.54(4.86)	MeanDif	1.19(-0.87,3.25)	Not Significant (P-value>.05)
Malavolta, E. A., 2014	High Quality	PROs (specify)(Constant)	1 year	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	83.26(11.14)	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	76.89(13.20)	MeanDif	6.37(-0.14,12.88)	Not Significant (P-value>.05)
Malavolta, E. A., 2014	High Quality	PROs (specify)(Constant)	2 years	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	84.78(14.05)	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	85.15(9.88)	MeanDif	-0.37(-6.85,6.11)	Not Significant (P-value>.05)
Malavolta, E. A., 2014	High Quality	PROs (specify)(UCLA)	1 year	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	32.3(3.51)	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	30.04(4.53)	MeanDif	2.26(0.10,4.42)	**Treatment 1 Significant (P-value<.05)**
Malavolta, E. A., 2014	High Quality	PROs (specify)(UCLA)	2 years	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	32.44(4.32)	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	32.7(3.64)	MeanDif	-0.26(-2.39,1.87)	Not Significant (P-value>.05)
Pandey, V, 2016	High Quality	PROs (specify)(ASES)	1 year	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	87.4(5.46)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	86.4(6.30)	MeanDif	1(-1.29,3.29)	Not Significant (P-value>.05)
Pandey, V, 2016	High Quality	PROs (specify)(ASES)	2 years	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	87.9(5.73)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	86.1(6.20)	MeanDif	1.8(-0.52,4.12)	Not Significant (P-value>.05)
Pandey, V, 2016	High Quality	PROs (specify)(Constant)	1 year	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	92.6(5.07)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	88.9(8.47)	MeanDif	3.7(0.98,6.42)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Pandey, V, 2016	High Quality	PROs (specify)(Constant)	2 years	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	93.2(4.97)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	87.6(8.12)	MeanDif	5.6(2.97,8.23)	**Treatment 1 Significant (P-value<.05)**
Pandey, V, 2016	High Quality	PROs (specify)(UCLA)	1 year	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	34.73(0.69)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	33.09(3.67)	MeanDif	1.64(0.61,2.67)	**Treatment 1 Significant (P-value<.05)**
Pandey, V, 2016	High Quality	PROs (specify)(UCLA)	2 years	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	34.75(0.72)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	32.22(3.55)	MeanDif	2.53(1.53,3.53)	**Treatment 1 Significant (P-value<.05)**
Randelli, P., 2011	High Quality	PROs (specify)(Constant)	1 year	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	78.3(6.40)	G2 (Control) (arthroscopic repair w/o PRP application)	22	75.7(9.50)	MeanDif	2.6(-2.19,7.39)	Not Significant (P-value>.05)
Randelli, P., 2011	High Quality	PROs (specify)(Constant)	2 years	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	82.4(6.30)	G2 (Control) (arthroscopic repair w/o PRP application)	23	78.7(10.00)	MeanDif	3.7(-1.16,8.56)	Not Significant (P-value>.05)
Randelli, P., 2011	High Quality	PROs (specify)(UCLA)	1 year	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	31.2(5.20)	G2 (Control) (arthroscopic repair w/o PRP application)	22	31(4.10)	MeanDif	0.2(-2.57,2.97)	Not Significant (P-value>.05)
Randelli, P., 2011	High Quality	PROs (specify)(UCLA)	2 years	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	33.3(2.20)	G2 (Control) (arthroscopic repair w/o PRP application)	23	31.3(4.10)	MeanDif	2(0.09,3.91)	**Treatment 1 Significant (P-value<.05)**
Ruiz-Moneo, P., 2013	High Quality	PROs (specify)(UCLA score)	1 year	g1(PRGF) (arthroscopic repair and received plasma rich in growth factors (PRGF))	32	23.2(7.22)	g2(control) (arthroscopic repair only)	31	23.8(8.24)	MeanDif	-0.6(-4.43,3.23)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Zhang, Z., 2016	High Quality	PROs (specify)(Constant)	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	80.3(6.70)	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	81.5(7.70)	MeanDif	-1.2(-4.85,2.45)	Not Significant (P-value>.05)
Zhang, Z., 2016	High Quality	PROs (specify)(DASH)	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	70.2(7.30)	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	71.5(6.10)	MeanDif	-1.3(-4.70,2.10)	Not Significant (P-value>.05)
Zumstein, M. A., 2016	High Quality	PROs (specify)(CMS)	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	80(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	80(.)	Author Reported	NA	Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) Quick Dash	6 weeks	G1 (PRP)	30	51.17 (19.54)	G2 (Control)	30	53.48 (13.27)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) Quick Dash	12 weeks	G1 (PRP)	30	33.14 (19.27)	G2 (Control)	30	36.33 (17.4)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) Quick Dash	16 weeks	G1 (PRP)	30	22.58 (14.36)	G2 (Control)	30	17.23 (13.56)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) OSS	6 weeks	G1 (PRP)	30	23.57 (9.61)	G2 (Control)	30	21.48 (6.61)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) OSS	12 weeks	G1 (PRP)	30	33.38 (8.93)	G2 (Control)	30	32.53 (6.92)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) OSS	16 weeks	G1 (PRP)	30	38.17 (7.19)	G2 (Control)	30	40.37 (5.12			Not Significant (P-value>.05)

Table 144: Pico 9 Part 1: Biologics with repair (specify in details) vs. Arthroscopic repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Castricini, R, 2011	High Quality	Clinical outcomes (specify)(Constant-Murley (Range of movement))	1.6 years	g2(RCR w PRFM) (arthroscopic rotator cuff repair and augmentation with PRFM)	45	39.1(.)	g1(RCR w/out PRFM) (arthroscopic rotator cuff repair alone)	45	38.8(.)	Author Reported	NA	Not Significant (P-value>.05)
Castricini, R, 2011	High Quality	Clinical outcomes (specify)(Constant-Murley (Strength))	1.6 years	g2(RCR w PRFM) (arthroscopic rotator cuff repair and augmentation with PRFM)	45	15.7(.)	g1(RCR w/out PRFM) (arthroscopic rotator cuff repair alone)	45	16.5(.)	Author Reported	NA	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	PROs (specify)(Simple Shoulder Test (Pain/function))	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	10.7(0.80)	g2(w/out supplement) (arthroscopic repair only)	43	10.3(1.20)	MeanDif	0.4(-0.03,0.83)	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	PROs (specify)(Simple Shoulder Test)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	10.5(0.80)	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	10.1(1.00)	MeanDif	0.4(-0.01,0.81)	Not Significant (P-value>.05)
Jo, C. H., 2015	High Quality	PROs (specify)(SST)	1 year	G1 (PRP) (PRP-augmented arthroscopic RC repair)	37	10.24(2.14)	G2 (Conventional) (Conventional arthroscopic RC repair)	37	9.76(2.27)	MeanDif	0.48(-0.53,1.49)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Randelli, P., 2011	High Quality	Clinical outcomes (specify)(SER (kg))	1 year	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	4.2(2.80)	G2 (Control) (arthroscopic repair w/o PRP application)	22	3.7(1.50)	MeanDif	0.5(-0.83,1.83)	Not Significant (P-value>.05)
Randelli, P., 2011	High Quality	Clinical outcomes (specify)(SER (kg))	2 years	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	4.3(2.30)	G2 (Control) (arthroscopic repair w/o PRP application)	23	4(1.90)	MeanDif	0.3(-0.94,1.54)	Not Significant (P-value>.05)
Randelli, P., 2011	High Quality	PROs (specify)(SST)	1 year	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	11.1(0.90)	G2 (Control) (arthroscopic repair w/o PRP application)	22	10.6(1.50)	MeanDif	0.5(-0.23,1.23)	Not Significant (P-value>.05)
Randelli, P., 2011	High Quality	PROs (specify)(SST)	2 years	G1 (PRP) (arthroscopic repair w/local autologous PRP application)	22	11.3(0.90)	G2 (Control) (arthroscopic repair w/o PRP application)	23	10.9(1.40)	MeanDif	0.4(-0.28,1.08)	Not Significant (P-value>.05)
Zhang, Z., 2016	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	78.1(8.20)	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	77.8(6.00)	MeanDif	0.3(-3.34,3.94)	Not Significant (P-value>.05)
Zhang, Z., 2016	High Quality	Clinical outcomes (specify)(Forward flexion (degrees))	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	176(8.40)	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	175(9.40)	MeanDif	1(-3.51,5.51)	Not Significant (P-value>.05)
Zhang, Z., 2016	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	12.2(1.40)	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	11.9(2.10)	MeanDif	0.3(-0.60,1.20)	Not Significant (P-value>.05)
Zumstein, M. A., 2016	High Quality	Clinical outcomes (specify)(External rotation (degrees))	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	36(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	39(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Zumstein, M. A., 2016	High Quality	Clinical outcomes (specify)(Flexion (degrees))	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	153(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	164(.)	Author Reported	NA	Not Significant (P-value>.05)
Zumstein, M. A., 2016	High Quality	Clinical outcomes (specify)(Internal rotation (points))	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	5.9(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	7.8(.)	Author Reported	NA	Not Significant (P-value>.05)
Zumstein, M. A., 2016	High Quality	PROs (specify)(SST)	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	10.7(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	10.9(.)	Author Reported	NA	Not Significant (P-value>.05)
Wang, A., 2015	High Quality	Clinical outcomes (specify) Arm flexion	16 weeks	G1 (PRP)	30	144.8 (22.8)	G2 (Control)	30	151.8 (19.8)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	Clinical outcomes (specify) Arm Abduction	16 weeks	G1 (PRP)	30	134.8 (28.2)	G2 (Control)	30	137.4 (29.1)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	Clinical outcomes (specify) External Rotation	16 weeks	G1 (PRP)	30	41.1 (10.2)	G2 (Control)	30	42.8 (9.3)			Not Significant (P-value>.05)

Table 145: Pico 9 Part 1: Biologics with repair (specify in details) vs. Arthroscopic repair -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Castricini, R, 2011	High Quality	PROs (specify)(Constant-Murley (pain))	1.6 years	g2(RCR w PRFM) (arthroscopic rotator cuff repair and augmentation with PRFM)	45	14.3(.)	g1(RCR w/out PRFM) (arthroscopic rotator cuff repair alone)	45	14.3(.)	Author Reported	NA	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	PROs (specify)(Constant-Murley (Pain))	1 years	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	12.6(.)	g2(w/out supplement) (arthroscopic repair only)	43	11.9(.)	Author Reported	NA	Not Significant (P-value>.05)
Gumina, S., 2012	High Quality	PROs (specify)(pain domain of constant score)	1.1 years	G1 (with platelet-leukocyte membrane) (arthroscopic single-row technique with platelet-leukocyte membrane inserted between the rotator cuff tendon and its footprint)	39	13.4(1.20)	G2 (w/out platelet-leukocyte membrane) (arthroscopic single-row technique)	37	11.4(1.20)	MeanDif	2(1.46, 2.54)	**Treatment 1 Significant (P-value<.05)**
Gumina, S., 2012	High Quality	PROs (specify)(VAS (Pain))	1 year	G1 (supplement) (arthroscopic repair and oral arginine L-alpha-ketoglutarate, methylsulfonylmethane, hydrolyzed type I collagen and bromelain)	44	1.5(.)	g2(w/out supplement) (arthroscopic repair only)	43	3.1(.)	Author Reported	NA	G1 (supplement) Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malavolta, E. A., 2014	High Quality	PROs (specify)(VAS)	1 year	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	1.04(1.81)	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	1.7(2.13)	MeanDif	-0.66(-1.71,0.39)	Not Significant (P-value>.05)
Malavolta, E. A., 2014	High Quality	PROs (specify)(VAS)	2 years	G1 (PRP) (Arthroscopic single-row repair w/PRP)	27	0.96(2.24)	G2 (Control) (Arthroscopic single-row repair w/o PRP)	27	1.15(1.92)	MeanDif	-0.19(-1.30,0.92)	Not Significant (P-value>.05)
Pandey, V, 2016	High Quality	PROs (specify)(VAS)	1 year	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	0.16(0.37)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	0.43(0.66)	MeanDif	-0.27(-0.48,-0.06)	**Treatment 1 Significant (P-value<.05)**
Pandey, V, 2016	High Quality	PROs (specify)(VAS)	2 years	G1 (PRP) (Arthroscopic repair w/PRP injection)	52	0.14(0.32)	G2 (Control) (Arthroscopic repair w/o PRP injection)	50	0.31(0.54)	MeanDif	-0.17(-0.34,0.00)	Not Significant (P-value>.05)
Zhang, Z., 2016	High Quality	PROs (specify)(VAS)	1 year	G1 (PRP) (Arthroscopic double-row repair w/PRP injection)	30	3.2(0.20)	G2 (Control) (Arthroscopic double-row repair w/o PRP)	30	3.1(0.10)	MeanDif	0.1(0.02,0.18)	Not Significant (P-value>.05)
Zumstein, M. A., 2016	High Quality	PROs (specify)(VAS)	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	13.9(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	13.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) VAS (pain)	6 weeks	G1 (PRP)	30	3.26 (2.43)	G2 (Control)	30	1.19 (2.340			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) VAS (pain)	12 weeks	G1 (PRP)	30	2.35 (2.01)	G2 (Control)	30	2.23 (1.91)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) VAS (pain)	16 weeks	G1 (PRP)	30	1.75 (1.68)	G2 (Control)	30	1.36 (1.51)			Not Significant (P-value>.05)

Table 146: Pico 9 Part 1: Biologics with repair (specify in details) vs. Arthroscopic repair -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Castricini, R, 2011	High Quality	PROs (specify)(Constant-Murley (Activities of Daily Life))	1.6 years	g2(RCR w PRFM) (arthroscopic rotator cuff repair and augmentation with PRFM)	45	19.3(.)	g1(RCR w/out PRFM) (arthroscopic rotator cuff repair alone)	45	18.8(.)	Author Reported	NA	Not Significant (P-value>.05)
Zumstein, M. A., 2016	High Quality	PROs (specify)(SSV (%))	1 year	G1 (L-PRF) (arthroscopic double-row repair w/L-PRF application to repair site)	17	88(.)	G1 (Control) (arthroscopic double-row repair w/o L-PRF application)	18	84(.)	Author Reported	NA	Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) SF-12 (PCS)	6 weeks	G1 (PRP)	30	36.31 (7.4)	G2 (Control)	30	34.98 (5.75)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) SF-12 (PCS)	12 weeks	G1 (PRP)	30	38.73 (7.06)	G2 (Control)	30	39.08 (6.94)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) SF-12 (PCS)	16 weeks	G1 (PRP)	30	41.78 (8.34)	G2 (Control)	30	43.08 (6.26)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) SF-12 (MCS)	6 weeks	G1 (PRP)	30	49.87 (12.94)	G2 (Control)	30	49.69 (13.63)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) SF-12 (MCS)	12 weeks	G1 (PRP)	30	52.75 (11.9)	G2 (Control)	30	53.47 (10.55)			Not Significant (P-value>.05)
Wang, A., 2015	High Quality	PROs (specify) SF-12 (MCS)	16 weeks	G1 (PRP)	30	53.81 (11.21)	G2 (Control)	30	55.17 (7.47			Not Significant (P-value>.05)

Table 147: Pico 9 Part 2: Biologics with repair (porcine small intestine) vs. Open repair -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bryant, D. 2006	High Quality	Complications (radiographic tear)	1 years	G1: Rotator cuff open repair augmented with SIS(porcine small intestine submucosa)	34	52.94%	G2: Control Group (open repair)	26	65.38%	RR		Not Significant (P-value>.05)
Bryant, D. 2006	High Quality	Complications (re-tear)	1 years	G1: Rotator cuff open repair augmented with SIS(porcine small intestine submucosa)	34	52.94%	G2: Control Group (open repair)	26	65.38%	RR		Not Significant (P-value>.05)
Iannotti, Jp, 2006	Moderate Quality	Clinical outcomes (specify)(Healing of RC tear)	1 years	G1: Augmented Group (porcine small intestine mucosa) (open repair w Porcine Small Intestine Submucosa Augmentation)	15	26.67%	G2: Control Group (open repair)	15	60.00%	RR	0.44(0.17,1.13)	Not Significant (P-value>.05)
Ciampi, P., 2015	Low Quality	Adverse event/complications Retears)	36 months	G1 (Polypropylene and open repair)	52	0.17	G2 (open repair)	51	0.41			**Treatment 1 Significant** (P-value<.05)

Table 148: Pico 9 Part 2: Biologics with repair vs. Open repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciampi, P., 2015	Low Quality	PROs (specify) UCLA score	36 months	G1 (Polypropylene and open repair)	52	24.61 (3.22)	G2 (open repair)	51	14.88 (1.98)			**Treatment 1 Significant** (P-value<.05)

Table 149: Pico 9 Part 2: Biologics with repair vs. Open repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciampi, P., 2015	Low Quality	Clinical outcomes (specify) Elevation on scapular plane (degrees)	36 months	G1 (Polypropylene and open repair)	52	174.71 (8.18)	G2 (open repair)	51	140.68 (9.84)			**Treatment 1 Significant** (P-value<.05)
Ciampi, P., 2015	Low Quality	Clinical outcomes (specify) Abduction strength (kg)	36 months	G1 (Polypropylene and open repair)	52	13.79 (0.64)	G2 (open repair)	51	8.73 (0.54)			**Treatment 1 Significant** (P-value<.05)

Table 150: Pico 9 Part 2: Biologics with repair (specify in details) vs. Open repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Iannotti, Jp, 2006	Moderate Quality	PROs (specify)(PENN Shoulder questionnaire (function))	1 years	G1: Augmented Group (porcine small intestine mucosa) (open repair w Porcine Small Intestine Submucosa Augmentation)	15	52(.)	G2: Control Group (open repair)	15	57(.)	Author Reported	NA	Augmented Group Significant (P-value<.05)

Table 151: Pico 9 Part 2: Biologics with repair (specify in details) vs. Open repair -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Iannotti, Jp, 2006	Moderate Quality	PROs (specify)(PENN Shoulder questionnaire (Pain))	1 years	G1: Augmented Group (porcine small intestine mucosa) (open repair w Porcine Small Intestine Submucosa Augmentation)	15	25(.)	G2: Control Group (open repair)	15	29(.)	Author Reported	NA	Not Significant (P-value>.05)
Ciampi, P., 2015	Low	PROs (specify) VAS (pain)	36 months	G1 (Polypropylene and open repair)	52	3.28 (1.1))	G2 (open repair)	51	3.66 (1.05)			Not Significant (P-value>.05)

Table 152: Pico 9 Part 2: Biologics with repair (specify in details) vs. Open repair -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bryant, D. 2006	High Quality	PROs (WORC(Physical symptoms))	1 years	G1: Rotator cuff open repair augmented with SIS(porcine small intestine submucosa)	34	83.4 (2.5)	G2: Control Group (open repair)	26	85.9 (2.8)	RR		Not Significant (P-value>.05)
Bryant, D. 2006	High Quality	PROs (WORC(Sports and recreations))	2 years	G1: Rotator cuff open repair augmented with SIS(porcine small intestine submucosa)	34	72.1 (4.5)	G2: Control Group (open repair)	26	73.1 (4.9)	RR		Not Significant (P-value>.05)
Bryant, D. 2006	High Quality	PROs (WORC(Work))	2 years	G1: Rotator cuff open repair augmented with SIS(porcine small intestine submucosa)	34	72.2 (4.1)	G2: Control Group (open repair)	26	76.1 (4.4)	RR		Not Significant (P-value>.05)
Iannotti, Jp, 2006	Moderate Quality	PROs (specify)(PENN Shoulder questionnaire (satisfaction))	1 years	G1: Augmented Group (porcine small intestine mucosa) (open repair w Porcine Small Intestine Submucosa Augmentation)	15	8(.)	G2: Control Group (open repair)	15	10(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 153: Pico 9 Part 3: Double row vs. Knotless -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hug, K., 2015	Low Quality	PROs (specify)(constant score)	2 years	g2(knot-tying) (modified Suture-Bridge knot-tying technique)	20	77(8.60)	g1(knotless) (arthroscopic knotless-anchor Speed-Bridge reconstruction)	22	78.2(13.20)	MeanDif	-1.2(-7.88,5.48)	Not Significant (P-value>.05)

Table 154: Pico 9 Part 3: Double row vs. Knotless -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hug, K., 2015	Low Quality	PROs (specify)(SSV (%))	2 years	g2(knot-tying) (modified Suture-Bridge knot-tying technique)	20	92.9(9.6)	g1(knotless) (arthroscopic knotless-anchor Speed-Bridge reconstruction)	22	88.7(14.9)	Author Reported	NA	Not Significant (P-value>.05)
Hug, K., 2015	Low Quality	PROs (specify)(WORC (%))	2 years	g2(knot-tying) (modified Suture-Bridge knot-tying technique)	20	90.7(12.60)	g1(knotless) (arthroscopic knotless-anchor Speed-Bridge reconstruction)	22	87.1(18.20)	MeanDif	3.6(-5.80,13.00)	Not Significant (P-value>.05)
Burks, R., 2012	High Quality	PROs (specify) WORC	1 year	G1 (Double row)	20	87.9 (20)	G2 (Single row)	20	84.8 (18.4)			Not Significant (P-value>.05)

Table 155: Pico 9 Part 4: Double row vs. Single row -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Barber, F. A., 2016	High Quality	Adverse events/complications(Retears)	1 year	G2 (double row) (suture-bridge double-row RC tendon repair augmented with PRP fibrin membrane)	20	15.00%	G1 (single row) (Triple-loaded single-row RC tendon repair augmented with PRP fibrin membrane)	20	15.00%	RR	1.00(0.23,4.37)	Not Significant (P-value>.05)
Franceschi, F, 2016	High Quality	Adverse events/complications(Complications)	2 years	G2 (Double row) (arthroscopic RC repair w/double row anchor repair)	25	0.00%	G1 (Single row) (arthroscopic RC repair w/single row anchor repair)	25	0.00%	RD	0.00(-0.07,0.07)	Not Significant (P-value>.05)
Franceschi, F, 2016	High Quality	RC Tear (specify component)(Retears)	2 years	G2 (Double row) (arthroscopic RC repair w/double row anchor repair)	25	28.00%	G1 (Single row) (arthroscopic RC repair w/single row anchor repair)	25	60.00%	RR	0.47(0.23,0.94)	**Treatment 1 Significant (P-value<.05)**
Franceschi, F., 2007	High Quality	RC Tear (specify component)(Retears (MRA))	2 years	G2 (Double Row) (arthroscopic repair w/double-row suture anchor technique)	26	30.77%	G1 (Single Row) (arthroscopic repair w/single-row suture anchor technique)	26	46.15%	RR	0.67(0.33,1.36)	Not Significant (P-value>.05)
Burks, R., 2012	High Quality	Adverse event/complications Retears	1 year	G1 (Double row)	20	0.1)	G2 (Single row)	20	0.1			Not Significant (P-value>.05)

Table 156: Pico 9 Part 4: Double row vs. Single row -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Aydin, N., 2010	High Quality	Other(Constant shoulder scoring system.)	3 years	g2(double row) (repair with double row technique)	34	78.8(.)	g1(single row) (repair with single row technique)	34	82.2(.)	Author Reported	NA	Not Significant (P-value>.05)
Barber, F. A., 2016	High Quality	PROs (specify)(ASES)	1 year	G2 (double row) (suture-bridge double-row RC tendon repair augmented with PRP fibrin membrane)	20	96.2(11.64)	G1 (single row) (Triple-loaded single-row RC tendon repair augmented with PRP fibrin membrane)	20	97(9.81)	MeanDif	-0.8(-7.47,5.87)	Not Significant (P-value>.05)
Barber, F. A., 2016	High Quality	PROs (specify)(Constant)	1 year	G2 (double row) (suture-bridge double-row RC tendon repair augmented with PRP fibrin membrane)	20	93(2.74)	G1 (single row) (Triple-loaded single-row RC tendon repair augmented with PRP fibrin membrane)	20	88.3(13.46)	MeanDif	4.7(-1.32,10.72)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	PROs (specify)(ASES)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	85.2(3.2)	G1 (Single Row) (Arthroscopic repair w/single row)	80	84.6(6.10)	MeanDif	-1.4(-2.90,0.10)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	PROs (specify)(ASES)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	83.2(3.10)	G1 (Single Row) (Arthroscopic repair w/single row)	80	80.3(6.20)	MeanDif	2.9(1.38,4.42)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	PROs (specify)(ASES)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	85.2(3.20)	G1 (Single Row) (Arthroscopic repair w/single row)	80	84.6(6.10)	MeanDif	0.6(-0.91,2.11)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	PROs (specify)(Constant)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	79.7(3.20)	G1 (Single Row) (Arthroscopic repair w/single row)	80	79.8(6.60)	MeanDif	-0.1(-1.71,1.51)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carbonel, I., 2012	High Quality	PROs (specify)(Constant)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	77(2.40)	G1 (Single Row) (Arthroscopic repair w/single row)	80	75.2(7.00)	MeanDif	1.8(0.18,3.42)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	PROs (specify)(UCLA)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	29.5(1.60)	G1 (Single Row) (Arthroscopic repair w/single row)	80	28.9(2.40)	MeanDif	0.6(-0.03,1.23)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	PROs (specify)(UCLA)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	28.2(1.40)	G1 (Single Row) (Arthroscopic repair w/single row)	80	27.1(1.90)	MeanDif	1.1(0.58,1.62)	**Treatment 1 Significant (P-value<.05)**
Franceschi, F., 2007	High Quality	PROs (specify)(UCLA)	2 years	G2 (Double Row) (arthroscopic repair w/double-row suture anchor technique)	26	33.3(4.42)	G1 (Single Row) (arthroscopic repair w/single-row suture anchor technique)	26	32.9(5.46)	MeanDif	0.4(-2.30,3.10)	Not Significant (P-value>.05)
Koh, K. H., 2011	High Quality	PROs (specify)(ASES)	2 years	G2 (double-row) (Arthroscopic double-row suture anchor repair, no component specified, symptoms >/=6 months)	31	83.4(20.90)	G1 (single-row) (Arthroscopic single-row suture anchor repair, no component specified, symptoms >/=6 months)	31	85.9(15.20)	MeanDif	-2.5(-11.60,6.60)	Not Significant (P-value>.05)
Koh, K. H., 2011	High Quality	PROs (specify)(Constant)	2 years	G2 (double-row) (Arthroscopic double-row suture anchor repair, no component specified, symptoms >/=6 months)	31	82.5(21.90)	G1 (single-row) (Arthroscopic single-row suture anchor repair, no component specified, symptoms >/=6 months)	31	85.4(13.80)	MeanDif	-2.9(-12.01,6.21)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koh, K. H., 2011	High Quality	PROs (specify)(UCLA)	2 years	G2 (double-row) (Arthroscopic double-row suture anchor repair, no component specified, symptoms >/=6 months)	31	29.8(6.70)	G1 (single-row) (Arthroscopic single-row suture anchor repair, no component specified, symptoms >/=6 months)	31	29.3(5.20)	MeanDif	0.5(-2.49,3.49)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(ASES)	1 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	40	86.5(17.10)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	43	84.8(18.70)	MeanDif	1.7(-6.00,9.40)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(ASES)	2 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	34	89.3(17.50)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	39	87.9(16.90)	MeanDif	1.4(-6.52,9.32)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(ASES)	Baseline	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	42	54(19.00)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	48	47.8(17.60)	MeanDif	6.2(-1.40,13.80)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(Constant)	1 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	40	78.5(18.60)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	43	81.9(13.50)	MeanDif	-3.4(-10.44,3.64)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(Constant)	2 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	34	86.3(14.20)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	39	85.6(14.00)	MeanDif	0.7(-5.79,7.19)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(Constant)	Baseline	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	42	58.2(19.20)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	48	55.1(15.00)	MeanDif	3.1(-4.09,10.29)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ma, Hl, 2012	High Quality	PROs (specify)(ASES)	2 years	G2 (Double row) (Arthroscopic RC repair w/double-row suture)	26	91.38(2.36)	G1 (Single row) (Arthroscopic RC repair w/single-row suture)	27	91.25(2.36)	MeanDif	0.13(-1.14,1.40)	Not Significant (P-value>.05)
Ma, Hl, 2012	High Quality	PROs (specify)(UCLA)	2 years	G2 (Double row) (Arthroscopic RC repair w/double-row suture)	26	31.53(3.40)	G1 (Single row) (Arthroscopic RC repair w/single-row suture)	27	31.4(3.34)	MeanDif	0.13(-1.69,1.95)	Not Significant (P-value>.05)
Burks, R., 2012	High Quality	PROs (specify) Constant score	1 year	G1 (Double row)	20	74.4 (18.4)	G2 (Single row)	20	77.8 (9)			Not Significant (P-value>.05)
Burks, R., 2012	High Quality	PROs (specify) UCLA	1 year	G1 (Double row)	20	29.5 (5.6)	G2 (Single row)	20	28.6 (3.6)			Not Significant (P-value>.05)
Burks, R., 2012	High Quality	PROs (specify) ASES score	1 year	G1 (Double row)	20	85.5 (20)	G2 (Single row)	20	85.9 (14)			Not Significant (P-value>.05)

Table 157: Pico 9 Part 4: Double row vs. Single row -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Barber, F. A., 2016	High Quality	PROs (specify)(Rowe)	1 year	G2 (double row) (suture-bridge double-row RC tendon repair augmented with PRP fibrin membrane)	20	98.3(7.99)	G1 (single row) (Triple-loaded single-row RC tendon repair augmented with PRP fibrin membrane)	20	96.8(11.41)	MeanDif	1.5(-4.60,7.60)	Not Significant (P-value>.05)
Barber, F. A., 2016	High Quality	PROs (specify)(SANE)	1 year	G2 (double row) (suture-bridge double-row RC tendon repair augmented with PRP fibrin membrane)	20	96.1(9.13)	G1 (single row) (Triple-loaded single-row RC tendon repair augmented with PRP fibrin membrane)	20	94.5(12.78)	MeanDif	1.6(-5.28,8.48)	Not Significant (P-value>.05)
Barber, F. A., 2016	High Quality	PROs (specify)(SST)	1 year	G2 (double row) (suture-bridge double-row RC tendon repair augmented with PRP fibrin membrane)	20	11.6(7.99)	G1 (single row) (Triple-loaded single-row RC tendon repair augmented with PRP fibrin membrane)	20	11.6(1.37)	MeanDif	0(-0.85,0.85)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	(Internal Rotation SSI-tears 30-50mm)	2 years	*G2 (Double Row) (Arthroscopic repair w/double row)	80	0.78(0.02)	*G1 (Single Row) (Arthroscopic repair w/single row)	80	0.76(0.04)	MeanDif	0.02(0.01,0.03)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Abduction SSI-tears 10-30mm)	2 years	*G2 (Double Row) (Arthroscopic repair w/double row)	80	0.78(0.04)	*G1 (Single Row) (Arthroscopic repair w/single row)	80	0.76(0.06)	MeanDif	0.02(0.00,0.04)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Abduction SSI-tears 30-50mm)	2 years	*G2 (Double Row) (Arthroscopic repair w/double row)	80	0.74(0.03)	*G1 (Single Row) (Arthroscopic repair w/single row)	80	0.72(0.05)	MeanDif	0.02(0.01,0.03)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	56.3(3.80)	G1 (Single Row) (Arthroscopic repair w/single row)	80	54.2(6.60)	MeanDif	2.1(0.43,3.77)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	58.6(4.00)	G1 (Single Row) (Arthroscopic repair w/single row)	80	59(6.70)	MeanDif	-0.4(-2.11,1.31)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Flexion (degrees))	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	153.1(7.00)	G1 (Single Row) (Arthroscopic repair w/single row)	80	145.8(9.80)	MeanDif	7.3(4.66,9.94)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Flexion (degrees))	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	159.2(6.80)	G1 (Single Row) (Arthroscopic repair w/single row)	80	153.9(10.20)	MeanDif	5.3(2.61,7.99)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Flexion SSI)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	0.78(0.04)	G1 (Single Row) (Arthroscopic repair w/single row)	80	0.75(0.06)	MeanDif	0.03(0.01,0.05)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Flexion SSI)	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	0.74(0.03)	G1 (Single Row) (Arthroscopic repair w/single row)	80	0.7(0.05)	MeanDif	0.04(0.03,0.05)	**Treatment 1 Significant (P-value<.05)**
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	55.8(4.30)	G1 (Single Row) (Arthroscopic repair w/single row)	80	55.7(6.60)	MeanDif	0.1(-1.63,1.83)	Not Significant (P-value>.05)
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	2 years	G2 (Double Row) (Arthroscopic repair w/double row)	80	52.9(3.70)	G1 (Single Row) (Arthroscopic repair w/single row)	80	51(5.50)	MeanDif	1.9(0.45,3.35)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carbonel, I., 2012	High Quality	Clinical outcomes (specify)(Internal Rotation SSI-tears 10-30mm)	2 years	*G2 (Double Row) (Arthroscopic repair w/double row)	80	0.81(0.04)	*G1 (Single Row) (Arthroscopic repair w/single row)	80	0.79(0.05)	MeanDif	0.02(0.01,0.03)	**Treatment 1 Significant (P-value<.05)**
Franceschi, F, 2016	High Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G2 (Double row) (arthroscopic RC repair w/double row anchor repair)	25	131.7(.)	G1 (Single row) (arthroscopic RC repair w/single row anchor repair)	25	130.2(.)	Author Reported	NA	Not Significant (P-value>.05)
Franceschi, F, 2016	High Quality	Clinical outcomes (specify)(Forward Flexion)	2 years	G2 (Double row) (arthroscopic RC repair w/double row anchor repair)	25	160(.)	G1 (Single row) (arthroscopic RC repair w/single row anchor repair)	25	157(.)	Author Reported	NA	Not Significant (P-value>.05)
Franceschi, F, 2016	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	2 years	G2 (Double row) (arthroscopic RC repair w/double row anchor repair)	25	40.3(.)	G1 (Single row) (arthroscopic RC repair w/single row anchor repair)	25	37.8(.)	Author Reported	NA	Not Significant (P-value>.05)
Franceschi, F, 2016	High Quality	PROs (specify)(modified UCLA)	2 years	G2 (Double row) (arthroscopic RC repair w/double row anchor repair)	25	33.3(.)	G1 (Single row) (arthroscopic RC repair w/single row anchor repair)	25	32.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Franceschi, F., 2007	High Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G2 (Double Row) (arthroscopic repair w/double-row suture anchor technique)	26	131.3(14.83)	G1 (Single Row) (arthroscopic repair w/single-row suture anchor technique)	26	132.4(19.77)	MeanDif	-1.1(-10.60,8.40)	Not Significant (P-value>.05)
Franceschi, F., 2007	High Quality	Clinical outcomes (specify)(Forward flexion (degrees))	2 years	G2 (Double Row) (arthroscopic repair w/double-row suture anchor technique)	26	156(36.42)	G1 (Single Row) (arthroscopic repair w/single-row suture anchor technique)	26	159(28.62)	MeanDif	-3(-20.80,14.80)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2007	High Quality	Clinical outcomes (specify)(Internal rotation (degrees))	2 years	G2 (Double Row) (arthroscopic repair w/double-row suture anchor technique)	26	40.3(7.02)	G1 (Single Row) (arthroscopic repair w/single-row suture anchor technique)	26	37.3(12.23)	MeanDif	3(-2.42,8.42)	Not Significant (P-value>.05)
Koh, K. H., 2011	High Quality	Clinical outcomes (specify)(External rotation (degrees))	2 years	G2 (double-row) (Arthroscopic double-row suture anchor repair, no component specified, symptoms >/=6 months)	31	30.8(13.40)	G1 (single-row) (Arthroscopic single-row suture anchor repair, no component specified, symptoms >/=6 months)	31	33.2(15.40)	MeanDif	-2.4(-9.59,4.79)	Not Significant (P-value>.05)
Koh, K. H., 2011	High Quality	Clinical outcomes (specify)(Forward elevation (degrees))	2 years	G2 (double-row) (Arthroscopic double-row suture anchor repair, no component specified, symptoms >/=6 months)	31	151(16.20)	G1 (single-row) (Arthroscopic single-row suture anchor repair, no component specified, symptoms >/=6 months)	31	150.3(13.50)	MeanDif	0.7(-6.72,8.12)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	Clinical outcomes (specify)(Strength (kg))	1 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	40	6.8(3.20)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	43	6.2(2.70)	MeanDif	0.6(-0.68,1.88)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	Clinical outcomes (specify)(Strength (kg))	2 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	34	7.3(3.20)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	39	8(6.00)	MeanDif	-0.7(-2.87,1.47)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	Clinical outcomes (specify)(Strength (kg))	Baseline	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	42	4.7(2.90)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	48	4.2(2.10)	MeanDif	0.5(-0.56,1.56)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ma, Hl, 2012	High Quality	Clinical outcomes (specify)(Abduction strength (kg))	2 years	G2 (Double row) (Arthroscopic RC repair w/double-row suture)	26	5.01(0.62)	G1 (Single row) (Arthroscopic RC repair w/single-row suture)	27	4.91(0.80)	MeanDif	0.1(-0.28,0.48)	Not Significant (P-value>.05)
Ma, Hl, 2012	High Quality	Clinical outcomes (specify)(External rotation strength (kg))	2 years	G2 (Double row) (Arthroscopic RC repair w/double-row suture)	26	7.03(0.78)	G1 (Single row) (Arthroscopic RC repair w/single-row suture)	27	6.86(0.84)	MeanDif	0.17(-0.27,0.61)	Not Significant (P-value>.05)
Burks, R., 2012	High Quality	Clinical outcomes (specify) SANE score	1 year	G1 (Double row)	20	89.9 (20))	G2 (Single row)	20	90 (11)			Not Significant (P-value>.05)
Burks, R., 2012	High Quality	Clinical outcomes (specify) External rotation	1 year	G1 (Double row)	20	16.7 (7.5)	G2 (Single row)	20	17.2 (7.7)			Not Significant (P-value>.05)
Burks, R., 2012	High Quality	Clinical outcomes (specify) Internal rotation	1 year	G1 (Double row)	20	28.8 (14.4)	G2 (Single row)	20	28.1 (11.6)			Not Significant (P-value>.05)

Table 158: Pico 9 Part 4: Double row vs. Single row -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Koh, K. H., 2011	High Quality	PROs (specify)(PVAS (pain))	2 years	G2 (double-row) (Arthroscopic double-row suture anchor repair, no component specified, symptoms >/=6 months)	31	2(2.40)	G1 (single-row) (Arthroscopic single-row suture anchor repair, no component specified, symptoms >/=6 months)	31	1.5(1.90)	MeanDif	0.5(-0.58,1.58)	Not Significant (P-value>.05)

Table 159: Pico 9 Part 4: Double row vs. Single row -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lapner, Pl, 2012	High Quality	PROs (specify)(WORC)	1 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	40	80.3(22.50)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	43	81.3(20.20)	MeanDif	-1(-10.22,8.22)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(WORC)	2 years	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	34	81.7(20.90)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	39	84.4(21.30)	MeanDif	-2.7(-12.40,7.00)	Not Significant (P-value>.05)
Lapner, Pl, 2012	High Quality	PROs (specify)(WORC)	Baseline	G2 (double-row repair) (arthroscopic RC repair w/double row fixation)	42	37.3(16.60)	G1 (single-row repair) (arthroscopic RC repair w/single row fixation)	48	34.8(16.30)	MeanDif	2.5(-4.32,9.32)	Not Significant (P-value>.05)

Table 160: Pico 9 Part 5: Knot vs. Knotless -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Y. S., 2016	High Quality	Adverse events/complications(types 4 and 5 (retears))	2.1 years	g1(en masse repair) (conventional en masse repair)	48	16.67%	g2(separate repair) (separate double-layer double-row repair)	34	17.65%	RR	0.94(0.36,2.47)	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	Radiographic tear(retear rate)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	18.64%	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	5.88%	RR	3.17(0.94,10.74)	**Treatment 2 Significant (P-value<.05)**

Table 161: Pico 9 Part 5: Knot vs. Knotless -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Boyer, P., 2015	Low Quality	PROs (specify)(Constant score)	2.4 years	g1(knot) (arthroscopic, tied, suture-bridging technique)	38	81.3(9.90)	g2(knotless) (arthroscopic knot-less bridging with suture tape)	35	82.6(8.30)	MeanDif	-1.3(-5.48,2.88)	Not Significant (P-value>.05)
Kim, Y. S., 2016	High Quality	Clinical outcomes (specify)(ASES)	2.1 years	g1(en masse repair) (conventional en masse repair)	48	84.9(.)	g2(separate repair) (separate double-layer double-row repair)	34	89.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Kim, Y. S., 2016	High Quality	PROs (specify)(Constant)	2.1 years	g1(en masse repair) (conventional en masse repair)	48	80.5(.)	g2(separate repair) (separate double-layer double-row repair)	34	84.5(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	PROs (specify)(Constant score)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	76.3(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	79.1(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	PROs (specify)(UCLA score)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	27.9(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	31(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 162: Pico 9 Part 5: Knot vs. Knotless -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Y. S., 2016	High Quality	Clinical outcomes (specify)(SST)	2.1 years	g1(en masse repair) (conventional en masse repair)	48	79.4(.)	g2(separate repair) (separate double-layer double-row repair)	34	66.7(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	Clinical outcomes (specify)(Muscle strength, kg External rotation)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	7.7(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	7.4(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	Clinical outcomes (specify)(Muscle strength, kg Forward flexion)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	5.7(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	6.6(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	Clinical outcomes (specify)(Muscle strength, kg Internal rotation)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	8.5(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	9.3(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Rhee, Y. G., 2012	Low Quality	Clinical outcomes (specify)(ROM, degrees Abduction)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	153.2(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	166(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	Clinical outcomes (specify)(ROM, degrees External rotation at the side)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	53.3(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	53.9(.)	Author Reported	NA	Not Significant (P-value>.05)
Rhee, Y. G., 2012	Low Quality	Clinical outcomes (specify)(ROM, degrees Forward flexion)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	154.1(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	156.4(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 163: Pico 9 Part 5: Knot vs. Knotless -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Y. S., 2016	High Quality	PROs (specify)(Visual analog scale (VAS))	2.1 years	g1(en masse repair) (conventional en masse repair)	48	2(.)	g2(separate repair) (separate double-layer double-row repair)	34	1.2(.)	Author Reported	NA	Group 2 Significant (P-value<.05)
Rhee, Y. G., 2012	Low Quality	PROs (specify)(pain score (VAS) at ROM)	1.7 years	g2(knot-tying) (arthroscopic repair w conventional knot-tying suture bridge technique)	59	2.8(.)	g1(knotless) (arthroscopic repair w knotless suture bridge technique using the Mason-Allen stich for medial row fixation)	51	1.6(.)	Author Reported	NA	Knotless Significant (P-value<.05)

Table 164: Pico 9 Part 6: Marrow stimulation with repair vs. Arthroscopic repair -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Taniguchi, N., 2015	Low Quality	Radiographic tear(cuff integrity score for large tears)	1 year	g1(BMS) (arthroscopic surface-holding (ASH) repair w Bone marrow stimulation (BMS) at the footprint)	22	1.6(0.20)	g2(non BMS) (arthroscopic surface-holding (ASH) repair)	35	2.5(0.30)	MeanDif	-0.9(-1.03,-0.77)	**Treatment 1 Significant (P-value<.05)**
Taniguchi, N., 2015	Low Quality	Radiographic tear(cuff repair integrity score)	1 year	g1(BMS) (arthroscopic surface-holding (ASH) repair w Bone marrow stimulation (BMS) at the footprint)	44	1.7(0.20)	g2(non BMS) (arthroscopic surface-holding (ASH) repair)	67	2.2(0.20)	MeanDif	-0.5(-0.58,-0.42)	Not Significant (P-value>.05)
Taniguchi, N., 2015	Low Quality	Radiographic tear(Retear rate of middle tears)	1 year	g1(BMS) (arthroscopic surface-holding (ASH) repair w Bone marrow stimulation (BMS) at the footprint)	22	13.64%	g2(non BMS) (arthroscopic surface-holding (ASH) repair)	32	18.75%	RR	0.73(0.20,2.60)	Not Significant (P-value>.05)
Taniguchi, N., 2015	Low Quality	Radiographic tear(Retear rate)	1 year	g1(BMS) (arthroscopic surface-holding (ASH) repair w Bone marrow stimulation (BMS) at the footprint)	44	9.09%	g2(non BMS) (arthroscopic surface-holding (ASH) repair)	67	23.88%	RR	0.38(0.14,1.06)	**Treatment 1 Significant (P-value<.05)**

Table 165: Pico 9 Part 7: Marrow stimulation with repair vs. Single row -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Randelli, P., 2017	High Quality	Adverse events/complications(Complications)	2.1 years	G1 (Transosseous) (Arthroscopic RC repair w/transosseous hardware-free suture)	31	0.00%	G2 (Single Row) (Arthroscopic RC repair w/single row anchor fixation)	35	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)

Table 166: Pico 9 Part 7: Marrow stimulation with repair vs. Single row -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Randelli, P., 2017	High Quality	PROs (specify)(Constant)	1.2 years	G1 (Transosseous) (Arthroscopic RC repair w/transosseous hardware-free suture)	31	69.9(.)	G2 (Single Row) (Arthroscopic RC repair w/single row anchor fixation)	35	72.3(.)	Author Reported	NA	Not Significant (P-value>.05)
Randelli, P., 2017	High Quality	PROs (specify)(QuickDASH)	1.2 years	G1 (Transosseous) (Arthroscopic RC repair w/transosseous hardware-free suture)	31	4.5(.)	G2 (Single Row) (Arthroscopic RC repair w/single row anchor fixation)	35	2.3(.)	Author Reported	NA	Transosseous Significant (P-value<.05)
Randelli, P., 2017	High Quality	PROs (specify)(QuickDASH)	3 years	G1 (Transosseous) (Arthroscopic RC repair w/transosseous hardware-free suture)	31	2.3(.)	G2 (Single Row) (Arthroscopic RC repair w/single row anchor fixation)	35	2.3(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 167: Pico 9 Part 7: Marrow stimulation with repair vs. Single row -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Randelli, P., 2017	High Quality	PROs (specify)(NRS)	1.2 years	G1 (Transosseous) (Arthroscopic RC repair w/transosseous hardware-free suture)	31	1.2(1.80)	G2 (Single Row) (Arthroscopic RC repair w/single row anchor fixation)	35	1.3(2.10)	MeanDif	-0.1(-1.04,0.84)	Not Significant (P-value>.05)

Table 168: Pico 9 Part 8: Open repair vs. Arthroscopic repair -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carr, A. J., 2015	High Quality	Adverse events/complications(Retear)	1 year	g2(Open) (open repair)	137	23.36%	g1(arthroscopic) (arthroscopic repair)	136	23.53%	RR	0.99(0.65,1.52)	Not Significant (P-value>.05)
Carr, A., 2017	High Quality	Adverse events/complications(retear)	Post-Op	G1 (Open) (open repair)	137	23.36%	g2(arthroscopic) (arthroscopic repair)	136	23.53%	RR	0.99(0.65,1.52)	Not Significant (P-value>.05)
Liu, J., 2017	High Quality	RC Tear (specify component)(Retears (unspecified))	1 years	*G2 (Mini Open) (no mention of lengthmini-open repair of conservative treatment prior to surgery)	49	8.16%	*G1 (All Arthroscopic) (arthroscopic repari; no mention of length of conservative treatment prior to surgery)	50	10.00%	RR	0.82(0.23,2.86)	Not Significant (P-value>.05)
Zwaal, P, 2013	High Quality	RC Tear (specify component)(Retears)	1 year	G2 (mini-open) (mini-open repair)	48	12.50%	G1 (arthroscopic) (all-arthroscopic repair)	47	17.02%	RR	0.73(0.28,1.96)	Not Significant (P-value>.05)

Table 169: Pico 9 Part 8: Open repair vs. Arthroscopic repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carr, A., 2017	High Quality	PROs (specify)(Oxford Shoulder Score (OSS))	1 year	G1 (Open) (open repair)	137	39.6(8.50)	g2(arthroscopic) (arthroscopic repair)	136	38.3(9.50)	MeanDif	1.3(-0.84,3.44)	Not Significant (P-value>.05)
Carr, A., 2017	High Quality	PROs (specify)(Oxford Shoulder Score (OSS))	2 years	G1 (Open) (open repair)	137	41.5(7.90)	g2(arthroscopic) (arthroscopic repair)	136	41.7(7.90)	MeanDif	-0.2(-2.07,1.67)	Not Significant (P-value>.05)
Liu, J., 2017	High Quality	PROs (specify)(Chinese DASH)	1 years	G2 (Mini Open) (no mention of length of conservative treatment prior to surgery)	49	30.6(7.60)	G1 (All Arthroscopic) (no mention of length of conservative treatment prior to surgery)	50	32.7(4.40)	MeanDif	-2.1(-4.55,0.35)	Not Significant (P-value>.05)
Liu, J., 2017	High Quality	PROs (specify)(CMS)	1 years	G2 (Mini Open) (no mention of length of conservative treatment prior to surgery)	49	74.7(6.80)	G1 (All Arthroscopic) (no mention of length of conservative treatment prior to surgery)	50	74.1(8.40)	MeanDif	0.6(-2.41,3.61)	Not Significant (P-value>.05)
Zwaal, P, 2013	High Quality	PROs (specify)(Constant)	12 months	G2 (mini-open) (mini-open repair)	48	84(2.20)	G1 (arthroscopic) (all-arthroscopic repair)	45	87(1.80)	MeanDif	-3(-3.81,-2.19)	Not Significant (P-value>.05)
Zwaal, P, 2013	High Quality	PROs (specify)(DASH)	12 months	G2 (mini-open) (mini-open repair)	48	51(3.40)	G1 (arthroscopic) (all-arthroscopic repair)	45	51(3.70)	MeanDif	0(-1.45,1.45)	Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) UCLA score	31 months	G1 (Open repair)	32	32 (2)	G2 (Arthroscopy)	32	31 (2)			Not Significant (P-value>.05)

Table 170: Pico 9 Part 8: Open repair vs. Arthroscopic repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carr, A. J., 2015	High Quality	Clinical outcomes (specify)(OSS)	1 year	g2(Open) (open repair)	137	39.6(8.50)	g1(arthroscopic) (arthroscopic repair)	136	38.3(9.50)	MeanDif	1.3(-53.30,55.90)	Not Significant (P-value>.05)
Carr, A. J., 2015	High Quality	Clinical outcomes (specify)(OSS)	2 years	g2(Open) (open repair)	137	41.5(7.90)	g1(arthroscopic) (arthroscopic repair)	136	41.7(7.90)	MeanDif	-0.2(-57.31,56.91)	Not Significant (P-value>.05)
Liu, J., 2017	High Quality	Clinical outcomes (specify)(ROM External Rotation (degrees))	1 years	G2 (Mini Open) (no mention of length of conservative treatment prior to surgery)	49	69.2(5.70)	G1 (All Arthroscopic) (no mention of length of conservative treatment prior to surgery)	50	68.2(5.30)	MeanDif	1(-1.17,3.17)	Not Significant (P-value>.05)
Liu, J., 2017	High Quality	Clinical outcomes (specify)(ROM Forward Flexion (degrees))	1 years	G2 (Mini Open) (no mention of length of conservative treatment prior to surgery)	49	159.1(4.90)	G1 (All Arthroscopic) (no mention of length of conservative treatment prior to surgery)	50	160.7(5.60)	MeanDif	-1.6(-3.67,0.47)	Not Significant (P-value>.05)
Zwaal, P, 2013	High Quality	Clinical outcomes (specify)(External Rotation (degrees))	12 months	G2 (mini-open) (mini-open repair)	48	72(2.90)	G1 (arthroscopic) (all-arthroscopic repair)	45	80(2.00)	MeanDif	-8(-9.01,-6.99)	**Treatment 2 Significant (P-value<.05)**
Zwaal, P, 2013	High Quality	Clinical outcomes (specify)(Forward Flexion (degrees))	12 months	G2 (mini-open) (mini-open repair)	48	159(4.30)	G1 (arthroscopic) (all-arthroscopic repair)	45	170(2.60)	MeanDif	-11(-12.43,-9.57)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Osti, L., 2010	Low Quality	Clinical outcomes (specify) Forward Elevation (degrees)	31 months	G1 (Open repair)	32	157 (8)	G2 (Arthroscopy)	32	157 (9)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	Clinical outcomes (specify) External Rotation (degrees)	31 months	G1 (Open repair)	32	125 (13)	G2 (Arthroscopy)	32	126 (14)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	Clinical outcomes (specify) Internal Rotation (degrees)	31 months	G1 (Open repair)	32	38 (3)	G2 (Arthroscopy)	32	38 (3)			Not Significant (P-value>.05)

Table 171: Pico 9 Part 8: Open repair vs. Arthroscopic repair -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carr, A. J., 2015	High Quality	PROs (specify)(SPADI pain)	2 years	g2(Open) (open repair)	137	20.1(26.10)	g1(arthroscopic) (arthroscopic repair)	136	18.7(23.10)	MeanDif	1.4(-15.80,18.60)	Not Significant (P-value>.05)
Liu, J., 2017	High Quality	PROs (specify)(VAS)	1 years	*G2 (Mini Open) (no mention of lengthmini-open repair of conservative treatment prior to surgery)	49	0.9(0.70)	*G1 (All Arthroscopic) (arthroscopic repari; no mention of length of conservative treatment prior to surgery)	50	0.9(0.70)	MeanDif	0(-0.28,0.28)	Not Significant (P-value>.05)
Zwaal, P, 2013	High Quality	PROs (specify)(VAS)	12 months	G2 (mini-open) (mini-open repair)	48	2.8(0.30)	G1 (arthroscopic) (all-arthroscopic repair)	45	2.4(0.20)	MeanDif	0.4(0.30,0.50)	**Treatment 2 Significant (P-value<.05)**

Table 172: Pico 9 Part 8: Open repair vs. Arthroscopic repair -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carr, A. J., 2015	High Quality	Clinical outcomes (specify)(SPADI disability)	1 year	g2(Open) (open repair)	137	21.7(26.90)	g1(arthroscopic) (arthroscopic repair)	136	21.8(26.30)	MeanDif	-0.1(-21.24,21.04)	Not Significant (P-value>.05)
Carr, A. J., 2015	High Quality	Clinical outcomes (specify)(SPADI disability)	2 years	g2(Open) (open repair)	137	15.8(22.80)	g1(arthroscopic) (arthroscopic repair)	136	14.8(22.50)	MeanDif	1(-12.07,14.07)	Not Significant (P-value>.05)
Carr, A. J., 2015	High Quality	PROs (specify)(European Quality of Life-5)	1 year	g2(Open) (open repair)	137	0.711(0.30)	g1(arthroscopic) (arthroscopic repair)	136	0.727(0.28)	MeanDif	-0.016(-0.93,0.90)	Not Significant (P-value>.05)
Carr, A. J., 2015	High Quality	PROs (specify)(European Quality of Life-5)	2 years	g2(Open) (open repair)	137	0.778(0.22)	g1(arthroscopic) (arthroscopic repair)	136	0.76(0.24)	MeanDif	0.018(-1.04,1.08)	Not Significant (P-value>.05)
Carr, A. J., 2015	High Quality	PROs (specify)(Mental Health Inventory 5 (MHI-5))	1 year	g2(Open) (open repair)	137	23.6(4.60)	g1(arthroscopic) (arthroscopic repair)	136	23.5(5.00)	MeanDif	95.5(-24.54,215.54)	Not Significant (P-value>.05)
Carr, A. J., 2015	High Quality	PROs (specify)(Mental Health Inventory 5 (MHI-5))	2 years	g2(Open) (open repair)	137	24.3(4.50)	g1(arthroscopic) (arthroscopic repair)	136	24.4(4.00)	MeanDif	-0.1(-32.88,32.68)	Not Significant (P-value>.05)
Carr, A., 2017	High Quality	PROs (specify)(EQ-5D (EuroQol-5D))	1 year	G1 (Open) (open repair)	137	0.711(0.30)	g2(arthroscopic) (arthroscopic repair)	136	0.727(0.28)	MeanDif	-0.016(-0.08,0.05)	Not Significant (P-value>.05)
Carr, A., 2017	High Quality	PROs (specify)(EQ-5D (EuroQol-5D))	2 years	G1 (Open) (open repair)	137	0.778(0.22)	g2(arthroscopic) (arthroscopic repair)	136	0.76(0.24)	MeanDif	0.018(-0.04,0.07)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Carr, A., 2017	High Quality	PROs (specify)(MHI-5 (mental Health Inventory))	1 year	G1 (Open) (open repair)	137	23.6(4.60)	g2(arthroscopic) (arthroscopic repair)	136	23.5(5.00)	MeanDif	0.1(-1.04,1.24)	Not Significant (P-value>.05)
Carr, A., 2017	High Quality	PROs (specify)(MHI-5 (mental Health Inventory))	2 years	G1 (Open) (open repair)	137	24.3(4.50)	g2(arthroscopic) (arthroscopic repair)	136	24.4(4.00)	MeanDif	-0.1(-1.11,0.91)	Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (Bodily Pain)	31 months	G1 (Open repair)	32	58.5 (6.1)	G2 (Arthroscopy)	32	59.3 (4.5)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (General health)	31 months	G1 (Open repair)	32	49.5 (5.3)	G2 (Arthroscopy)	32	48.5 (5)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (Vitality)	31 months	G1 (Open repair)	32	53.3 (3.8)	G2 (Arthroscopy)	32	50.5 (7.3)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (Social functioning)	31 months	G1 (Open repair)	32	69.2 (4.6)	G2 (Arthroscopy)	32	67.9 (4.2)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (Role emotional)	31 months	G1 (Open repair)	32	67.7 (5.6)	G2 (Arthroscopy)	32	66.8 (5.1)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (Mental Health)	31 months	G1 (Open repair)	32	61.3 (5.2)	G2 (Arthroscopy)	32	58.2 (8.5)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (Bodily Pain)	31 months	G1 (Open repair)	32	58.5 (6.1)	G2 (Arthroscopy)	32	59.3 (4.5)			Not Significant (P-value>.05)
Osti, L., 2010	Low Quality	PROs (specify) SP-36 (General health)	31 months	G1 (Open repair)	32	49.5 (5.3)	G2 (Arthroscopy)	32	48.5 (5)			Not Significant (P-value>.05)

Table 173: Pico 9 Part 9: Open repair vs. Mini-open repair -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mohtadi, N. G., 2008	High Quality	Adverse events/complications(Reoperations)	2 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	0.00%	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	29	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)

Table 174: Pico 9 Part 9: Open repair vs. Open repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mohtadi, N. G., 2008	High Quality	PROs (specify)(ASES)	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	85.2(15.66)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	86.1(17.33)	MeanDif	-0.9(-9.25,7.45)	Not Significant (P-value>.05)
Mohtadi, N. G., 2008	High Quality	PROs (specify)(ASES)	2 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	87.5(15.39)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	89.9(12.78)	MeanDif	-2.4(-9.58,4.78)	Not Significant (P-value>.05)

Table 175: Pico 9 Part 9: Open repair vs. Open repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mohtadi, N. G., 2008	High Quality	Clinical outcomes (specify)(External rotation at 90 deg (degrees))	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	78.4(16.70)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	49(13.60)	MeanDif	29.4(21.66,37.14)	**Treatment 1 Significant (P-value<.05)**
Mohtadi, N. G., 2008	High Quality	Clinical outcomes (specify)(External rotation on side (degrees))	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	54.1(28.60)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	48.1(29.70)	MeanDif	6(-8.75,20.75)	Not Significant (P-value>.05)
Mohtadi, N. G., 2008	High Quality	Clinical outcomes (specify)(Forward elevation (degrees))	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	162.3(19.20)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	158.3(22.61)	MeanDif	4(-6.59,14.59)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mohtadi, N. G., 2008	High Quality	PROs (specify)(FSET)	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	74.8(37.64)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	75.9(35.79)	MeanDif	-1.1(-19.71,17.51)	Not Significant (P-value>.05)
Mohtadi, N. G., 2008	High Quality	PROs (specify)(RC-QOL)	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	85(15.94)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	88.5(12.50)	MeanDif	-3.5(-10.78,3.78)	Not Significant (P-value>.05)
Mohtadi, N. G., 2008	High Quality	PROs (specify)(RC-QOL)	2 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	86.9(14.01)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	87.2(18.75)	MeanDif	-0.3(-8.64,8.04)	Not Significant (P-value>.05)
Mohtadi, N. G., 2008	High Quality	PROs (specify)(SRQ)	1 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	83.4(14.84)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	85.2(11.36)	MeanDif	-1.8(-8.52,4.92)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mohtadi, N. G., 2008	High Quality	PROs (specify)(SRQ)	2 years	G1 (Open repair) (Open acromioplasty and RC repair, failed non-op tx of >/=3 months)	29	85.1(13.74)	G2 (Mini-open repair) (Arthroscopic acromioplasty and mini-open RC repair, failed non-op tx of >/=3 months)	31	85.9(11.65)	MeanDif	-0.8(-7.27,5.67)	Not Significant (P-value>.05)

Table 42: Pico 9: Arthroscopic repair vs. Arthroscopic repair-(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gilot, G. J., 2015	Low Quality	PROs (specify) SP-12 (Mental Component)	1 year	G1 (ECM arthroscopic repair)	20	45.7 (10.8)	G2 (Arthroscopic repair)	15	47.1(11.8)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) SP-12 (Mental Component)	2 years	G1 (ECM arthroscopic repair)	20	47.3 (6.5)	G2 (Arthroscopic repair)	15	41.1 (8.2)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gilot, G. J., 2015	Low Quality	PROs (specify) SP-12 (Physical Component)	1 year	G1 (ECM arthroscopic repair)	20	29.1 (5.1)	G2 (Arthroscopic repair)	15	30.3 (5.7)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) SP-12 (Physical Component)	2 years	G1 (ECM arthroscopic repair)	20	36.3 (4.4)	G2 (Arthroscopic repair)	15	30.4 (5)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) SP-12 (Physical Component)	8 years	G1 (ECM arthroscopic repair)	20	84 (4)	G2 (Arthroscopic repair)	15	65 (5)			**Treatment 1** (P-value<.05

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gilot, G. J., 2015	Low Quality	PROs (specify) WORC	1 year	G1 (ECM arthroscopic repair)	20	52 (6)	G2 (Arthroscopic repair)	15	59 (8)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) WORC	2 years	G1 (ECM arthroscopic repair)	20	81 (12)	G2 (Arthroscopic repair)	15	64 (6)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M. J, 2018	Low Quality	PROs outcomes (specify) EQ-ED utility index	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	18	0.07 (0.1)	G2 (Arthroscopic repair)	20	0.16 (0.23)			Not Significant (P-value>.05)

Table 43: Pico 9: Arthroscopic repair vs. Arthroscopic repair-(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gilot, G. J., 2015	Low Quality	PROs (specify) ASES (pain/function)	1 year	G1 (ECM arthroscopic repair)	20	60.6 (8.3)	G2 (Arthroscopic repair)	15	57.6 (8.85)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) ASES (pain/function	2 years	G1 (ECM arthroscopic repair)	20	64.3 (7.8)	G2 (Arthroscopic repair)	15	60.4 (10.1)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) ASES (pain/function	8 years	G1 (ECM arthroscopic repair)	20	88.9 (4.8)	G2 (Arthroscopic repair)	15	72.6 (11.9)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M. J, 2018	Low Quality	PROs outcomes (specify) Constant score	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	17	24.9 (11)	G2 (Arthroscopic repair)	19	27.5 (16.5)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	PROs outcomes (specify) Oxford Shoulder Score (OSS)	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	18	15.9 (7.7)	G2 (Arthroscopic repair)	19	14.7 (5.4)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	PROs outcomes (specify) ASES score	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	17	44.9 (16.1)	G2 (Arthroscopic repair)	19	40.7 (23.5)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	PROs outcomes (specify) Quick DASH	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	18	-33.8 (17.5)	G2 (Arthroscopic repair)	20	-34.2 (14.7)			Not Significant (P-value>.05)

Pico 9: Arthroscopic repair vs. Arthroscopic repair-(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Gilot, G. J., 2015	Low Quality	PROs (specify) VAS (pain)	1 year	G1 (ECM arthroscopic repair)	20	5.3 (1.6)	G2 (Arthroscopic repair)	15	5.8 (1.1)			Not Significant (P-value>.05)
Gilot, G. J., 2015	Low Quality	PROs (specify) VAS (pain)	2 years	G1 (ECM arthroscopic repair)	20	3.9 (1.6)	G2 (Arthroscopic repair)	15	6.8 (1.1)			**Treatment 1 Significant** (P-value<.05
Gilot, G. J., 2015	Low Quality	PROs (specify) VAS (pain)	8 years	G1 (ECM arthroscopic repair)	20	1.3 (1.2)	G2 (Arthroscopic repair)	15	4.1 (1.1)			**Treatment 1 Significant** (P-value<.05

Pico 9: Arthroscopic repair vs. Arthroscopic repair-(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) Flexion(degrees)	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	18	28.3 (34.2)	G2 (Arthroscopic repair)	20	30.8			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) Abduction (degrees)	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	18	31.1 (31.4	G2 (Arthroscopic repair)	20	51.5 (40.2)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) External rotation in 0 degrees of abduction	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	12	25 (29.1)	G2 (Arthroscopic repair)	20	22.8 (22)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) External rotation in 90 degrees of abduction	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	15	12 (12.1)	G2 (Arthroscopic repair)	20	14.3 (26.8)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) Internal rotation in 90 degrees of abduction	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	15	1.7 (33.6)	G2 (Arthroscopic repair)	20	3 (27.6)			Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) Strength in abduction (kg)	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	18	2.1 (2.2)	G2 (Arthroscopic repair)	20	2.8 (2.8)			Not Significant (P-value>.05)
Flury, M. J, 2018	Low Quality	Clinical outcomes (specify) Strength in external rotation (kg)	1 year	G1 (Dermal patch augmentation and arthroscopic repair)	16	2.3 (2)	G2 (Arthroscopic repair)	20	2.6 (2.6)			Not Significant (P-value>.05)

Pico 9: Biologics with repair vs. Biologics with repair-(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciampi, P., 2015	Low	Clinical outcomes (specify) Elevation on scapular plane (degrees)	36 months	G1 (Polypropylene and open repair)	52	174.71 (8.18)	G2 (Collagen and open repair)	49	140.61 (12.48)			**Treatment 1 Significant** (P-value<.05)
Ciampi, P., 2015	Low	Clinical outcomes (specify) Abduction strength (kg)	36 months	G1 (Polypropylene and open repair)	52	13.79 (0.64)	G2 (Collagen and open repair)	49	9.03 (0.6)			**Treatment 1 Significant** (P-value<.05)
Gilot, G. J., 2015	Low Quality	Adverse event/complications Retears	2 years	G1 (ECM arthroscopic repair)	20	0.1	G2 (Arthroscopic repair)	15	0.27)			**Treatment 1 Significant** (P-value<.05)

Pico 9: Biologics with repair vs. Biologics with repair-(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciampi, P., 2015	Low	Adverse event/complications Retears	36 months	G1 (Polypropylene and open repair)	52	0.17	G2 (Collagen and open repair)	49	0.51			**Treatment 1 Significant** (P-value<.05)

Quality Evaluation Table 12: irreparable tear without arthropathy-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Franceschi, F., 2015	○	●	●	●	●	●				Include	Low Quality
Mori, D., 2013	○	●	●	●	●	○	●	●	●	Include	Low Quality
Pandey, R., 2017	○	●	●	●	●	●	●	●	●	Include	Low Quality
Paribelli, G., 2015	○	●	●	●	●	●				Include	Low Quality

Table 176: Summary of Findings-Pico 10 Part 1: Arthroscopic partial repair (with allograft) vs. Arthroscopic partial repair (alone)

	Low Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Pandey, R., 2017
Composite	
PROs (specify)(Constant score)	↑
Function	
Clinical outcomes (specify)(Oxford Shoulder Score)	↑

Table 177: Summary of Findings-Pico 10 Part 2: Debridement vs. Arthroscopic partial repair

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Franceschi, F., 2015 Low Quality
Composite	
Clinical outcomes (specify)(Modified-UCLA score)	↓
Function	
Clinical outcomes (specify)(forward flexion)	↓
Clinical outcomes (specify)(External rotation, degree)	↓
Clinical outcomes (specify)(Forward flexion, degree)	↓
Clinical outcomes (specify)(Internal rotation, degree)	↓
Pain	
PROs (specify)(Pain (VAS))	●
Quality of life	
PROs (specify)(Quality of life (RC-QOL))	↓

Table 178: Summary of Findings-Pico 10 Part 3: Interpositional graft vs. Arthroscopic partial repair

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Mori, D., 2013 Low Quality
Composite	
PROs (specify)(Constant score)	↑
PROs (specify)(UCLA score)	↑
Clinical outcomes (specify)(ASES)	↑
Function	
Clinical outcomes (specify)(external rotation)	●
Clinical outcomes (specify)(Internal Rotation)	●
Clinical outcomes (specify)(forward flexion)	●
Pain	
PROs (specify)(Visual analog scale (VAS))	↑

Table 179: Summary of Findings-Pico 10 Part 4: Latissimus dorsal transfer vs. Arthroscopic partial repair

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Paribelli, G., 2015 Low Quality
Composite	
Clinical outcomes (specify)(UCLA score)	↑
Function	
Clinical outcomes (specify)(Active forward flexion (°))	↑
Clinical outcomes (specify)(Active, external rotation (°))	●
Clinical outcomes (specify)(Passive external rotation (°))	●
Clinical outcomes (specify)(Passive forward flexion (°))	●
Pain	
PROs (specify)(Visual Analogue Scale (VAS))	●
Quality of life	
PROs (specify)(quality of life (RC-QOL) questionnaire)	↑

Table 180: Pico 10 Part 1: Arthroscopic partial repair (with allograft) vs. Arthroscopic partial repair (alone) - (Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Pandey, R., 2017	Low Quality	PROs (specify)(CONSTANT Score)	2 years	g1(Partial repair+Allograft) (Arthroscopic partial repair with the addition of GraftJacketO? allograft to bridge the repair)	13	83.9(6.00)	g1(Partial repair) (Arthroscopic partial repair only)	13	70.8(5.30)	MeanDif	13.1(8.75,17.45)	**Treatment 1 Significant (P-value<.05)**

Table 181: Pico 10 Part 1: Arthroscopic partial repair (with allograft) vs. Arthroscopic partial repair (alone) - (Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Pandey, R., 2017	Low Quality	Clinical outcomes (specify)(Oxford Shoulder Score)	2 years	g1(Partial repair+Allograft) (Arthroscopic partial repair with the addition of GraftJacketO? allograft to bridge the repair)	13	43.9(2.40)	g1(Partial repair) (Arthroscopic partial repair only)	13	37.1(2.40)	MeanDif	6.8(4.95,8.65)	**Treatment 1 Significant (P-value<.05)**

Table 182: Pico 10 Part 2: Debridement vs. Arthroscopic partial repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Modified-UCLA score)	2 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	23.2(2.80)	g2(partial repair) (Arthroscopic partial repair)	34	32.3(3.60)	MeanDif	-9.1(-10.63,-7.57)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Modified-UCLA score)	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	21.4(3.70)	g2(partial repair) (Arthroscopic partial repair)	34	28.8(4.20)	MeanDif	-7.4(-9.28,-5.52)	**Treatment 2 Significant (P-value<.05)**

Table 183: Pico 10 Part 2: Debridement vs. Arthroscopic partial repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(External rotation, degree)	2 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	52.1(5.30)	g2(partial repair) (Arthroscopic partial repair)	34	55.7(4.60)	MeanDif	-3.6(-5.96,-1.24)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(External rotation, degree)	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	48(7.30)	g2(partial repair) (Arthroscopic partial repair)	34	50.5(6.30)	MeanDif	-2.5(-5.74,0.74)	Not Significant (P-value>.05)
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Forward flexion)	2 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	140.4(7.30)	g2(partial repair) (Arthroscopic partial repair)	34	172.9(11.60)	MeanDif	-32.5(-37.11,-27.89)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Forward flexion)	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	132(23.20)	g2(partial repair) (Arthroscopic partial repair)	34	163.5(12.90)	MeanDif	-31.5(-40.42,-22.58)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Forward flexion, degree)	2 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	140.4(7.30)	g2(partial repair) (Arthroscopic partial repair)	34	172.9(11.60)	MeanDif	-32.5(-37.11,-27.89)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Forward flexion, degree)	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	132(23.20)	g2(partial repair) (Arthroscopic partial repair)	34	163.5(12.90)	MeanDif	-31.5(-40.42,-22.58)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Internal rotation, degree)	2 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	49.2(8.10)	g2(partial repair) (Arthroscopic partial repair)	34	73.8(10.20)	MeanDif	-24.6(-28.98,-20.22)	**Treatment 2 Significant (P-value<.05)**
Franceschi, F., 2015	Low Quality	Clinical outcomes (specify)(Internal rotation, degree)	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	46.7(7.10)	g2(partial repair) (Arthroscopic partial repair)	34	68.7(12.70)	MeanDif	-22(-26.89,-17.11)	**Treatment 2 Significant (P-value<.05)**

Table 184: Pico 10 Part 2: Debridement vs. Arthroscopic partial repair -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2015	Low Quality	PROs (specify)(Pain (VAS))	2 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	1.2(0.70)	g2(partial repair) (Arthroscopic partial repair)	34	0.9(1.10)	MeanDif	0.3(-0.14,0.74)	Not Significant (P-value>.05)
Franceschi, F., 2015	Low Quality	PROs (specify)(Pain (VAS))	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	1.5(0.70)	g2(partial repair) (Arthroscopic partial repair)	34	1.8(0.80)	MeanDif	-0.3(-0.66,0.06)	Not Significant (P-value>.05)

Table 185: Pico 10 Part 2: Debridement vs. Arthroscopic partial repair -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Franceschi, F., 2015	Low Quality	PROs (specify)(Quality of life (RC-QOL))	7 years	g1(debridement) (debridement associated with acromioplasty and bursec- tomy)	34	61.8(6.10)	g2(partial repair) (Arthroscopic partial repair)	34	71.2(9.80)	MeanDif	-9.4(-13.28,-5.52)	**Treatment 2 Significant (P-value<.05)**

Table 186: Pico 10 Part 3: Interpositional graft vs. Arthroscopic partial repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(ASES)	1 year	g1 (patch graft) (patch graft procedure)	24	84.9(8.10)	g2 (partial repair) (partial repair)	24	84.2(19.70)	MeanDif	0.7(-7.82,9.22)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(ASES)	2 years	g1 (patch graft) (patch graft procedure)	24	94.1(5.40)	g2 (partial repair) (partial repair)	24	85.7(14.10)	MeanDif	8.4(2.36,14.44)	**Treatment 1 Significant (P-value<.05)**
Mori, D., 2013	Low Quality	PROs (specify)(Constant score)	1 year	g1 (patch graft) (patch graft procedure)	24	73.6(6.60)	g2 (partial repair) (partial repair)	24	72.9(16.80)	MeanDif	0.7(-6.52,7.92)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	PROs (specify)(Constant score)	2 years	g1 (patch graft) (patch graft procedure)	24	81.1(5.70)	g2 (partial repair) (partial repair)	24	69.9(10.30)	MeanDif	11.2(6.49,15.91)	**Treatment 1 Significant (P-value<.05)**
Mori, D., 2013	Low Quality	PROs (specify)(UCLA score)	1 year	g1 (patch graft) (patch graft procedure)	24	28.6(4.30)	g2 (partial repair) (partial repair)	24	27.3(6.10)	MeanDif	1.3(-1.69,4.29)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	PROs (specify)(UCLA score)	2 years	g1 (patch graft) (patch graft procedure)	24	32.6(3.40)	g2 (partial repair) (partial repair)	24	29.8(5.30)	MeanDif	2.8(0.28,5.32)	**Treatment 1 Significant (P-value<.05)**

Table 187: Pico 10 Part 3: Interpositional graft vs. Arthroscopic partial repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(external rotation)	1 year	g1 (patch graft) (patch graft procedure)	24	42.5(14.40)	g2 (partial repair) (partial repair)	24	42.3(16.50)	MeanDif	0.2(-8.56,8.96)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(external rotation)	2 years	g1 (patch graft) (patch graft procedure)	24	46(14.70)	g2 (partial repair) (partial repair)	24	44.6(15.80)	MeanDif	1.4(-7.23,10.03)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(Forward flexion)	1 year	g1 (patch graft) (patch graft procedure)	24	152.9(10.40)	g2 (partial repair) (partial repair)	24	157.3(15.00)	MeanDif	-4.4(-11.70,2.90)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(Forward flexion)	2 years	g1 (patch graft) (patch graft procedure)	24	160.8(9.60)	g2 (partial repair) (partial repair)	24	162.3(9.40)	MeanDif	-1.5(-6.88,3.88)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(internal rotation)	1 year	g1 (patch graft) (patch graft procedure)	24	12.9(1.90)	g2 (partial repair) (partial repair)	24	12(3.00)	MeanDif	0.9(-0.52,2.32)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	Clinical outcomes (specify)(internal rotation)	2 years	g1 (patch graft) (patch graft procedure)	24	11.6(2.50)	g2 (partial repair) (partial repair)	24	11.6(2.40)	MeanDif	0(-1.39,1.39)	Not Significant (P-value>.05)

Table 188: Pico 10 Part 3: Interpositional graft vs. Arthroscopic partial repair -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mori, D., 2013	Low Quality	PROs (specify)(visual analog scale (VAS))	1 year	g1 (patch graft) (patch graft procedure)	24	1.2(0.80)	g2 (partial repair) (partial repair)	24	1.8(1.70)	MeanDif	-0.6(-1.35,0.15)	Not Significant (P-value>.05)
Mori, D., 2013	Low Quality	PROs (specify)(visual analog scale (VAS))	2 years	g1 (patch graft) (patch graft procedure)	24	0.3(0.60)	g2 (partial repair) (partial repair)	24	1.2(1.50)	MeanDif	-0.9(-1.55,-0.25)	**Treatment 1 Significant (P-value<.05)**

Table 189: Pico 10 Part 4: Latissimus dorsal transfer vs. Arthroscopic partial repair -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Paribelli, G., 2015	Low Quality	Clinical outcomes (specify)(UCLA score)	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	30.3(4.20)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	20.1(3.40)	MeanDif	10.2(7.83,12.57)	**Treatment 1 Significant (P-value<.05)**

Table 190: Pico 10 Part 4: Latissimus dorsal transfer vs. Arthroscopic partial repair -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Paribelli, G., 2015	Low Quality	Clinical outcomes (specify)(Active forward flexion (°))	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	131(9.00)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	110(12.70)	MeanDif	21(14.18,27.82)	**Treatment 1 Significant (P-value<.05)**
Paribelli, G., 2015	Low Quality	Clinical outcomes (specify)(Active, external rotation (°))	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	41.2(8.70)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	38.4(12.00)	MeanDif	2.8(-3.70,9.30)	Not Significant (P-value>.05)
Paribelli, G., 2015	Low Quality	Clinical outcomes (specify)(Passive external rotation (°))	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	59.1(10.20)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	57.4(9.10)	MeanDif	1.7(-4.29,7.69)	Not Significant (P-value>.05)
Paribelli, G., 2015	Low Quality	Clinical outcomes (specify)(Passive forward flexion (°))	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	171.2(9.70)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	169(10.90)	MeanDif	2.2(-4.19,8.59)	Not Significant (P-value>.05)

Table 191: Pico 10 Part 4: Latissimus dorsal transfer vs. Arthroscopic partial repair -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Paribelli, G., 2015	Low Quality	PROs (specify)(Visual Analogue Scale (VAS))	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	1.3(0.70)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	1.5(0.80)	MeanDif	-0.2(-0.67,0.27)	Not Significant (P-value>.05)

Table 192: Pico 10 Part 4: Latissimus dorsal transfer vs. Arthroscopic partial repair -(Quality of life)

ce	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	F Tr
G.,	Low Quality	PROs (specify)(quality of life (RC-QOL) questionnaire)	2 years	g1 (LDTT) (arthroscopic-assisted latissimus dorsi tendon transfer)	20	81.8(9.30)	g2 (PR) (arthroscopic rotator cuff partial repair)	20	69.3(8.70)	MeanDif	12.5(6.92,18.08)	Tre Sign va

Quality Evaluation Table 13: irreparable tear with arthropathy-Observational studies

Study	Design	Participant Recruitment	Allocation	Confounding Variables	Follow-Up Length	Other Bias? (If retrospective comparative, mark Yes)	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Young, S. W., 2013	○	●	●	●	●	○				Include	Low Quality

Table 193: Summary of Findings-Pico 11 Part 1: Hemiarthroplasty vs. Reversal Shoulder arthroplasty

	Low Quality
↑ **Better Outcomes** ↓ **Worse Outcomes** ● **Not Significant**	**Young, S. W., 2013**
Complications	
Adverse events/complications(revision rates)	●
Function	
Clinical outcomes (specify)(Oxford Shoulder Score)	↓
PROs (specify)(Constant-Murley (Range of Movement); Median (range))	
PROs (specify)(Constant-Murley (Strength); Median (range))	
PROs (specify)(UCLA (Active Forward Flexion); Median (range))	
PROs (specify)(UCLA (Function); Median (range))	
Pain	
PROs (specify)(Constant-Murley (pain); Median (range))	
PROs (specify)(UCLA (Pain); Median (range))	
Quality of life	
PROs (specify)(Constant-Murley (ADL); Median (range))	

Table 194: Pico 11 Part 1: Hemiarthroplasty vs. Reversal Shoulder arthroplasty -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Young, S. W., 2013	Low Quality	Adverse events/complications(revision rates)	1 year	g1(Hemiarthroplasties) (primary shoulder hemiarthroplasties)	102	3.92%	g2(Reverse Shoulder) (Reverse Shoulder Arthroplasties)	102	3.92%	RR	1.00(0.26,3.89)	Not Significant (P-value>.05)

Table 195: Pico 11 Part 1: Hemiarthroplasty vs. Reversal Shoulder arthroplasty -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Young, S. W., 2013	Low Quality	Clinical outcomes (specify)(Oxford Shoulder Score)	5 years	g1(Hemiarthroplasties) (primary shoulder hemiarthroplasties)	18	31.7(.)	g2(Reverse Shoulder) (Reverse Shoulder Arthroplasties)	14	38.9(.)	Author Reported	NA	Reverse Shoulder Significant (P-value<.05)
Young, S. W., 2013	Low Quality	Clinical outcomes (specify)(Oxford Shoulder Score)	6 months	g1(Hemiarthroplasties) (primary shoulder hemiarthroplasties)	102	31.1(.)	g2(Reverse Shoulder) (Reverse Shoulder Arthroplasties)	102	37.5(.)	Author Reported	NA	Reverse Shoulder Significant (P-value<.05)

Quality Evaluation Table 14: post op pain management-randomized studies

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Bain, G. I., 2001	◑	◑	●	●	●	◑				Include	High Quality
Banerjee, S. S., 2008	●	◑	●	●	◑	◑				Include	High Quality
Bang, S. R., 2010	●	●	●	●	●	◑				Include	High Quality
Behr, A., 2012	●	●	●	●	●	●	●	●	●	Include	High Quality
Borgeat, A., 2010	●	◑	●	●	◑	●				Include	High Quality
Ciccone, Ii W. J., 2008	●	◑	●	●	◑	◑				Include	High Quality
Clendenen, S. R., 2010	●	◑	●	●	◑	◑				Include	High Quality
Coghlan, Ja, 2009	●	●	●	●	◑	○				Include	High Quality
Culebras, X, 2001	◑	●	●	●	◑	◑				Include	High Quality
Desmet, M., 2013	●	●	◑	●	●	●				Include	High Quality
Desmet, M., 2015	●	●	◑	●	◑	◑				Include	High Quality
Faria-Silva, R., 2016	●	◑	◑	●	◑	●				Include	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Fredrickson, M. J., 2011	●	●	○	●	◑	●				Include	High Quality
Hadzic, A., 2005	◑	◑	◑	●	●	●				Include	High Quality
Han, Ss, 2013	●	◑	◑	●	◑	●				Include	High Quality
Hartrick, Ct, 2012	●	◑	●	●	●	○	●	●	●	Include	High Quality
Hoe-Hansen, C., 1999	◑	◑	●	●	●	◑				Include	High Quality
Hofmann-Kiefer, K., 2008	●	◑	◑	◑	●	●				Include	High Quality
Jo, Ch, 2014	●	◑	●	●	◑	●				Include	High Quality
Kim, Jy, 2016	●	●	◑	●	◑	◑				Include	High Quality
Klein, Sm, 2000	◑	●	●	●	●	●	●	●	●	Include	High Quality
Ko, S. H., 2017	●	◑	●	●	◑	●				Include	High Quality
Kraeutler, M. J., 2015	●	◑	◑	●	◑	●				Include	High Quality
Lee, Ar, 2012	●	◑	◑	◑	●	●	●	●	●	Include	High Quality
Lee, Hj, 2015	●	●	◑	●	◑	●				Include	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Lee, J-H, 2011	●	◑	●	●	●	●	●	●	●	Include	High Quality
Lee, J. J., 2017	●	◑	●	●	◑	◑				Include	High Quality
Lee, Jj, 2014	●	◑	●	●	◑	●				Include	High Quality
Lee, Jj, 2015	●	●	●	●	◑	○				Include	High Quality
Liu, X. N., 2017	●	◑	◑	●	●	●	●	●	●	Include	High Quality
Mahure, S. A., 2017	●	◑	●	◑	◑	◑				Include	Moderate Quality
Malik, T., 2016	◑	●	◑	●	◑	●				Include	High Quality
Merivirta, R., 2012	◑	●	●	●	●	●	●	●	●	Include	High Quality
Merivirta, R., 2013	◑	●	●	●	◑	●				Include	High Quality
Oh, J. H., 2009	●	◑	◑	●	●	◑				Include	High Quality
Osti, L., 2015	●	●	●	●	◑	●				Include	High Quality
Park, J. Y., 2016	◑	◑	●	●	◑	●				Include	High Quality
Perdreau, A., 2015	◑	●	●	●	●	●	●	●	●	Include	High Quality

Study	Random Sequence Generation	Allocation Concealment	Blinding	Incomplete Outcome Data	Selective Reporting	Other Bias	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Schwartzberg, Rs, 2013	●	●	●	●	◑	◑	●	●	●	Include	High Quality
Shin, H. J., 2016	●	●	●	●	◑	●				Include	High Quality
Sun, Z., 2018	●	◑	◑	●	◑	●				Include	High Quality
Syed, U. A. M., 2018	●	◑	●	●	◑	●				Include	High Quality
Takada, M., 2009	●	◑	●	●	◑	◑				Include	High Quality
Thackeray, E. M., 2013	●	◑	●	●	◑	●				Include	High Quality
Watanabe, K., 2016	◑	◑	●	●	◑	●				Include	High Quality
Yamakado, K., 2014	◑	●	◑	●	◑	●				Include	High Quality
Yun, M. J., 2012	●	◑	◑	●	◑	●				Include	High Quality

Quality Evaluation Table 15: post op pain management-Observational studies

Study	Design	Participant Recruitment	Allocation	Confounding Variables	Follow-Up Length	Other Bias? (If retrospective comparative, mark Yes)	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Clendenen, S. R., 2010	○	●	●	●	●	●	●	●	●	Include	Low Quality

Study	Design	Participant Recruitment	Allocation	Confounding Variables	Follow-Up Length	Other Bias? (If retrospective comparative, mark Yes)	Is there a large magnitude of effect?	Influence of All Plausible Residual Confounding	Dose-Response Gradient	Inclusion	Strength
Lin, Y. H., 2015	●	●	●	●	●	●	●	●	●	Include	High Quality

Table 196: Summary of Findings-Pico 12 Part 1a: Liposomal bupivacaine vs. Post-operative opioid use

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Merivirta, R., 2013
Complications	
Adverse events/complications(nausea)	●
Composite	
Clinical outcomes (specify)(Constant score 12 weeks after surgery)	●
Pain	
PROs (specify)(median pain score)	●
Post-op pain control	
Opioid consumption(consumption of oxycodone(mg) in recovery room on day of surgery)	●

Table 197: Summary of Findings-Pico 12 Part 1b: Pain pumps/catheter vs. Post-operative opioid use

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Hofmann-Kiefer, K., 2008 | High Quality
Function	
Clinical outcomes (specify)(Constant (Abduction); Median)	●
Clinical outcomes (specify)(Constant (External Rotation); Median)	●
Clinical outcomes (specify)(Constant (Forward Flexion); Median)	●
Clinical outcomes (specify)(Constant (Internal Rotation); Median)	●
Clinical outcomes (specify)(Constant (Strength); Median)	●
PROs (specify)(Constant (Arm Positioning))	●
Quality of life	
PROs (specify)(Constant (ADL); Median)	●
Pain control	
Opioid consumption(intraoperative fentanyl consumption [mg])	↓
Opioid consumption(number of piritramide rescue doses (3.75-11.25 mg))	↓

Table 198: Summary of Findings-Pico 12 Part 2a: Cryotherapy vs. Control

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Kraeutler, M. J., 2015
Pain	
PROs (specify)(Worst pain on night of surgery)	●
Quality of life	
PROs (specify)(able to sleep on night of surgery)	●
Post-op pain control	
Medication use (length of time)(average total MED during postoperative days 0 to 7)	●

Table 199: Summary of Findings-Pico 12 Part 2b: Gabapentin vs. Control

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Bang, S. R., 2010
Complications	
Adverse events/complications(incidence of side effects)	●
Pain	
PROs (specify)(Visual analog scale (VAS))	↑
Post-op pain control	
Medication use (length of time)(Consumption of fentanyl)	●
Medication use (length of time)(first opioid administration)	●

Table 200: Summary of Findings-Pico 12 Part 2c: Liposomal bupivacaine vs. Control

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Banerjee, S. S., 2008
Pain	
PROs (specify)(Visual analog scale (VAS))	●
Post-op pain control	
Medication use (length of time)(total narcotic consumption)	●

Table 201: Summary of Findings-Pico 12 Part 2d: Liposomal bupivacaine vs. Liposomal bupivacaine

	High Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Banerjee, S. S., 2008	Lee, Hj, 2015
Pain		
PROs (specify)(Visual analog scale (VAS))	●	
PROs (specify)(VAS pain score)		●
Post-op pain control		
Medication use (length of time)(total narcotic consumption)	●	
Opioid consumption(consumption of rescue analgesic)		●

Table 202: Summary of Findings-Pico 12 Part 2e: Multimodal programs vs. Control

	High Quality		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Jo, Ch, 2014	Perdreau, A., 2015	Syed, U. A. M., 2018
Complications			
Adverse events/complications(Nausea and vomiting (%))	●		
Adverse events/complications(Numbers of night awakenings)	●		
Adverse events/complications(Urinary retention (%))	●		
Adverse events/complications(complex regional pain syndrome (CRPS))		●	
Adverse events/complications(delayed skin healing)		●	
Adverse events/complications(infection)		●	
Adverse events/complications(PONV score)		●	
Adverse events/complications(respiratory score)		●	
Adverse events/complications(sedation score)		●	
Adverse events/complications(urinary retention)		●	
Pain			
PROs (specify)(VAS)		↑	
PROs (specify)(VAS pain score)			↑
Post-op pain control			
Medication use (length of time)(Cumulative PCA consumption)	↑		
Opioid consumption(cumulative morphine intake(mg))		↑	
Opioid consumption(mean time to first morphine bolus)		↑	

Table 203: Summary of Findings-Pico 12 Part 2f: Multimodal programs vs. Non-steroidals

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Han, Ss, 2013
Complications	
Adverse events/complications(nausea)	↑
Adverse events/complications(urinary retention)	●
Adverse events/complications(constipation)	●
Adverse events/complications(dizziness)	●
Adverse events/complications(heeadache)	●
Adverse events/complications(pruritas)	●
Adverse events/complications(respiratory discomfort)	●
Adverse events/complications(somnolence)	●
Adverse events/complications(tingling/numbness)	●
Adverse events/complications(use of rescue antiemetics)	●
Adverse events/complications(vomiting)	●
Pain	
PROs (specify)(pain at rest)	↑
Post-op pain control	
Opioid consumption(rescue analgesic)	↓

Table 204: Summary of Findings-Pico 12 Part 2g: Non-steroidals vs. Control

	High Quality		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Behr, A., 2012	Hoe-Hansen, C., 1999	Takada, M., 2009
Complications			
Adverse events/complications(artery puncture)	●		
Adverse events/complications(laryngeal nerve block)	●		
Adverse events/complications(PONV)	●		
Adverse events/complications(respiratory depression)	●		
Hospital readmission(number re-operated)		●	
Composite			
PROs (specify)(UCLA score)		●	
Pain			
PROs (specify)(Number of Patients Showing Mild or No Pain Satisfied With Treatment)		↑	
PROs (specify)((median) Visual analog scale (VAS) score)			↑
Post-op pain control			
Opioid consumption(ketoralac consumption)	↑		
Opioid consumption(tramadol consumption)	↑		
Other(time to the first rescue analgesic request(min))			↑

Table 205: Summary of Findings-Pico 12 Part 2h: Pain pumps/catheter vs. Control

	High Quality				
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Ciccone, Ii W. J., 2008	Coghlan, Ja, 2009	Merivirta, R., 2012	Schwartzberg, Rs, 2013	Yun, M. J., 2012
Complications					
Adverse events/complications(nausea)			●		↑
Adverse events/complications(dizziness)			●		
Adverse events/complications(vomiting)			●		
Adverse events/complications(nausea and vomiting)		●			
PROs (specify)(post-op stiff painful shoulder)		●			
Adverse events/complications(dysarthria)			●		
Adverse events/complications(metallic taste)			●		
Adverse events/complications(muscular rigidity)			●		
Adverse events/complications(muscular twitching)			●		
Adverse events/complications(perioral numbness)			●		
Adverse events/complications(tinnitus)			●		
Adverse events/complications(visual disturbance)			●		
Length of stay					
Length of stay(delayed discharge)		●			
Pain					
PROs (specify)(VAS)				●	
PROs (specify)(VAS score)	↓				
PROs (specify)(Visual analog scale (VAS))					↑
PROs (specify)(average pain)		↑			
PROs (specify)(maximum pain)		●			
Quality of life					
PROs (specify)(Patient satisfaction)					↑
Post-op pain control					
Medication use (length of time)(Recovery Room Oral narcotic consumption)	↓				
Opioid consumption(opioid use (mg))		↑			
Opioid consumption(oral analgesia use)		↑			
Opioid consumption(no. of oxycodone tablets per day)				●	
Opioid consumption(no. of patients who used other analgesics)				●	
Opioid consumption(total no. of oxycodone tablets)				●	
Medication use (length of time)(frequency of requested bolus doses by patients)					↑
Medication use (length of time)(NSAID requirement)					●
Medication use (length of time)(opioid requirement)					●

Table 206: Summary of Findings-Pico 12 Part 2i: Pain pumps/catheter vs. Pain pumps/catheter

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality	
	Schwartzberg, Rs, 2013	Yamakado, K., 2014
Pain		
PROs (specify)(VAS)	●	↑
Post-op pain control		
Opioid consumption(no. of oxycodone tablets per day)	●	
Opioid consumption(no. of patients who used other analgesics)	●	
Opioid consumption(total no. of oxycodone tablets)	●	
Clinical outcomes (specify)(Additional Pain-reduction attempts)		↑

Table 207: Summary of Findings-Pico 12 Part 2j: Perioperative steroids vs. Control

	High Quality	
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Desmet, M., 2015	Lin, Y. H., 2015
Complications		
Adverse events/complications(Weakness)	●	
Pain		
PROs (specify)(VAS)		↑
PROs (specify)(Mild pain)	●	
Quality of life		
PROs (specify)(Disturbed sleep)	↑	
PROs (specify)(satisfaction)	↑	
Post-op pain control		
Medication use (length of time)(median duration of interscalene analgesia(h))	↑	
Medication use (length of time)(No analgesia required)	●	
Medication use (length of time)(Piritramide required)	●	
Medication use (length of time)(required Diclofenac; mg)	●	
Medication use (length of time)(required Paracetamol g)	↑	

Table 208: Summary of Findings-Pico 12 Part 2k: Regional block vs. Control

Table 209: Summary of Findings-Pico 12 Part 2l: Regional block vs. Liposomal bupivacaine

	High Quality
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Hadzic, A., 2005
Complications	
Adverse events/complications(nausea)	↑
Adverse events/complications(vomiting)	↑
Hospital readmission(Hospital admission)	↑
Length of stay	
Length of stay(Bypass PACU)	↑
Length of stay(Discharge time, min)	↑
Pain	
PROs (specify)(Moderate/severe pain (VAS >3)))	↑

Table 210: Summary of Findings-Pico 12 Part 2m: Regional block vs. Pain pumps/catheter

	High Quality		
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Ciccone, li W. J., 2008	Malik, T., 2016	Park, J. Y., 2016
Complications			
Adverse events/complications(incidence of nausea, vomiting, or sedation each day)		↓	
Pain			
PROs (specify)(VAS score)	↑		
PROs (specify)(Median Pain at Rest)		↓	
PROs (specify)(median Pain With Movement)		↓	
PROs (specify)(Pain VAS score)			↓
Quality of life			
PROs (specify)(sleep disturbance each day(number of patients))		↓	
Post-op pain control			
Medication use (length of time)(Recovery Room Oral narcotic consumption)	↑		
Medication use (length of time)(median Opioid Doses)		↓	

Table 211: Summary of Findings-Pico 12 Part 2n: Regional block vs. Perioperative steroids

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality	
	Lin, Y. H., 2015	Watanabe, K., 2016
Complications		
Adverse events/complications(Nausea/ vomiting)		●
Adverse events/complications(Sleep disturbance)		↓
Pain		
PROs (specify)(VAS)	↓	
PROs (specify)(Wong-Baker Face Scale pain score)		↓
Post-op pain control		
Opioid consumption(Pentazocine(mg) Consumption)		●
Other(duration of the motor block(hours))		↓

Table 212: Summary of Findings-Pico 12 Part 2o: Regional block vs. Regional block

	High Quality						
↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	Shin, H. J., 2016	Desmet, M., 2013	Hartrick, Ct, 2012	Kim, Jy, 2016	Lee, J-H, 2011	Oh, J. H., 2009	Thackeray, E. M., 2013
Complications							
Adverse events/complications(urinary retention)				●			
Adverse events/complications(dizziness)				↓			
Adverse events/complications(nausea and vomiting)				↓			
Adverse events/complications(No weakness)	↑						
Adverse events/complications(numbness(severity 0))	↓						
Adverse events/complications(numbness(severity 2))	●						
Adverse events/complications(severe weakness)	↑						
Clinical outcomes (specify)(Oxygen saturation)	●						
Adverse events/complications(Incidence of dyspnoea (%))		●					
Adverse events/complications(Incidence of hoarseness (%))		●					
Adverse events/complications(Incidence of Horner syndrome (%))		●					
Adverse events/complications(dyspnea in PACU)			↓				
Adverse events/complications(mean reductions in contralateral diaphragm motion)			●				
Adverse events/complications(mean reductions in ipsilateral diaphragm motion)			●				
Adverse events/complications(Horner's syndrome)				●			
Adverse events/complications(complications: hematoma formation, Horner's syndrome, hoarseness, respiratory distress)					●		
Adverse events/complications(Hemidiaphragmatic paralysis)					↓		
Adverse events/complications(post-op nausea and vomiting)					●		
Adverse events/complications(Postoperative diaphragm function)							↑
Other(change in oxygen saturation%)							↓
Pain							
PROs (specify)(VAS)					●		
PROs (specify)(NRS)			●				
PROs (specify)(Visual analog scale (VAS))						●	
PROs (specify)(pain score(numerical rating scale))	↑						
PROs (specify)(verbal pain score)							↑
Quality of life							
PROs (specify)(Patient satisfaction)			●				●
PROs (specify)(satisfaction)				↑			
PROs (specify)(Satisfaction score)	↑				●		
PROs (specify)(patients satisfied)		●					
PROs (specify)(Sleep disturbance)		↑					
PROs (specify)(procedural discomfort(median))				●			
Post-op pain control							
Clinical outcomes (specify)(Patients with residual motor block)		●					
Medication use (length of time)(median time of primary endpoint)		↑					
Opioid consumption(cumulative ropivacaine infusion)			●				
Opioid consumption(opioid consumption)			●				
Opioid consumption(if patient required treatment with opioids)							●

Table 213: Summary of Findings-Pico 12 Part 2p: TENs vs. Control

↑ Better Outcomes ↓ Worse Outcomes ● Not Significant	High Quality Osti, L., 2015	Moderate Quality Mahure, S. A., 2017
Complications		
Adverse events/complications(mild to moderate capsulitis)	●	
Adverse events/complications(severe capsulitis)	●	
Composite		
PROs (specify)(constant-murley score)	↑	
PROs (specify)(UCLA score)	↑	
Function		
Clinical outcomes (specify)(External rotation(degrees))	↑	
Clinical outcomes (specify)(Forward flexion(degrees))	↑	
Pain		
PROs (specify)(Visual analog scale (VAS) pain scores)		↑
Post-op pain control		
Medication use (length of time)(Percocet use)		↑

Table 214: Pico 12 Part 1a: Liposomal bupivacaine vs. Post-operative opioid use -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merivirta, R., 2013	High Quality	Adverse events/complications(nausea)	1 day	G2(Bupivacaine) (placebo patch and an infusion of 2.5-mg/mL bupivacaine in a subacromial manner for 72 hours)	30	3.33%	G1(fentanyl patch) (12.0-mg/h fentanyl patch + saline solution infusion in a subacromial manner at the rate of 4 mL/h.)	30	0.00%	RD	0.03(-0.05,0.12)	Not Significant (P-value>.05)
Merivirta, R., 2013	High Quality	Adverse events/complications(nausea)	12 hours	G2(Bupivacaine) (placebo patch and an infusion of 2.5-mg/mL bupivacaine in a subacromial manner for 72 hours)	30	6.67%	G1(fentanyl patch) (12.0-mg/h fentanyl patch + saline solution infusion in a subacromial manner at the rate of 4 mL/h.)	30	6.67%	RR	1.00(0.15,6.64)	Not Significant (P-value>.05)

Table 215: Pico 12 Part 1a: Liposomal bupivacaine vs. Post-operative opioid use -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merivirta, R., 2013	High Quality	Clinical outcomes (specify)(Constant score 12 weeks after surgery)	1.7 weeks	G2(Bupivacaine) (placebo patch and an infusion of 2.5-mg/mL bupivacaine in a subacromial manner for 72 hours)	30	67(15.00)	G1(fentanyl patch) (12.0-mg/h fentanyl patch + saline solution infusion in a subacromial manner at the rate of 4 mL/h.)	30	64(16.00)	MeanDif	3(-4.85,10.85)	Not Significant (P-value>.05)

Table 216: Pico 12 Part 1a: Liposomal bupivacaine vs. Post-operative opioid use -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merivirta, R., 2013	High Quality	PROs (specify)(median pain score)	18 hours	G2(Bupivacaine) (placebo patch and an infusion of 2.5-mg/mL bupivacaine in a subacromial manner for 72 hours)	30	3(.)	G1(fentanyl patch) (12.0-mg/h fentanyl patch + saline solution infusion in a subacromial manner at the rate of 4 mL/h.)	30	4(.)	Author Reported	NA	Not Significant (P-value>.05)
Merivirta, R., 2013	High Quality	PROs (specify)(median pain score)	Post-Op	G2(Bupivacaine) (placebo patch and an infusion of 2.5-mg/mL bupivacaine in a subacromial manner for 72 hours)	30	7(.)	G1(fentanyl patch) (12.0-mg/h fentanyl patch + saline solution infusion in a subacromial manner at the rate of 4 mL/h.)	30	7(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 217: Pico 12 Part 1a: Liposomal bupivacaine vs. Post-operative opioid (Pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merivirta, R., 2013	High Quality	Opioid consumption(consumption of oxycodone(mg) in recovery room on day of surgery)	Post-Op	G2(Bupivacaine) (placebo patch and an infusion of 2.5-mg/mL bupivacaine in a subacromial manner for 72 hours)	30	13.5(.)	G1(fentanyl patch) (12.0-mg/h fentanyl patch + saline solution infusion in a subacromial manner at the rate of 4 mL/h.)	30	15(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 218: Pico 12 Part 1b: Pain pumps/catheter vs. Post-operative opioid use -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hofmann-Kiefer, K., 2008	High Quality	Clinical outcomes (specify)(Constant (Abduction); Median)	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	0(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	0(.)	Author Reported	NA	Not Significant (P-value>.05)
Hofmann-Kiefer, K., 2008	High Quality	Clinical outcomes (specify)(Constant (External Rotation); Median)	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	0(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	0(.)	Author Reported	NA	Not Significant (P-value>.05)
Hofmann-Kiefer, K., 2008	High Quality	Clinical outcomes (specify)(Constant (Forward Flexion); Median)	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	0(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	0(.)	Author Reported	NA	Not Significant (P-value>.05)
Hofmann-Kiefer, K., 2008	High Quality	Clinical outcomes (specify)(Constant (Internal Rotation); Median)	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	1(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	2(.)	Author Reported	NA	Not Significant (P-value>.05)
Hofmann-Kiefer, K., 2008	High Quality	Clinical outcomes (specify)(Constant (Strength); Median)	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	1(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	1(.)	Author Reported	NA	Not Significant (P-value>.05)
Hofmann-Kiefer, K., 2008	High Quality	PROs (specify)(Constant (Arm Positioning))	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	4(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	6(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 219: Pico 12 Part 1b: Pain pumps/catheter vs. Post-operative opioid use -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hofmann-Kiefer, K., 2008	High Quality	Opioid consumption(intraoperative fentanyl consumption [mg])	3 Days	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	0.46(0.14)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	0.26(0.11)	MeanDif	0.2(0.14,0.26)	**Treatment 2 Significant (P-value<.05)**
Hofmann-Kiefer, K., 2008	High Quality	Opioid consumption(number of piritramide rescue doses (3.75-11.25 mg))	3 Days	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	11	g1(PCISB) (patient-controlled continuous interscale ne block)	36	6	Author Reported	1.94(0.81,4.67)	**Treatment 2 Significant (P-value<.05)**

Table 220: Pico 12 Part 1b: Pain pumps/catheter vs. Post-operative opioid use -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hofmann-Kiefer, K., 2008	High Quality	PROs (specify)(Constant (ADL); Median)	Post-Op	g2(PCA) (patient-controlled IV (opioid) analgesia (PCA))	34	2(.)	g1(PCISB) (patient-controlled continuous interscale ne block)	36	2(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 221: Pico 12 Part 2a: Cryotherapy vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kraeutler, M. J., 2015	High Quality	PROs (specify)(Worst pain on night of surgery)	Post-Op	g1(crythotherapy) (Compressive cryotherapy)	25	40(.)	g2(Ice) (standard ice wrap)	21	32(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 222: Pico 12 Part 2a: Cryotherapy vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kraeutler, M. J., 2015	High Quality	Medication use (length of time)(average total MED during postoperative days 0 to 7)	1 week	g1(crythotherapy) (Compressive cryotherapy)	25	201(.)	g2(Ice) (standard ice wrap)	21	154(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 223: Pico 12 Part 2a: Cryotherapy vs. Control -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kraeutler, M. J., 2015	High Quality	PROs (specify)(able to sleep on night of surgery)	Post-Op	g1(crythotherapy) (Compressive cryotherapy)	25	35(.)	g2(Ice) (standard ice wrap)	21	35.5(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 224: Pico 12 Part 2b: Gabapentin vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bang, S. R., 2010	High Quality	Adverse events/complications(incidence of side effects)	Post-Op	g1(gabapentin (300 mg of gabapentin)	23	N/A	g2(placebo) (placebo identical in appearance to gabapentin)	23	N/A	Author Reported	NA	Not Significant (P-value>.05)

Table 225: Pico 12 Part 2b: Gabapentin vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bang, S. R., 2010	High Quality	PROs (specify)(Visual analog scale (VAS))	12 hours	g1(gabapentin (300 mg of gabapentin)	23	4.4	g2(placebo) (placebo identical in appearance to gabapentin)	23	5.8	Author Reported	NA	gabapentin Significant (P-value<.05)
Bang, S. R., 2010	High Quality	PROs (specify)(Visual analog scale (VAS))	2 hours	g1(gabapentin (300 mg of gabapentin)	23	5	g2(placebo) (placebo identical in appearance to gabapentin)	23	7	Author Reported	NA	gabapentin Significant (P-value<.05)
Bang, S. R., 2010	High Quality	PROs (specify)(Visual analog scale (VAS))	6 hours	g1(gabapentin (300 mg of gabapentin)	23	4.5	g2(placebo) (placebo identical in appearance to gabapentin)	23	6	Author Reported	NA	gabapentin Significant (P-value<.05)

Table 226: Pico 12 Part 2b: Gabapentin vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bang, S. R., 2010	High Quality	Medication use (length of time)(Consumption of fentanyl)	1 day	g1(gabapentin (300 mg of gabapentin)	23	N/A	g2(placebo) (placebo identical in appearance to gabapentin)	23	N/A	Author Reported	NA	Not Significant (P-value>.05)
Bang, S. R., 2010	High Quality	Medication use (length of time)(first opioid administration)	Post-Op	g1(gabapentin (300 mg of gabapentin)	23	N/A	g2(placebo) (placebo identical in appearance to gabapentin)	23	N/A	Author Reported	NA	Not Significant (P-value>.05)

Table 227: Pico 12 Part 2c: Liposomal bupivacaine vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Banerjee, S. S., 2008	High Quality	PROs (specify)(Visual analog scale (VAS))	Post-Op	g1(bupivacaine 2 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 2 mL/hr)	20	2.9(.)	g3(saline) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and saline at 5 mL/hr)	20	3.3(.)	Author Reported	NA	Not Significant (P-value>.05)
Banerjee, S. S., 2008	High Quality	PROs (specify)(Visual analog scale (VAS))	Post-Op	g2(bupivacaine 5 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 5 mL/hr)	20	3.6(.)	g3(saline) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and saline at 5 mL/hr)	20	3.3(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 228: Pico 12 Part 2c: Liposomal bupivacaine vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Banerjee, S. S., 2008	High Quality	Medication use (length of time)(total narcotic consumption)	Post-Op	g1(bupivacaine 2 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 2 mL/hr)	20	2.24(.)	g3(saline) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and saline at 5 mL/hr)	20	2.32(.)	Author Reported	NA	Not Significant (P-value>.05)
Banerjee, S. S., 2008	High Quality	Medication use (length of time)(total narcotic consumption)	Post-Op	g2(bupivacaine 5 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 5 mL/hr)	20	3.52(.)	g3(saline) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and saline at 5 mL/hr)	20	2.32(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 229: Pico 12 Part 2d: Liposomal bupivacaine vs. Liposomal bupivacaine -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Banerjee, S. S., 2008	High Quality	PROs (specify)(Visual analog scale (VAS))	Post-Op	g2(bupivacaine 5 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 5 mL/hr)	20	3.6(.)	g1(bupivacaine 2 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 2 mL/hr)	20	2.9(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	PROs (specify)(VAS pain score)	1 day	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	3.9(.)	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	3(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	PROs (specify)(VAS pain score)	1 day	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	3.5(.)	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	3(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	PROs (specify)(VAS pain score)	1 day	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	3.5(.)	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	3.9(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Hj, 2015	High Quality	PROs (specify)(VAS pain score)	Post-Op	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	6.4(.)	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	7(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	PROs (specify)(VAS pain score)	Post-Op	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	6.5(.)	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	7(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	PROs (specify)(VAS pain score)	Post-Op	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	6.5(.)	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	6.4(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 230: Pico 12 Part 2d: Liposomal bupivacaine vs. Liposomal bupivacaine -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Banerjee, S. S., 2008	High Quality	Medication use (length of time)(total narcotic consumption)	Post-Op	g2(bupivacaine 5 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 5 mL/hr)	20	3.52(.)	g1(bupivacaine 2 mL/hr) (bolus injection in the subacromial space of 35 mL of 0.25% bupivacaine with epinephrine and 0.25% bupivacaine at 2 mL/hr)	20	2.24(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	1 day	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	7.14%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	5.00%	RR	1.43(0.25,8.11)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	1 day	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	7.69%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	5.00%	RR	1.54(0.27,8.71)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	1 day	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	7.69%	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	7.14%	RR	1.08(0.23,5.02)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	1 hour	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	85.71%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	92.50%	RR	0.93(0.80,1.08)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	1 hour	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	92.31%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	92.50%	RR	1.00(0.88,1.13)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	1 hour	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	92.31%	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	85.71%	RR	1.08(0.92,1.26)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	12 hours	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	19.05%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	25.00%	RR	0.76(0.33,1.73)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	12 hours	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	25.64%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	25.00%	RR	1.03(0.48,2.19)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	12 hours	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	25.64%	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	19.05%	RR	1.35(0.59,3.06)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	2 hours	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	7.14%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	7.50%	RR	0.95(0.20,4.45)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	2 hours	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	10.26%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	7.50%	RR	1.37(0.33,5.72)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	2 hours	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	10.26%	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	7.14%	RR	1.44(0.34,6.01)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	6 hours	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	50.00%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	52.50%	RR	0.95(0.62,1.45)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	6 hours	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	43.59%	G1 (glenohumeral injection) (glenohumeral injection of injection of bupivacaine (20mL) and lidocaine (10mL))	40	52.50%	RR	0.83(0.52,1.32)	Not Significant (P-value>.05)
Lee, Hj, 2015	High Quality	Opioid consumption(consumption of rescue analgesic)	6 hours	G3 (GH + SA injection) (GH + SA injection; half dose in each area)	39	43.59%	G2 (subacromial injection) (subacromial injection of injection of bupivacaine (20mL) and lidocaine (10mL))	42	50.00%	RR	0.87(0.55,1.39)	Not Significant (P-value>.05)

Table 231: Pico 12 Part 2e: Multimodal programs vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jo, Ch, 2014	High Quality	Adverse events/complications(Nausea and vomiting (%))	3 Days	g2(MMA) (MMA injections)	27	18.52%	g1(Control) (Saline injections)	27	25.93%	RR	0.71(0.26,1.97)	Not Significant (P-value>.05)
Jo, Ch, 2014	High Quality	Adverse events/complications(Numbers of night awakenings)	3 Days	g2(MMA) (MMA injections)	27	. %	g1(Control) (Saline injections)	27	. %	Author Reported	NA	Not Significant (P-value>.05)
Jo, Ch, 2014	High Quality	Adverse events/complications(Urinary retention (%))	3 Days	g2(MMA) (MMA injections)	27	25.93%	g1(Control) (Saline injections)	27	14.81%	RR	1.75(0.58,5.29)	Not Significant (P-value>.05)
Perdreau, A., 2015	High Quality	Adverse events/complications(complex regional pain syndrome (CRPS))	3 months	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	16.00%	G2 (saline) (placebo injection of saline)	25	4.00%	RR	4.00(0.48,33.33)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	Adverse events/complications(delayed skin healing)	3 months	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	4.00%	G2 (saline) (placebo injection of saline)	25	4.00%	RR	1.00(0.07,15.12)	Not Significant (P-value>.05)
Perdreau, A., 2015	High Quality	Adverse events/complications(infection)	3 months	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	0.00%	G2 (saline) (placebo injection of saline)	25	0.00%	RD	0.00(-0.07,0.07)	Not Significant (P-value>.05)
Perdreau, A., 2015	High Quality	Adverse events/complications(PONV score)	1 day	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	0.2(.)	G2 (saline) (placebo injection of saline)	25	0.16(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	Adverse events/complications(respiratory score)	1 day	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	0.28(.)	G2 (saline) (placebo injection of saline)	25	0.24(.)	Author Reported	NA	Not Significant (P-value>.05)
Perdreau, A., 2015	High Quality	Adverse events/complications(sedation score)	1 day	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	0.76(.)	G2 (saline) (placebo injection of saline)	25	0.76(.)	Author Reported	NA	Not Significant (P-value>.05)
Perdreau, A., 2015	High Quality	Adverse events/complications(urinary retention)	3 months	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	0.00%	G2 (saline) (placebo injection of saline)	25	8.00%	RD	-0.08(-0.21,0.05)	Not Significant (P-value>.05)

Table 232: Pico 12 Part 2e: Multimodal programs vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	0.5 hours	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	2.6(.)	G2 (saline) (placebo injection of saline)	25	4.1(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	1 day	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	1(.)	G2 (saline) (placebo injection of saline)	25	2.3(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	1 hour	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	2.8(.)	G2 (saline) (placebo injection of saline)	25	4.8(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	12 hours	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	1.5(.)	G2 (saline) (placebo injection of saline)	25	2.9(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	18 hours	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	1.3(.)	G2 (saline) (placebo injection of saline)	25	2.4(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	2 hours	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	3.5(.)	G2 (saline) (placebo injection of saline)	25	4(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	4 hours	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	2.7(.)	G2 (saline) (placebo injection of saline)	25	3.8(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)
Perdreau, A., 2015	High Quality	PROs (specify)(VAS)	6 hours	G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	2.1(.)	G2 (saline) (placebo injection of saline)	25	3.5(.)	Author Reported	NA	ropivacaine + methylprednisol Significant (P-value<.05)
Syed, U. A. M., 2018	High Quality	PROs (specify)(VAS pain score)	1 month	g1(education) (arthroscopic rotator cuff repair with opioid related preoperative education)	68	2.4(2.00)	g2(no/education) (arthroscopic rotator cuff repair alone)	66	3.7(2.40)	MeanDif	-1.3(-2.05,-0.55)	**Treatment 1 Significant (P-value<.05)**
Syed, U. A. M., 2018	High Quality	PROs (specify)(VAS pain score)	2 weeks	g1(education) (arthroscopic rotator cuff repair with opioid related preoperative education)	68	3.3(2.20)	g2(no/education) (arthroscopic rotator cuff repair alone)	66	4.4(2.50)	MeanDif	-1.1(-1.90,-0.30)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Syed, U. A. M., 2018	High Quality	PROs (specify)(VAS pain score)	3 months	g1(education) (arthroscopic rotator cuff repair with opioid related preoperative education)	68	2.2(2.40)	g2(no/education) (arthroscopic rotator cuff repair alone)	66	2.2(2.20)	MeanDif	0(-0.78,0.78)	Not Significant (P-value>.05)

Table 233: Pico 12 Part 2e: Multimodal programs vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Jo, Ch, 2014	High Quality	Medication use (length of time)(Cumulative PCA consumption)	1 day	g2(MMA) (MMA injections)	27	. %	g1(Control) (Saline injections)	27	. %	Author Reported	NA	MMA Significant (P-value<.05)
Jo, Ch, 2014	High Quality	Medication use (length of time)(Cumulative PCA consumption)	12 hours	g2(MMA) (MMA injections)	27	. %	g1(Control) (Saline injections)	27	. %	Author Reported	NA	MMA Significant (P-value<.05)
Jo, Ch, 2014	High Quality	Medication use (length of time)(Cumulative PCA consumption)	18 hours	g2(MMA) (MMA injections)	27	. %	g1(Control) (Saline injections)	27	. %	Author Reported	NA	MMA Significant (P-value<.05)
Jo, Ch, 2014	High Quality	Medication use (length of time)(Cumulative PCA consumption)	6 hours	g2(MMA) (MMA injections)	27	. %	g1(Control) (Saline injections)	27	. %	Author Reported	NA	MMA Significant (P-value<.05)
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	0.5 hours	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	2.2(.)	*G2 (Saline) (placebo injection of saline)	25	4.4(.)	Author Reported	NA	(ropivacaine + methylprednis o Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	1 day	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	14.7(.)	*G2 (Saline) (placebo injection of saline)	25	21.4(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	1 hour	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	4.6(.)	*G2 (Saline) (placebo injection of saline)	25	9.5(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	12 hours	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	11.6(.)	*G2 (Saline) (placebo injection of saline)	25	18.4(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	18 hours	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	13.1(.)	*G2 (Saline) (placebo injection of saline)	25	19.7(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	2 hours	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	7.4(.)	*G2 (Saline) (placebo injection of saline)	25	13.1(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	4 hours	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	9.2(.)	*G2 (Saline) (placebo injection of saline)	25	15(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Perdreau, A., 2015	High Quality	Opioid consumption(cumulative morphine intake(mg))	6 hours	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	10.4(.)	*G2 (Saline) (placebo injection of saline)	25	16.2(.)	Author Reported	NA	(ropivacaine + methylprednisolo Significant (P-value<.05)
Perdreau, A., 2015	High Quality	Opioid consumption(mean time to first morphine bolus)	Post-Op	*G1 (ropivacaine + methylprednisolone + morphine) (postoperative multi-site injection of a mixture of 10 mg morphine, 75 mg ropivacaine and 120 mg methylprednisolone)	25	71.6(85.00)	*G2 (Saline) (placebo injection of saline)	25	33(47.70)	MeanDif	38.6(0.39,76.81)	**Treatment 1 Significant (P-value<.05)**

Table 234: Pico 12 Part 2f: Multimodal programs vs. Non-steroidals -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	Adverse events/complications(constipation)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	0.00%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	0.00%	RD	0.00(-0.05,0.05)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(dizziness)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	8.57%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RR	1.00(0.22,4.62)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(heeadache)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	0.00%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	2.86%	RD	-0.03(-0.10,0.05)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(nausea)	1 day	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	5.71%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	31.43%	RR	0.18(0.04,0.76)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	Adverse events/complications(nausea)	12 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	20.00%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	37.14%	RR	0.54(0.24,1.19)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(nausea)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	2.86%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	11.43%	RR	0.25(0.03,2.13)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(nausea)	2 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	34.29%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	37.14%	RR	0.92(0.49,1.73)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(nausea)	6 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	48.57%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	40.00%	RR	1.21(0.71,2.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	Adverse events/complications(pruritas)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	5.71%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	5.71%	RR	1.00(0.15,6.71)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(respiratory discomfort)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	2.86%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RR	0.33(0.04,3.05)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(somnolence)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	0.00%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RD	-0.09(-0.19,0.02)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(tingling/numbness)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	5.71%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	14.29%	RR	0.40(0.08,1.93)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	Adverse events/complications(urinary retention)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	14.29%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RR	1.67(0.43,6.45)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(use of rescue antiemetics)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	45.71%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	37.14%	RR	1.23(0.70,2.16)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Adverse events/complications(vomiting)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	28.57%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	17.14%	RR	1.67(0.68,4.09)	Not Significant (P-value>.05)

Table 235: Pico 12 Part 2f: Multimodal programs vs. Non-steroidals -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	PROs (specify)(pain at rest)	1 day	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	4(1.10)	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	3.7(1.10)	MeanDif	0.3(-0.22,0.82)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	PROs (specify)(pain at rest)	12 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	4.7(1.90)	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	4.2(1.70)	MeanDif	0.5(-0.34,1.34)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	PROs (specify)(pain at rest)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	3.3(1.20)	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	3.3(0.60)	MeanDif	0(-0.44,0.44)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	PROs (specify)(pain at rest)	2 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	3.8(2.10)	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	5.5(2.10)	MeanDif	-1.7(-2.68,-0.72)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	PROs (specify)(pain at rest)	6 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	3.8(1.70)	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	4.4(1.40)	MeanDif	-0.6(-1.33,0.13)	Not Significant (P-value>.05)

Table 236: Pico 12 Part 2f: Multimodal programs vs. Non-steroidals -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	Opioid consumption(rescue analgesic)	1 day	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	62.86%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RR	7.33(2.41,22.29)	**Treatment 2 Significant (P-value<.05)**
Han, Ss, 2013	High Quality	Opioid consumption(rescue analgesic)	12 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	28.57%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RR	3.33(1.00,11.09)	Not Significant (P-value>.05)
Han, Ss, 2013	High Quality	Opioid consumption(rescue analgesic)	2 Days	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	48.57%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	5.71%	RR	8.50(2.12,34.07)	**Treatment 2 Significant (P-value<.05)**
Han, Ss, 2013	High Quality	Opioid consumption(rescue analgesic)	2 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	0.00%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	5.71%	RD	-0.06(-0.15,0.03)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Han, Ss, 2013	High Quality	Opioid consumption(rescue analgesic)	6 hours	G2 (multimodal injection) (40 mL 0.75 % ropivacaine, 20 mg morphine, and normal saline, including 1:200,000 adrenaline in a total volume of 100 mL)	35	8.57%	G1 (IV PCA) (mixture of 2 mg fentanyl and 120 mg ketorolac (<80 yo) or 1.5 mg fentanyl and 90 mg ketorolac (>80 yo) at 1mL/h)	35	8.57%	RR	1.00(0.22,4.62)	Not Significant (P-value>.05)

Table 237: Pico 12 Part 2g: Non-steroidals vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Behr, A., 2012	High Quality	Adverse events/complications(artery puncture)	1.5 Days	G1 (epineural buprenorphine/ENB) (0.75 % levobupivacaine and epineural buprenorphine 0.15 mg)	50	0.00%	G3 (control) (0.75 % levobupivacaine)	50	2.00%	RD	-0.02(-0.07,0.03)	Not Significant (P-value>.05)
Behr, A., 2012	High Quality	Adverse events/complications(artery puncture)	1.5 Days	G2 (intramuscular buprenorphine/IMB) (0.75 % levobupivacaine and intramuscular buprenorphine 0.15 mg)	50	0.00%	G3 (control) (0.75 % levobupivacaine)	50	2.00%	RD	-0.02(-0.07,0.03)	Not Significant (P-value>.05)
Behr, A., 2012	High Quality	Adverse events/complications(laryngeal nerve block)	1.5 Days	G1 (epineural buprenorphine/ENB) (0.75 % levobupivacaine and epineural buprenorphine 0.15 mg)	50	0.00%	G3 (control) (0.75 % levobupivacaine)	50	2.00%	RD	-0.02(-0.07,0.03)	Not Significant (P-value>.05)
Behr, A., 2012	High Quality	Adverse events/complications(laryngeal nerve block)	1.5 Days	G2 (intramuscular buprenorphine/IMB) (0.75 % levobupivacaine and intramuscular buprenorphine 0.15 mg)	50	2.00%	G3 (control) (0.75 % levobupivacaine)	50	2.00%	RR	1.00(0.06,15.55)	Not Significant (P-value>.05)
Behr, A., 2012	High Quality	Adverse events/complications(PONV)	1.5 Days	G1 (epineural buprenorphine/ENB) (0.75 % levobupivacaine and epineural buprenorphine 0.15 mg)	50	8.00%	G3 (control) (0.75 % levobupivacaine)	50	2.00%	RR	4.00(0.46,34.55)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Behr, A., 2012	High Quality	Adverse events/complications(PONV)	1.5 Days	G2 (intramuscular buprenorphine/IMB) (0.75 % levobupivacaine and intramuscular buprenorphine 0.15 mg)	50	12.00%	G3 (control) (0.75 % levobupivacaine)	50	2.00%	RR	6.00(0.75,48.05)	Not Significant (P-value>.05)
Behr, A., 2012	High Quality	Adverse events/complications(respiratory depression)	1.5 Days	G1 (epineural buprenorphine/ENB) (0.75 % levobupivacaine and epineural buprenorphine 0.15 mg)	50	0.00%	G3 (control) (0.75 % levobupivacaine)	50	0.00%	RD	0.00(-0.04,0.04)	Not Significant (P-value>.05)
Behr, A., 2012	High Quality	Adverse events/complications(respiratory depression)	1.5 Days	G2 (intramuscular buprenorphine/IMB) (0.75 % levobupivacaine and intramuscular buprenorphine 0.15 mg)	50	4.00%	G3 (control) (0.75 % levobupivacaine)	50	0.00%	RD	0.04(-0.03,0.11)	Not Significant (P-value>.05)
Hoe-Hansen, C., 1999	High Quality	Hospital readmission(number re-operated)	1 year	g1(ketoprofen) (treatment with ketoprofen 200 mg once daily)	21	4.76%	g2(placebo) (placebo)	20	10.00%	RR	0.48(0.05,4.85)	Not Significant (P-value>.05)
Hoe-Hansen, C., 1999	High Quality	Hospital readmission(number re-operated)	2 years	g1(ketoprofen) (treatment with ketoprofen 200 mg once daily)	21	4.76%	g2(placebo) (placebo)	20	10.00%	RR	0.48(0.05,4.85)	Not Significant (P-value>.05)

Table 238: Pico 12 Part 2g: Non-steroidals vs. Control -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hoe-Hansen, C., 1999	High Quality	PROs (specify)(UCLA score)	1 month	g1(ketoprofen) (treatment with ketoprofen 200 mg once daily)	21	30(.)	g2(placebo) (placebo)	20	26(.)	Author Reported	NA	Not Significant (P-value>.05)
Hoe-Hansen, C., 1999	High Quality	PROs (specify)(UCLA score)	2 years	g1(ketoprofen) (treatment with ketoprofen 200 mg once daily)	21	31(.)	g2(placebo) (placebo)	20	29(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 239: Pico 12 Part 2g: Non-steroidals vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hoe-Hansen, C., 1999	High Quality	PROs (specify)(Number of Patients Showing Mild or No Pain Satisfied With Treatment)	1 month	g1(ketoprofen) (treatment with ketoprofen 200 mg once daily)	19	84.21%	g2(placebo) (placebo)	19	47.37%	RR	1.78(1.06,2.97)	**Treatment 1 Significant (P-value<.05)**
Hoe-Hansen, C., 1999	High Quality	PROs (specify)(Number of Patients Showing Mild or No Pain Satisfied With Treatment)	2 years	g1(ketoprofen) (treatment with ketoprofen 200 mg once daily)	17	82.35%	g2(placebo) (placebo)	15	66.67%	RR	1.24(0.81,1.88)	Not Significant (P-value>.05)
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	0.5 hours	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	35(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	70(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	1 day	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	30(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	30(.)	Author Reported	NA	Not Significant (P-value>.05)
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	1 hour	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	25(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	60(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	12 hours	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	25(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	30(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	2 hours	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	15(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	60(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	4 hours	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	12(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	50(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Takada, M., 2009	High Quality	PROs (specify)((median) Visual analog scale (VAS) score)	6 hours	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	20(.)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	38(.)	Author Reported	NA	Group 1 Significant (P-value<.05)

Table 240: Pico 12 Part 2g: Non-steroidals vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Behr, A., 2012	High Quality	Opioid consumption(ketoralac consumption)	1.5 Days	G1 (epineural buprenorphine/ENB) (0.75 % levobupivacaine and epineural buprenorphine 0.15 mg)	50	14.00%	G3 (control) (0.75 % levobupivacaine)	50	44.00%	RR	0.32(0.15,0.68)	**Treatment 1 Significant (P-value<.05)**
Behr, A., 2012	High Quality	Opioid consumption(ketoralac consumption)	1.5 Days	G2 (intramuscular buprenorphine/IMB) (0.75 % levobupivacaine and intramuscular buprenorphine 0.15 mg)	50	24.00%	G3 (control) (0.75 % levobupivacaine)	50	44.00%	RR	0.55(0.30,0.98)	**Treatment 1 Significant (P-value<.05)**
Behr, A., 2012	High Quality	Opioid consumption(tramadol consumption)	1.5 Days	G1 (epineural buprenorphine/ENB) (0.75 % levobupivacaine and epineural buprenorphine 0.15 mg)	50	24.00%	G3 (control) (0.75 % levobupivacaine)	50	62.00%	RR	0.39(0.23,0.66)	**Treatment 1 Significant (P-value<.05)**
Behr, A., 2012	High Quality	Opioid consumption(tramadol consumption)	1.5 Days	G2 (intramuscular buprenorphine/IMB) (0.75 % levobupivacaine and intramuscular buprenorphine 0.15 mg)	50	34.00%	G3 (control) (0.75 % levobupivacaine)	50	62.00%	RR	0.55(0.35,0.85)	**Treatment 1 Significant (P-value<.05)**
Takada, M., 2009	High Quality	Other(time to the first rescue analgesic request(min))	Post-Op	g2(flurbiprofen) (1 mg·kg? 1 flurbiprofen)	22	368(295.00)	g1(placebo) (lipid emulsion 0.1 ml·kg?1 as a placebo)	22	110(167.00)	MeanDif	258(116.35,399.65)	**Treatment 1 Significant (P-value<.05)**

Table 241: Pico 12 Part 2h: Pain pumps/catheter vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Coghlan, Ja, 2009	High Quality	Adverse events/complications(nausea and vomiting)	Post-Op	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	64.44%	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	58.14%	RR	1.11(0.79,1.55)	Not Significant (P-value>.05)
Coghlan, Ja, 2009	High Quality	PROs (specify)(post-op stiff painful shoulder)	Post-Op	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	17.78%	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	13.95%	RR	1.27(0.48,3.37)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(dizziness)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	13.33%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	22.22%	RR	0.60(0.24,1.51)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(dysarthria)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	2.22%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	0.00%	RD	0.02(-0.04,0.08)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merivirta, R., 2012	High Quality	Adverse events/complications(metallic taste)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	6.67%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	6.67%	RR	1.00(0.21,4.69)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(muscular rigidity)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	4.44%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	2.22%	RR	2.00(0.19,21.28)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(muscular twitching)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	6.67%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	0.00%	RD	0.07(-0.02,0.15)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(nausea)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	11.11%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	15.56%	RR	0.71(0.24,2.08)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Merivirta, R., 2012	High Quality	Adverse events/complications(perioral numbness)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	2.22%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	0.00%	RD	0.02(-0.04,0.08)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(tinnitus)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	2.22%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	6.67%	RR	0.33(0.04,3.09)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(visual disturbance)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	4.44%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	0.00%	RD	0.04(-0.03,0.12)	Not Significant (P-value>.05)
Merivirta, R., 2012	High Quality	Adverse events/complications(vomiting)	3 Days	G1 (bupivacaine continuous infusion) (continuous infusion of 5 mg/ml bupivacaine at a constant rate of 2 ml/h)	45	0.00%	G1 (saline continuous infusion) (continuous infusion of 9 mg/ml saline at a constant rate of 2 ml/h)	45	6.67%	RD	-0.07(-0.15,0.02)	Not Significant (P-value>.05)
Yun, M. J., 2012	High Quality	Adverse events/complications(nausea)	Post-Op	G1(SA-PCA) (0.5% ropivacaine at a rate of 2 ml/h with a patient-controlled bolus dose of 2 ml)	30	23.33%	G2 (IV-PCA) (intravenous patient-controlled analgesia.)	30	56.67%	RR	0.41(0.20,0.85)	**Treatment 1 Significant (P-value<.05)**

Table 242: Pico 12 Part 2h: Pain pumps/catheter vs. Control -(Length of stay)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Coghlan, Ja, 2009	High Quality	Length of stay(delayed discharge)	Post-Op	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	15.56%	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	30.23%	RR	0.51(0.23,1.17)	Not Significant (P-value>.05)

Table 243: Pico 12 Part 2h: Pain pumps/catheter vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciccone, Ii W. J., 2008	High Quality	PROs (specify)(VAS score)	1 hour	g2(Pump Only) (infusion pump with 0.5% bupivacaine)	19	. %	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	. %	Author Reported	NA	saline pump and block Significant (P-value<.05)
Ciccone, Ii W. J., 2008	High Quality	PROs (specify)(VAS score)	2 hours	g2(Pump Only) (infusion pump with 0.5% bupivacaine)	19	. %	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	. %	Author Reported	NA	saline pump and block Significant (P-value<.05)
Coghlan, Ja, 2009	High Quality	PROs (specify)(average pain)	1 day	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	1.34(1.19)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	1.58(1.03)	MeanDif	-0.24(-0.70,0.22)	Not Significant (P-value>.05)
Coghlan, Ja, 2009	High Quality	PROs (specify)(average pain)	12 hours	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	1.62(1.14)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	2.16(1.08)	MeanDif	-0.54(-1.00,-0.08)	**Treatment 1 Significant (P-value<.05)**
Coghlan, Ja, 2009	High Quality	PROs (specify)(maximum pain)	1 day	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	1.97(1.50)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	2.5(1.79)	MeanDif	-0.53(-1.22,0.16)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Coghlan, Ja, 2009	High Quality	PROs (specify)(maximum pain)	12 hours	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	5.2(2.33)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	5.23(1.69)	MeanDif	-0.03(-0.88,0.82)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	1 hour	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	52.3(25.80)	G3 (no catheter) (no catheter)	27	59.7(26.50)	MeanDif	-7.4(-20.81,6.01)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	1 hour	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	60(19.50)	G3 (no catheter) (no catheter)	27	59.7(26.50)	MeanDif	0.3(-11.96,12.56)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	12 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	42.8(29.00)	G3 (no catheter) (no catheter)	27	35.8(22.70)	MeanDif	7(-6.20,20.20)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	12 hours	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	46.6(28.00)	G3 (no catheter) (no catheter)	27	35.8(22.70)	MeanDif	10.8(-2.51,24.11)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	2 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	50.7(24.20)	G3 (no catheter) (no catheter)	27	62(26.00)	MeanDif	-11.3(-24.20,1.60)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	2 hours	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	60.5(23.20)	G3 (no catheter) (no catheter)	27	62(26.00)	MeanDif	-1.5(-14.44,11.44)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	3 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	51.2(27.60)	G3 (no catheter) (no catheter)	27	55.3(27.10)	MeanDif	-4.1(-18.10,9.90)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	3 hours	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	60(24.50)	G3 (no catheter) (no catheter)	27	55.3(27.10)	MeanDif	4.7(-8.86,18.26)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	4 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	46.8(27.30)	G3 (no catheter) (no catheter)	27	50.3(28.70)	MeanDif	-3.5(-17.88,10.88)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	4 hours	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	52.6(26.50)	G3 (no catheter) (no catheter)	27	50.3(28.70)	MeanDif	2.3(-12.20,16.80)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	5 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	46.7(33.20)	G3 (no catheter) (no catheter)	27	48.6(24.10)	MeanDif	-1.9(-16.56,12.76)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	5 hours	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	54.5(25.50)	G3 (no catheter) (no catheter)	27	48.6(24.10)	MeanDif	5.9(-7.09,18.89)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	6 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	42.2(32.00)	G3 (no catheter) (no catheter)	27	37.3(22.30)	MeanDif	4.9(-9.02,18.82)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	6 hours	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	42.9(26.60)	G3 (no catheter) (no catheter)	27	37.3(22.30)	MeanDif	5.6(-7.23,18.43)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	Post-Op	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	51.4(31.10)	G3 (no catheter) (no catheter)	27	43.9(33.60)	MeanDif	7.5(-9.14,24.14)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	Post-Op	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	64.7(25.90)	G3 (no catheter) (no catheter)	27	43.9(33.60)	MeanDif	20.8(5.00,36.60)	Not Significant (P-value>.05)
Yun, M. J., 2012	High Quality	PROs (specify)(Visual analog scale (VAS))	1 hour	G1(SA-PCA) (0.5% ropivacaine at a rate of 2 ml/h with a patient-controlled bolus dose of 2 ml)	30	4.3(2.70)	G2 (IV-PCA) (intravenous patient-controlled analgesia.)	30	6.3(2.60)	MeanDif	-2(-3.34,-0.66)	**Treatment 1 Significant (P-value<.05)**

Table 244: Pico 12 Part 2h: Pain pumps/catheter vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciccone, Ii W. J., 2008	High Quality	Medication use (length of time)(Recovery Room Oral narcotic consumption)	Post-Op	g2(Pump Only) (infusion pump with 0.5% bupivacaine)	19	78.95%	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	16.67%	RR	4.74(1.64,13.66)	**Treatment 2 Significant (P-value<.05)**
Coghlan, Ja, 2009	High Quality	Opioid consumption(opioid use (mg))	1 day	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	1.84(4.62)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	3.37(4.72)	MeanDif	-1.53(-3.48,0.42)	**Treatment 1 Significant (P-value<.05)**
Coghlan, Ja, 2009	High Quality	Opioid consumption(opioid use (mg))	12 hours	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	18.41(13.62)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	20.81(11.36)	MeanDif	-2.4(-7.63,2.83)	Not Significant (P-value>.05)
Coghlan, Ja, 2009	High Quality	Opioid consumption(oral analgesia use)	1 day	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	3.96(2.02)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	3.72(1.61)	MeanDif	0.24(-0.52,1.00)	**Treatment 1 Significant (P-value<.05)**
Coghlan, Ja, 2009	High Quality	Opioid consumption(oral analgesia use)	12 hours	g1; ropivacaine after subacromial decompression (0.75% ropivacaine set at 5 mL/hr)	45	1.42(1.57)	g2; elastomeric pump after subacromial decompression (saline set at 5 mL/hr)	43	1.44(4.47)	MeanDif	-0.02(-1.43,1.39)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of oxycodone tablets per day)	4 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	4.3(2.90)	G3 (no catheter) (no catheter)	27	3.8(2.20)	MeanDif	0.5(-0.80,1.80)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of oxycodone tablets per day)	4 Days	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	5(3.10)	G3 (no catheter) (no catheter)	27	3.8(2.20)	MeanDif	1.2(-0.20,2.60)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	1 day	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	28.13%	G3 (no catheter) (no catheter)	27	40.74%	RR	0.69(0.34,1.41)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	1 day	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	51.72%	G3 (no catheter) (no catheter)	27	40.74%	RR	1.27(0.71,2.26)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	2 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	31.25%	G3 (no catheter) (no catheter)	27	33.33%	RR	0.94(0.45,1.97)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	2 Days	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	48.28%	G3 (no catheter) (no catheter)	27	33.33%	RR	1.45(0.75,2.78)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	3 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	37.50%	G3 (no catheter) (no catheter)	27	37.04%	RR	1.01(0.52,1.97)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	3 Days	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	41.38%	G3 (no catheter) (no catheter)	27	37.04%	RR	1.12(0.58,2.15)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	4 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	34.38%	G3 (no catheter) (no catheter)	27	40.74%	RR	0.84(0.44,1.63)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	4 Days	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	31.03%	G3 (no catheter) (no catheter)	27	40.74%	RR	0.76(0.38,1.55)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	Intra-Op	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	27.59%	G3 (no catheter) (no catheter)	27	25.93%	RR	1.06(0.45,2.54)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	Post-Op	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	28.13%	G3 (no catheter) (no catheter)	27	25.93%	RR	1.08(0.47,2.52)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(total no. of oxycodone tablets)	4 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	21.7(14.70)	G3 (no catheter) (no catheter)	27	19.1(11.20)	MeanDif	2.6(-4.02,9.22)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(total no. of oxycodone tablets)	4 Days	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	24.8(15.90)	G3 (no catheter) (no catheter)	27	19.1(11.20)	MeanDif	5.7(-1.47,12.87)	Not Significant (P-value>.05)
Yun, M. J., 2012	High Quality	Medication use (length of time)(frequency of requested bolus doses by patients)	4 hours	G1(SA-PCA) (0.5% ropivacaine at a rate of 2 ml/h with a patient-controlled bolus dose of 2 ml)	30	7(10.00)	G2 (IV-PCA) (intravenous patient-controlled analgesia.)	30	19(19.00)	MeanDif	-12(-19.68,-4.32)	**Treatment 1 Significant (P-value<.05)**
Yun, M. J., 2012	High Quality	Medication use (length of time)(NSAID requirement)	2 Days	G1(SA-PCA) (0.5% ropivacaine at a rate of 2 ml/h with a patient-controlled bolus dose of 2 ml)	30	3.33%	G2 (IV-PCA) (intravenous patient-controlled analgesia.)	30	3.33%	RR	1.00(0.07,15.26)	Not Significant (P-value>.05)
Yun, M. J., 2012	High Quality	Medication use (length of time)(opioid requirement)	2 Days	G1(SA-PCA) (0.5% ropivacaine at a rate of 2 ml/h with a patient-controlled bolus dose of 2 ml)	30	3.33%	G2 (IV-PCA) (intravenous patient-controlled analgesia.)	30	0.00%	RD	0.03(-0.05,0.12)	Not Significant (P-value>.05)

Table 245: Pico 12 Part 2h: Pain pumps/catheter vs. Control -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yun, M. J., 2012	High Quality	PROs (specify)(Patient satisfaction)	Post-Op	G1(SA-PCA) (0.5% ropivacaine at a rate of 2 ml/h with a patient-controlled bolus dose of 2 ml)	30	6.7(.)	G2 (IV-PCA) (intravenous patient-controlled analgesia.)	30	5.6(.)	Author Reported	NA	Group 1 Significant (P-value<.05)

Table 246: Pico 12 Part 2i: Pain pumps/catheter vs. Pain pumps/catheter -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	1 hour	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	52.3(25.80)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	60(19.50)	MeanDif	-7.7(-19.11,3.71)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	12 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	42.8(29.00)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	46.6(28.00)	MeanDif	-3.8(-18.11,10.51)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	2 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	50.7(24.20)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	60.5(23.20)	MeanDif	-9.8(-21.70,2.10)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	3 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	51.2(27.60)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	60(24.50)	MeanDif	-8.8(-21.88,4.28)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	4 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	46.8(27.30)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	52.6(26.50)	MeanDif	-5.8(-19.31,7.71)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	5 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	46.7(33.20)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	54.5(25.50)	MeanDif	-7.8(-22.58,6.98)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	6 hours	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	42.2(32.00)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	42.9(26.60)	MeanDif	-0.7(-15.42,14.02)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	PROs (specify)(VAS)	Post-Op	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	51.4(31.10)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	64.7(25.90)	MeanDif	-13.3(-27.62,1.02)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamakado, K., 2014	High Quality	PROs (specify)(VAS)	1 day	G1 (SSNB) (Received ca-SSNB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	21	24.4(17.50)	G2 (SAB) (Received SAB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	19	44.6(31.90)	MeanDif	-20.2(-36.38,-4.02)	**Treatment 1 Significant (P-value<.05)**
Yamakado, K., 2014	High Quality	PROs (specify)(VAS)	2 Days	G1 (SSNB) (Received ca-SSNB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	21	18.7(15.40)	G2 (SAB) (Received SAB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	19	40.4(28.60)	MeanDif	-21.7(-36.15,-7.25)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamakado, K., 2014	High Quality	PROs (specify)(VAS)	3 Days	G1 (SSNB) (Received ca-SSNB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	21	18.5(19.80)	G2 (SAB) (Received SAB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	19	27.8(22.10)	MeanDif	-9.3(-22.36,3.76)	Not Significant (P-value>.05)
Yamakado, K., 2014	High Quality	PROs (specify)(VAS)	6 hours	G1 (SSNB) (Received ca-SSNB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	21	9.1(15.90)	G2 (SAB) (Received SAB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	19.4	23.4(.)	Author Reported	-14.3(.,.)	Not Significant (P-value>.05)

Table 247: Pico 12 Part 2i: Pain pumps/catheter vs. Pain pumps/catheter -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of oxycodone tablets per day)	4 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	4.3(2.90)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	5(3.10)	MeanDif	-0.7(-2.21,0.81)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	1 day	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	28.13%	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	51.72%	RR	0.54(0.28,1.05)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	2 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	31.25%	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	48.28%	RR	0.65(0.34,1.22)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	3 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	37.50%	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	41.38%	RR	0.91(0.49,1.69)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	4 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	34.38%	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	31.03%	RR	1.11(0.54,2.28)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(no. of patients who used other analgesics)	Post-Op	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	28.13%	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	27.59%	RR	1.02(0.45,2.29)	Not Significant (P-value>.05)
Schwartzberg, Rs, 2013	High Quality	Opioid consumption(total no. of oxycodone tablets)	4 Days	G1 (post-op catheter w/ bupivacaine) (postoperative infusion catheter with 200 mL of 0.5% bupivacaine without epinephrine)	32	21.7(14.70)	G2 (post-op catheter w/ saline) (postoperative infusion catheter with 200 mL of sterile saline solution)	29	24.8(15.90)	MeanDif	-3.1(-10.81,4.61)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Yamakado, K., 2014	High Quality	Clinical outcomes (specify)(Additional Pain-reduction attempts)	3 Days	G1 (SSNB) (Received ca-SSNB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	21	0.3(0.70)	G2 (SAB) (Received SAB; 0.2% ropivacaine infusion and a continuous rate of 3 mL/hour, placed via an arthroscopically placed catheter following ARCR with arthroscopic release of the superior transverse ligament:)	19	1.2(1.50)	MeanDif	-0.9(-1.64,-0.16)	**Treatment 1 Significant (P-value<.05)**

Table 248: Pico 12 Part 2j: Perioperative steroids vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2015	High Quality	Adverse events/complications(Weakness)	1 day	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	3.33%	g1(Control) (intravenous saline 0.9%)	59	3.39%	RR	0.98(0.14,6.75)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Adverse events/complications(Weakness)	1 day	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	3.33%	g1(Control) (intravenous saline 0.9%)	59	3.39%	RR	0.98(0.14,6.75)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Adverse events/complications(Weakness)	1 day	g4(10 dexamethasone) (10 mg dexamethasone)	60	8.33%	g1(Control) (intravenous saline 0.9%)	59	3.39%	RR	2.46(0.50,12.18)	Not Significant (P-value>.05)

Table 249: Pico 12 Part 2j: Perioperative steroids vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2015	High Quality	PROs (specify)(Mild pain)	1 day	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	55.00%	g1(Control) (intravenous saline 0.9%)	59	61.02%	RR	0.90(0.66,1.22)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(Mild pain)	1 day	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	44(.)	g1(Control) (intravenous saline 0.9%)	59	61.02%	RR	1.20(0.93,1.55)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(Mild pain)	1 day	g4(10 dexamethasone) (10 mg dexamethasone)	60	40(.)	g1(Control) (intravenous saline 0.9%)	59	61.02%	RR	1.09(0.83,1.43)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(Mild pain)	2 Days	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	86.67%	g1(Control) (intravenous saline 0.9%)	59	89.83%	RR	0.96(0.85,1.10)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(Mild pain)	2 Days	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	85.00%	g1(Control) (intravenous saline 0.9%)	59	89.83%	RR	0.95(0.83,1.08)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(Mild pain)	2 Days	g4(10 dexamethasone) (10 mg dexamethasone)	60	86.67%	g1(Control) (intravenous saline 0.9%)	59	89.83%	RR	0.96(0.85,1.10)	Not Significant (P-value>.05)
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 day	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	2.61(2.07)	G3 (control) (no analgesic)	21	6.67(1.65)	MeanDif	-4.06(-4.99,-3.13)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 month	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	2.14(1.95)	G3 (control) (no analgesic)	21	3.1(1.67)	MeanDif	-0.96(-1.88,-0.04)	**Treatment 1 Significant (P-value<.05)**
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 week	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	1.68(1.52)	G3 (control) (no analgesic)	21	6.1(1.76)	MeanDif	-4.42(-5.30,-3.54)	**Treatment 1 Significant (P-value<.05)**
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	3 months	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	1.98(2.34)	G3 (control) (no analgesic)	21	1.81(1.12)	MeanDif	0.17(-0.67,1.01)	Not Significant (P-value>.05)

Table 250: Pico 12 Part 2j: Perioperative steroids vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2015	High Quality	Medication use (length of time)(median duration of interscalene analgesia(h))	Post-Op	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	14(.)	g1(Control) (intravenous saline 0.9%)	59	12.2(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2015	High Quality	Medication use (length of time)(median duration of interscalene analgesia(h))	Post-Op	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	17.4(.)	g1(Control) (intravenous saline 0.9%)	59	12.2(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2015	High Quality	Medication use (length of time)(median duration of interscalene analgesia(h))	Post-Op	g4(10 dexamethasone) (10 mg dexamethasone)	60	20.1(.)	g1(Control) (intravenous saline 0.9%)	59	12.2(.)	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2015	High Quality	Medication use (length of time)(No analgesia required)	2 Days	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	1.67%	g1(Control) (intravenous saline 0.9%)	59	8.47%	RR	0.20(0.02,1.63)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(No analgesia required)	2 Days	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	5.00%	g1(Control) (intravenous saline 0.9%)	59	8.47%	RR	0.59(0.15,2.36)	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2015	High Quality	Medication use (length of time)(No analgesia required)	2 Days	g4(10 dexamethasone) (10 mg dexamethasone)	60	11.67%	g1(Control) (intravenous saline 0.9%)	59	8.47%	RR	1.38(0.46,4.09)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2015	High Quality	Medication use (length of time)(Piritramide required)	2 Days	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	5.00%	g1(Control) (intravenous saline 0.9%)	59	11.86%	RR	0.42(0.11,1.55)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(Piritramide required)	2 Days	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	59	3.39%	g1(Control) (intravenous saline 0.9%)	59	11.86%	RR	0.29(0.06,1.32)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(Piritramide required)	2 Days	g4(10 dexamethasone) (10 mg dexamethasone)	60	1.67%	g1(Control) (intravenous saline 0.9%)	59	11.86%	RR	0.14(0.02,1.11)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(required Diclofenac; mg)	2 Days	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	80(74.00)	g1(Control) (intravenous saline 0.9%)	59	94(76.00)	MeanDif	-14(-40.96,12.96)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(required Diclofenac; mg)	2 Days	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	90(80.00)	g1(Control) (intravenous saline 0.9%)	59	94(76.00)	MeanDif	-4(-32.03,24.03)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(required Diclofenac; mg)	2 Days	g4(10 dexamethasone) (10 mg dexamethasone)	60	73(66.00)	g1(Control) (intravenous saline 0.9%)	59	94(76.00)	MeanDif	-21(-46.59,4.59)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(required Paracetamol g)	2 Days	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	3.5(1.80)	g1(Control) (intravenous saline 0.9%)	59	3.9(2.00)	MeanDif	-0.4(-1.08,0.28)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	Medication use (length of time)(required Paracetamol g)	2 Days	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	3.3(1.60)	g1(Control) (intravenous saline 0.9%)	59	3.9(2.00)	MeanDif	-0.6(-1.25,0.05)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2015	High Quality	Medication use (length of time)(required Paracetamol g)	2 Days	g4(10 dexamethasone) (10 mg dexamethasone)	60	2.6(1.70)	g1(Control) (intravenous saline 0.9%)	59	3.9(2.00)	MeanDif	-1.3(-1.97,-0.63)	**Treatment 1 Significant (P-value<.05)**

Table 251: Pico 12 Part 2j: Perioperative steroids vs. Control -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2015	High Quality	PROs (specify)(Disturbed sleep)	1 day	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	68.33%	g1(Control) (intravenous saline 0.9%)	59	81.36%	RR	0.84(0.68,1.04)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(Disturbed sleep)	1 day	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	59	47.46%	g1(Control) (intravenous saline 0.9%)	59	81.36%	RR	0.58(0.43,0.78)	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2015	High Quality	PROs (specify)(Disturbed sleep)	1 day	g4(10 dexamethasone) (10 mg dexamethasone)	60	31.67%	g1(Control) (intravenous saline 0.9%)	59	81.36%	RR	0.39(0.26,0.58)	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2015	High Quality	PROs (specify)(satisfaction)	Post-Op	g2(1.25 Dexamethasone) (dexamethasone 1.25 mg)	60	90.00%	g1(Control) (intravenous saline 0.9%)	59	91.53%	RR	0.98(0.88,1.10)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(satisfaction)	Post-Op	g3(2.5 dexamethasone) (2.5 mg dexamethasone)	60	95.00%	g1(Control) (intravenous saline 0.9%)	59	91.53%	RR	1.04(0.94,1.14)	Not Significant (P-value>.05)
Desmet, M., 2015	High Quality	PROs (specify)(satisfaction)	Post-Op	g4(10 dexamethasone) (10 mg dexamethasone)	60	100.00%	g1(Control) (intravenous saline 0.9%)	59	91.53%	RD	0.08(0.01,0.16)	**Treatment 1 Significant (P-value<.05)**

Table 252: Pico 12 Part 2k: Regional block vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Borgeat, A., 2010	High Quality	Adverse events/complications(side effects)	Post-Op	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	22.50%	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	22.50%	RR	1.00(0.44,2.26)	Not Significant (P-value>.05)
Borgeat, A., 2010	High Quality	Clinical outcomes (specify)(postoperative paresthesias)	2 Days	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(dizziness)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	26.09%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	29.17%	RR	0.89(0.35,2.26)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(dizziness)	12 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	56.52%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	33.33%	RR	1.70(0.87,3.31)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(dizziness)	18 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	39.13%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	16.67%	RR	2.35(0.84,6.57)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(dizziness)	6 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	11(.)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	33.33%	RR	1.43(0.71,2.91)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	0.3 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	47.83%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	4.17%	RR	11.48(1.61,81.95)	**Treatment 2 Significant (P-value<.05)**
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	43.48%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	33.33%	RR	1.30(0.63,2.71)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	39.13%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	12.50%	RR	3.13(0.97,10.14)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	1.5 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	30.43%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	8.33%	RR	3.65(0.85,15.78)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	1.75 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	26.09%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	25.00%	RR	1.04(0.39,2.77)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	12 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	47.83%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	12.50%	RR	3.83(1.22,11.98)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	2 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	26.09%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	25.00%	RR	1.04(0.39,2.77)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	6 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	56.52%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	25.00%	RR	2.26(1.04,4.93)	**Treatment 2 Significant (P-value<.05)**
Clendenen, S. R., 2010	High Quality	Adverse events/complications(Drowsiness)	Post-Op	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	43.48%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	20.83%	RR	2.09(0.84,5.18)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	26.09%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	16.67%	RR	1.57(0.51,4.84)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	13.04%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	8.33%	RR	1.57(0.29,8.53)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	1.5 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	8.70%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	4.17%	RR	2.09(0.20,21.48)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	1.75 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	8.70%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	4.17%	RR	2.09(0.20,21.48)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	12 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	13.04%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	4.17%	RR	3.13(0.35,27.96)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	18 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	13.04%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	8.33%	RR	1.57(0.29,8.53)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	2 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	4.35%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	8.33%	RR	0.52(0.05,5.37)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Adverse events/complications(nausea)	6 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	17.39%	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	24(.)	RR	2.09(0.42,10.32)	Not Significant (P-value>.05)
Culebras, X, 2001	High Quality	Adverse events/complications(postoperative nausea and vomiting)	Post-Op	G1(Clonidine) (interscalene block with 40 ml of 0.5% bupivacaine with epinephrine and 150 ?g (= 1 mL) of clonid ine, completed by 1 ml of 0.9% saline JM in the contralateral shoulder)	19	. %	g2(control) (interscalene block with 40 ml of 0.5% bupivacaine with epinephr ine and 1 ml of 0.9% saline, completed by 150 ?g (= 1 ml) of clonidine IM in the contralateral shoulder)	20	. %	Author Reported	NA	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	Adverse events/complications(postoperative nausea and vomiting)	Post-Op	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	3.85%	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	6(.)	RR	0.15(0.02,1.19)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Fredrickson, M. J., 2011	High Quality	Adverse events/complications(Cessation of infusion required)	Post-Op	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	2.63%	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	20.93%	RR	0.13(0.02,0.95)	**Treatment 1 Significant (P-value<.05)**
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Numbness numerical rating score(median))	1 day	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	9(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	9(.)	Author Reported	NA	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Numbness numerical rating score(median))	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	2(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	3(.)	Author Reported	NA	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Weakness numerical rating score(median))	1 day	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	8(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	9(.)	Author Reported	NA	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Weakness numerical rating score(median))	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	5(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	5(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Ar, 2012	High Quality	Adverse events/complications(nausea)	1 day	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	42.86%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	33.33%	RR	1.29(0.66,2.49)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(nausea)	12 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	35.71%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	13.33%	RR	2.68(0.95,7.57)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(nausea)	4 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	10.71%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	3.33%	RR	3.21(0.35,29.12)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(nausea)	8 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	21.43%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	10.00%	RR	2.14(0.59,7.76)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(pruritis (itchy skin))	1 day	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	10.71%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	6.67%	RR	1.61(0.29,8.92)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(pruritis (itchy skin))	12 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.00%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	3.33%	RD	-0.03(-0.12,0.06)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(pruritis (itchy skin))	4 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.00%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	3.33%	RD	-0.03(-0.12,0.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Ar, 2012	High Quality	Adverse events/complications(pruritis (itchy skin))	8 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.00%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(rescue analgesics)	1 day	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	50.00%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	53.33%	RR	0.94(0.57,1.54)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(rescue analgesics)	12 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	35.71%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	20.00%	RR	1.79(0.75,4.27)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(rescue analgesics)	4 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.00%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(rescue analgesics)	8 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	3.57%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	3.33%	RR	1.07(0.07,16.32)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(sedation score; hand calculated means from categorical scale)	1 day	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.07(.)	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.33(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Ar, 2012	High Quality	Adverse events/complications(sedation score; hand calculated means from categorical scale)	12 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.13(.)	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.2(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(sedation score; hand calculated means from categorical scale)	4 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.07(.)	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.23(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(sedation score; hand calculated means from categorical scale)	8 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.13(.)	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.03(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(vomiting)	1 day	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	14.29%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	16.67%	RR	0.86(0.26,2.87)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(vomiting)	12 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	0.00%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	3.33%	RD	-0.03(-0.12,0.06)	Not Significant (P-value>.05)
Lee, Ar, 2012	High Quality	Adverse events/complications(vomiting)	4 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	3.57%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	0.00%	RD	0.04(-0.06,0.13)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Ar, 2012	High Quality	Adverse events/complications(vomiting)	8 hours	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	7.14%	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	3.33%	RR	2.14(0.21,22.35)	Not Significant (P-value>.05)
Lee, J. J., 2017	High Quality	Other(double rebound)	Post-Op	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	25.00%	g1(ISB) (ultrasound-guided ISB alone)	24	0.00%	RD	0.25(0.07,0.43)	Not Significant (P-value>.05)
Lee, J. J., 2017	High Quality	Other(Mean timing of rebound pain (h))	Post-Op	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	15.5(5.60)	g1(ISB) (ultrasound-guided ISB alone)	24	9.3(3.80)	MeanDif	6.2(3.49,8.91)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2014	High Quality	Adverse events/complications(nausea)	Post-Op	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	4.76%	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	4.76%	RR	1.00(0.07,14.96)	Not Significant (P-value>.05)
Lee, Jj, 2014	High Quality	Adverse events/complications(rebound of pain)	2 Days	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	28.57%	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	61.90%	RR	0.46(0.22,0.98)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2015	High Quality	Adverse events/complications(nausea)	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	13.33%	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	40.00%	RR	0.33(0.08,1.39)	Not Significant (P-value>.05)
Lee, Jj, 2015	High Quality	Adverse events/complications(need for rescue drug)	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	6.67%	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	6.67%	RR	1.00(0.07,14.55)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Jj, 2015	High Quality	Adverse events/complications(vomiting)	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	6.67%	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	6.67%	RR	1.00(0.07,14.55)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Clinical outcomes (specify)(DHEA-S (biomarker))	1.75 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	56.46(.)	G2 (control) (general anesthesia only)	31	58.92(.)	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Clinical outcomes (specify)(DHEA-S (biomarker))	18 hours	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	74.83(.)	G2 (control) (general anesthesia only)	31	73.95(.)	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Clinical outcomes (specify)(DHEA-S (biomarker))	3 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	57.12(.)	G2 (control) (general anesthesia only)	31	56.24(.)	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Clinical outcomes (specify)(insulin levels)	1.75 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	10.55(7.92)	G2 (control) (general anesthesia only)	31	20.39(25.60)	MeanDif	-9.84(-19.27,-0.41)	**Treatment 1 Significant (P-value<.05)**
Liu, X. N., 2017	High Quality	Clinical outcomes (specify)(insulin levels)	18 hours	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	14.89(.)	G2 (control) (general anesthesia only)	31	19.46(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	Clinical outcomes (specify)(insulin levels)	3 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	11.32(.)	G2 (control) (general anesthesia only)	31	18.54(.)	Author Reported	NA	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	1 day	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	96.67%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	-0.03(-0.12,0.05)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	100.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	2 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	30.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	86.67%	RR	0.35(0.20,0.61)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	63.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	86.67%	RR	0.73(0.54,0.99)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	8 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	63.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	-0.37(-0.54,-0.19)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	90.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	-0.10(-0.22,0.02)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	1 day	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	93.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	-0.07(-0.17,0.04)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	100.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	2 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	7.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	43.33%	RR	0.15(0.04,0.62)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	63.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	43.33%	RR	1.46(0.89,2.39)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	8 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	56.67%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	-0.43(-0.61,-0.25)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	96.67%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	100.00%	RD	-0.03(-0.12,0.05)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 2))	1 day	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	0.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 2))	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 2))	8 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	13.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.13(0.00,0.27)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	1 day	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	0.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	2 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	43.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	6.67%	RR	6.50(1.60,26.36)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	6.67%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	6.67%	RR	1.00(0.15,6.64)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	8 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	3.33%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.03(-0.05,0.12)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.00%	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Clinical outcomes (specify)(Oxygen saturation)	1 hour	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	93(3.00)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	95(3.00)	MeanDif	-2(-3.52,-0.48)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Clinical outcomes (specify)(Oxygen saturation)	1 hour	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	94(3.00)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	95(3.00)	MeanDif	-1(-2.52,0.52)	Not Significant (P-value>.05)
Sun, Z., 2018	High Quality	Adverse events/complications(Dizziness)	Post-Op	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.33%	g2(ropivacaine) (0.2% ropivacaine)	30	6.67%	RR	0.50(0.05,5.22)	Not Significant (P-value>.05)
Sun, Z., 2018	High Quality	Adverse events/complications(Nausea and vomiting)	Post-Op	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.33%	g2(ropivacaine) (0.2% ropivacaine)	30	6.67%	RR	0.50(0.05,5.22)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sun, Z., 2018	High Quality	Adverse events/complications(Respiratory depression)	Post-Op	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.33%	g2(ropivacaine) (0.2% ropivacaine)	30	10.00%	RR	0.33(0.04,3.03)	Not Significant (P-value>.05)
Sun, Z., 2018	High Quality	Adverse events/complications(Skin itching)	Discharge	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.33%	g2(ropivacaine) (0.2% ropivacaine)	30	10.00%	RR	0.33(0.04,3.03)	Not Significant (P-value>.05)

Table 253: Pico 12 Part 2k: Regional block vs. Control -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bain, G. I., 2001	High Quality	Clinical outcomes (specify)(Total Shoulder Scores)	1 day	g1(block) (Interscalene brachial plexus (ISBP))	20	. %	g2(no block) (no block, general anesthesia only)	20	. %	Author Reported	NA	block Significant (P-value<.05)
Bain, G. I., 2001	High Quality	Clinical outcomes (specify)(Total Shoulder Scores)	2 Days	g1(block) (Interscalene brachial plexus (ISBP))	20	. %	g2(no block) (no block, general anesthesia only)	20	. %	Author Reported	NA	block Significant (P-value<.05)

Table 254: Pico 12 Part 2k: Regional block vs. Control -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Borgeat, A., 2010	High Quality	Clinical outcomes (specify)(Hand grip strength)	2 Days	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Borgeat, A., 2010	High Quality	Clinical outcomes (specify)(weakened thumb adduction and weakened flexion of the 2nd and 3rd fingers)	0.8 hours	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	Author Reported	NA	Group 1 Significant (P-value<.05)

Table 255: Pico 12 Part 2k: Regional block vs. Control -(Length of stay)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	Length of stay(Time from surgery to discharge (hours))	Post-Op	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	3.5(1.40)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	4.3(7.10)	MeanDif	-0.8(-3.70,2.10)	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	Length of stay(Hospitalization (hrs.))	Post-Op	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	18.8(3.00)	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	20.7(6.50)	MeanDif	-1.9(-4.74,0.94)	Not Significant (P-value>.05)

Table 256: Pico 12 Part 2k: Regional block vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Borgeat, A., 2010	High Quality	PROs (specify)(Pain score (visual analog scale))	2 Days	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	. %	Author Reported	NA	Not Significant (P-value>.05)
Ciccone, Ii W. J., 2008	High Quality	PROs (specify)(VAS score)	1 hour	g1(block only) (interscalene regional block)	20	. %	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	. %	Author Reported	NA	saline pump and block Significant (P-value<.05)
Ciccone, Ii W. J., 2008	High Quality	PROs (specify)(VAS score)	2 hours	g1(block only) (interscalene regional block)	20	. %	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	. %	Author Reported	NA	saline pump and block Significant (P-value<.05)
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	3.1(2.40)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	3.9(2.70)	MeanDif	-0.8(-2.26,0.66)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	1 day	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	2.5(2.20)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	3.3(2.50)	MeanDif	-0.8(-2.14,0.54)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	1.5 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	2.8(2.60)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	3.3(2.20)	MeanDif	-0.5(-1.88,0.88)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	1.75 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	1.6(2.10)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	2.9(2.40)	MeanDif	-1.3(-2.59,-0.01)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	12 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	1.1(2.10)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	2.4(3.50)	MeanDif	-1.3(-2.94,0.34)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	18 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	2.9(2.90)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	.	3.7(2.90)	MeanDif	-0.8(-2.46,0.86)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	2 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	2.7(2.10)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	2.2(2.30)	MeanDif	0.5(-0.76,1.76)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	6 hours	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	1(2.10)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	0.7(1.90)	MeanDif	0.3(-0.85,1.45)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	PROs (specify)(VAS pain score)	Post-Op	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	0.1(0.60)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	0(0.00)	MeanDif	0.1(-0.15,0.35)	Not Significant (P-value>.05)
Culebras, X, 2001	High Quality	PROs (specify)(visual analog scale Pain score)	1 day	G1(Clonidine) (interscalene block with 40 ml of 0.5% bupivacaine with epinephrine and 150 ?g (= 1 mL) of clonid ine, completed by 1 ml of 0.9% saline JM in the contralateral shoulder)	19	40(16.00)	g2(control) (interscalene block with 40 ml of 0.5% bupivacaine with epinephr ine and 1 ml of 0.9% saline, completed by 150 ?g (= 1 ml) of clonidine IM in the contralateral shoulder)	20	36(23.00)	MeanDif	4(-8.38,16.38)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Culebras, X, 2001	High Quality	PROs (specify)(visual analog scale Pain score)	2 Days	G1(Clonidine) (interscalene block with 40 ml of 0.5% bupivacaine with epinephrine and 150 ?g (= 1 mL) of clonid ine, completed by 1 ml of 0.9% saline JM in the contralateral shoulder)	19	31(22.00)	g2(control) (interscalene block with 40 ml of 0.5% bupivacaine with epinephr ine and 1 ml of 0.9% saline, completed by 150 ?g (= 1 ml) of clonidine IM in the contralateral shoulder)	20	30(20.00)	MeanDif	1(-12.22,14.22)	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	PROs (specify)(verbal numerical pain scale)	1 day	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	. %	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	PROs (specify)(verbal numerical pain scale)	12 hours	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	. %	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	PROs (specify)(verbal numerical pain scale)	18 hours	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	. %	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	PROs (specify)(verbal numerical pain scale)	6 hours	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	. %	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	. %	Author Reported	NA	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Postoperative worst pain with movement(NRPS))	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	4(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	4(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	1 day	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	10 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Not Significant (P-value>.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	12 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	14 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	16 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	18 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	2 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Not Significant (P-value>.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	20 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	22 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Ropivacaine Significant (P-value<.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	4 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	6 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Not Significant (P-value>.05)
Klein, Sm, 2000	High Quality	PROs (specify)(VAS)	8 hours	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	. %	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	. %	Author Reported	NA	Not Significant (P-value>.05)
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	1 day	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	2.1(1.30)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	4.2(1.20)	MeanDif	-2.1(-2.88,-1.32)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	1 hour	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	8.4(1.70)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	8.6(1.50)	MeanDif	-0.2(-1.19,0.79)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	1.5 Days	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	0.9(1.60)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	3.9(1.50)	MeanDif	-3(-3.96,-2.04)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	12 hours	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	3(1.80)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	5.1(1.40)	MeanDif	-2.1(-3.10,-1.10)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	2 Days	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	1.3(1.60)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	3.3(1.20)	MeanDif	-2(-2.88,-1.12)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	4 hours	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	5.2(1.60)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	7.4(1.50)	MeanDif	-2.2(-3.16,-1.24)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Visual analog scale (pain score))	8 hours	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	4.1(1.50)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	6.1(1.40)	MeanDif	-2(-2.90,-1.10)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Mean size of rebound pain ((VAS)))	Post-Op	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	2.5(1.00)	g1(ISB) (ultrasound-guided ISB alone)	24	4(1.60)	MeanDif	-1.5(-2.25,-0.75)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	1 day	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	3.2(1.70)	g1(ISB) (ultrasound-guided ISB alone)	24	4.2(1.50)	MeanDif	-1(-1.91,-0.09)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	1 hour	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	2(1.20)	g1(ISB) (ultrasound-guided ISB alone)	24	2.6(1.40)	MeanDif	-0.6(-1.34,0.14)	Not Significant (P-value>.05)
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	1.5 Days	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	2.1(1.10)	g1(ISB) (ultrasound-guided ISB alone)	24	2.7(1.00)	MeanDif	-0.6(-1.19,-0.01)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	12 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	3.5(1.90)	g1(ISB) (ultrasound-guided ISB alone)	24	5.8(1.50)	MeanDif	-2.3(-3.27,-1.33)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	18 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	3.6(1.70)	g1(ISB) (ultrasound-guided ISB alone)	24	5.2(1.60)	MeanDif	-1.6(-2.53,-0.67)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	2 Days	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	1.3(0.80)	g1(ISB) (ultrasound-guided ISB alone)	24	2(0.70)	MeanDif	-0.7(-1.13,-0.27)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	3 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	1.7(1.00)	g1(ISB) (ultrasound-guided ISB alone)	24	2.6(1.40)	MeanDif	-0.9(-1.59,-0.21)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(Visual analogue scale pain score)	6 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	1.6(1.10)	g1(ISB) (ultrasound-guided ISB alone)	24	4(2.20)	MeanDif	-2.4(-3.38,-1.42)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	1 day	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	2.7(1.50)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	3.4(1.20)	MeanDif	-0.7(-1.52,0.12)	Not Significant (P-value>.05)
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	1 hour	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	5.1(1.60)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	7.6(1.50)	MeanDif	-2.5(-3.44,-1.56)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	1.5 Days	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	2.3(1.40)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	2.9(1.00)	MeanDif	-0.6(-1.34,0.14)	Not Significant (P-value>.05)
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	12 hours	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	3.2(1.80)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	4.5(1.40)	MeanDif	-1.3(-2.28,-0.32)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	18 hours	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	2.7(1.60)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	4(1.40)	MeanDif	-1.3(-2.21,-0.39)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	2 Days	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	2.1(1.40)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	2.6(1.20)	MeanDif	-0.5(-1.29,0.29)	Not Significant (P-value>.05)
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	3 hours	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	4.4(1.40)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	6.3(1.40)	MeanDif	-1.9(-2.75,-1.05)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Jj, 2014	High Quality	PROs (specify)(Visual analog scale (VAS))	6 hours	g1(SSNB + ANB) (Suprascapular nerve block (SSNB) +Axillary nerve block (ANB))	21	3.7(1.40)	g2(SSNB) (Suprascapular nerve block (SSNB) alone)	21	5.3(1.50)	MeanDif	-1.6(-2.48,-0.72)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2015	High Quality	PROs (specify)(VAS)	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	2.4(1.60)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	2.5(1.20)	MeanDif	-0.1(-1.11,0.91)	Not Significant (P-value>.05)
Lee, Jj, 2015	High Quality	PROs (specify)(VAS)	1 hour	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	6.9(2.30)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	6.9(1.80)	MeanDif	0(-1.48,1.48)	Not Significant (P-value>.05)
Lee, Jj, 2015	High Quality	PROs (specify)(VAS)	12 hours	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	3.3(1.80)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	3.6(1.00)	MeanDif	-0.3(-1.34,0.74)	Not Significant (P-value>.05)
Lee, Jj, 2015	High Quality	PROs (specify)(VAS)	18 hours	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	2.9(1.90)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	3(1.10)	MeanDif	-0.1(-1.21,1.01)	Not Significant (P-value>.05)
Lee, Jj, 2015	High Quality	PROs (specify)(VAS)	3 hours	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	4.9(2.50)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	5.2(2.20)	MeanDif	-0.3(-1.99,1.39)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Jj, 2015	High Quality	PROs (specify)(VAS)	6 hours	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	3.9(1.80)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	4.2(1.20)	MeanDif	-0.3(-1.39,0.79)	Not Significant (P-value>.05)
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 day	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	3.22(2.35)	G3 (control) (no analgesic)	21	6.67(1.65)	MeanDif	-3.45(-4.64,-2.26)	**Treatment 1 Significant (P-value<.05)**
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 month	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	1.52(1.59)	G3 (control) (no analgesic)	21	3.1(1.67)	MeanDif	-1.58(-2.55,-0.61)	**Treatment 1 Significant (P-value<.05)**
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 week	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	1.83(1.67)	G3 (control) (no analgesic)	21	6.1(1.76)	MeanDif	-4.27(-5.29,-3.25)	**Treatment 1 Significant (P-value<.05)**
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	3 months	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	0.65(1.03)	G3 (control) (no analgesic)	21	1.81(1.12)	MeanDif	-1.16(-1.80,-0.52)	**Treatment 1 Significant (P-value<.05)**
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	1 day	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	1 day	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	1 hour	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	2.45(1.21)	G2 (control) (general anesthesia only)	31	3.55(1.98)	MeanDif	-1.1(-1.92,-0.28)	**Treatment 1 Significant (P-value<.05)**
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	1.5 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	1.75 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	12 hours	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	2.61(1.25)	G2 (control) (general anesthesia only)	31	3.68(1.60)	MeanDif	-1.07(-1.78,-0.36)	**Treatment 1 Significant (P-value<.05)**
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	18 hours	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	2 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	2 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	3 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	3 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	3 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	3 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	3.5 Days	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	. %	G2 (control) (general anesthesia only)	31	. %	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	6 hours	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	2.42(1.43)	G2 (control) (general anesthesia only)	31	4.23(2.17)	MeanDif	-1.81(-2.72,-0.90)	**Treatment 1 Significant (P-value<.05)**
Liu, X. N., 2017	High Quality	PROs (specify)(VAS)	Post-Op	G1 (SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	2.5(0.94)	G2 (control) (general anesthesia only)	31	3.82(1.31)	MeanDif	-1.32(-1.89,-0.75)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	PROs (specify)(pain score(numerical rating scale))	2 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	1.1(1.60)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	7.6(1.80)	MeanDif	-6.5(-7.36,-5.64)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	PROs (specify)(pain score(numerical rating scale))	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.6(1.10)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	7.6(1.80)	MeanDif	-7(-7.75,-6.25)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	PROs (specify)(pain score(numerical rating scale))	8 hours	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	3.2(1.00)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	4.1(1.40)	MeanDif	-0.9(-1.52,-0.28)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	PROs (specify)(pain score(numerical rating scale))	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	2.5(1.50)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	4.1(1.40)	MeanDif	-1.6(-2.33,-0.87)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Sun, Z., 2018	High Quality	PROs (specify)(Pain score (visual analog scale))	1 day	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.8(0.80)	g2(ropivacaine) (0.2% ropivacaine)	30	4.2(0.80)	MeanDif	-0.4(-0.80,0.00)	Not Significant (P-value>.05)
Sun, Z., 2018	High Quality	PROs (specify)(Pain score (visual analog scale))	12 hours	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.7(0.50)	g2(ropivacaine) (0.2% ropivacaine)	30	4.3(0.50)	MeanDif	-0.6(-0.85,-0.35)	**Treatment 1 Significant (P-value<.05)**
Sun, Z., 2018	High Quality	PROs (specify)(Pain score (visual analog scale))	2 Days	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	4.3(0.60)	g2(ropivacaine) (0.2% ropivacaine)	30	4.3(0.80)	MeanDif	0(-0.36,0.36)	Not Significant (P-value>.05)
Sun, Z., 2018	High Quality	PROs (specify)(Pain score (visual analog scale))	4 hours	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.8(0.60)	g2(ropivacaine) (0.2% ropivacaine)	30	4.5(0.80)	MeanDif	-0.7(-1.06,-0.34)	**Treatment 1 Significant (P-value<.05)**
Sun, Z., 2018	High Quality	PROs (specify)(Pain score (visual analog scale))	8 hours	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	3.6(0.80)	g2(ropivacaine) (0.2% ropivacaine)	30	4.4(0.80)	MeanDif	-0.8(-1.20,-0.40)	**Treatment 1 Significant (P-value<.05)**

Table 257: Pico 12 Part 2k: Regional block vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Bain, G. I., 2001	High Quality	Medication use (length of time)(Intraoperative fentanyl (?g))	Post-Op	g1(block) (Interscalene brachial plexus (ISBP))	20	98.8(44.80)	g2(no block) (no block, general anesthesia only)	20	127.2(47.50)	MeanDif	-28.4(-57.02,0.22)	Not Significant (P-value>.05)
Bain, G. I., 2001	High Quality	Medication use (length of time)(PCA pethidine (mg))	Post-Op	g1(block) (Interscalene brachial plexus (ISBP))	20	109.5(177.80)	g2(no block) (no block, general anesthesia only)	20	174.2(114.50)	MeanDif	-64.7(-157.38, 27.98)	Not Significant (P-value>.05)
Bain, G. I., 2001	High Quality	Medication use (length of time)(Recovery pethidine (mg))	Post-Op	g1(block) (Interscalene brachial plexus (ISBP))	20	19.5(45.00)	g2(no block) (no block, general anesthesia only)	20	118(64.20)	MeanDif	-98.5(-132.86, -64.14)	**Treatment 1 Significant (P-value<.05)**
Borgeat, A., 2010	High Quality	Medication use (length of time)(Total intravenous morphine consumption)	1 day	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	14(9.00)	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	7(7.00)	MeanDif	7(3.47, 10.53)	**Treatment 2 Significant (P-value<.05)**
Borgeat, A., 2010	High Quality	Medication use (length of time)(Total intravenous morphine consumption)	2 Days	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	16(17.00)	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	4(4.00)	MeanDif	12(6.59,17.41)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciccone, Ii W. J., 2008	High Quality	Medication use (length of time)(Fentanyl consumption)	Post-Op	g1(block only) (interscalene regional block)	20	5.00%	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	0.00%	RD	0.05(-0.08,0.18)	Not Significant (P-value>.05)
Ciccone, Ii W. J., 2008	High Quality	Medication use (length of time)(Recovery Room Oral narcotic consumption)	Post-Op	g1(block only) (interscalene regional block)	20	25(18.00)	g4(saline pump and block) (interscalene block combined with an infusion pump containing 0.9% saline solution)	18	16.67%	RR	.(.,.)	Not Significant (P-value>.05)
Clendenen, S. R., 2010	High Quality	Medication use (length of time)(opioid consumption in mg)	2 Days	G1(pregabalin) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg pregabalin)	23	51(40.00)	G2 (placebo) (interscalene brachial plexus block with 30 mL of 0.5% ropivacaine, and oral celecoxib 200 mg and acetaminophen 500 mg and 150 mg placebo)	24	64(42.00)	MeanDif	-13(-36.44,10.44)	Not Significant (P-value>.05)
Culebras, X, 2001	High Quality	Medication use (length of time)(Duration of analgesia (min))	Post-Op	G1(Clonidine) (interscalene block with 40 ml of 0.5% bupivacaine with epinephrine and 150 ?g (= 1 mL) of clonid ine, completed by 1 ml of 0.9% saline JM in the contralateral shoulder)	19	829(159.00)	g2(control) (interscalene block with 40 ml of 0.5% bupivacaine with epinephr ine and 1 ml of 0.9% saline, completed by 150 ?g (= 1 ml) of clonidine IM in the contralateral shoulder)	20	909(160.00)	MeanDif	-80(-180.14, 20.14)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Culebras, X, 2001	High Quality	Medication use (length of time)(Total dose of morphine/patient (mg))	1 day	G1(Clonidine) (interscalene block with 40 ml of 0.5% bupivacaine with epinephrine and 150 ?g (= 1 mL) of clonid ine, completed by 1 ml of 0.9% saline JM in the contralateral shoulder)	19	30(18.00)	g2(control) (interscalene block with 40 ml of 0.5% bupivacaine with epinephr ine and 1 ml of 0.9% saline, completed by 150 ?g (= 1 ml) of clonidine IM in the contralateral shoulder)	20	27(14.00)	MeanDif	3(-7.16,13.16)	Not Significant (P-value>.05)
Culebras, X, 2001	High Quality	Medication use (length of time)(Total dose of morphine/patient (mg))	2 Days	G1(Clonidine) (interscalene block with 40 ml of 0.5% bupivacaine with epinephrine and 150 ?g (= 1 mL) of clonid ine, completed by 1 ml of 0.9% saline JM in the contralateral shoulder)	19	62(36.00)	g2(control) (interscalene block with 40 ml of 0.5% bupivacaine with epinephr ine and 1 ml of 0.9% saline, completed by 150 ?g (= 1 ml) of clonidine IM in the contralateral shoulder)	20	52(26.00)	MeanDif	10(-9.80,29.80)	Not Significant (P-value>.05)
Faria-Silva, R., 2016	High Quality	Clinical outcomes (specify)(Motor block (hrs.))	Post-Op	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	7.4(5.20)	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	2.5(.)	Author Reported	4.9(.,.)	clonidine Significant (P-value<.05)
Faria-Silva, R., 2016	High Quality	Medication use (length of time)(Morphine doses (50 (r)g kg?1))	Post-Op	G2(clonidine) (30 mL of 0.33% ropivacaine solution and 0.15 mg of clonidine)	26	1.1(1.40)	G1(local anesthetics) (30 mL of 0.33% ropivacaine solution)	24	2(2.90)	MeanDif	-0.9(-2.18,0.38)	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	Medication use (length of time)(Ropivacaine boluses(median))	1 day	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	1(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	0(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Fredrickson, M. J., 2011	High Quality	Medication use (length of time)(Ropivacaine boluses(median))	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	0(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	2(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Fredrickson, M. J., 2011	High Quality	Medication use (length of time)(Tramadol required)	1 day	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	18.42%	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	25.58%	RR	0.72(0.31,1.67)	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	Medication use (length of time)(Tramadol required)	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	42.11%	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	44.19%	RR	0.95(0.58,1.57)	Not Significant (P-value>.05)
Klein, Sm, 2000	High Quality	Opioid consumption(total postop morphine consumption)	1 day	G1 (Ropivacaine) (continuous interscalene brachial plexus blockade of 0.2% ropivacaine at 10 mL/h)	22	18(29.00)	G2 (Saline) (normal saline at 10 mL/h via a disposable infusion pump)	18	36(24.00)	MeanDif	-18(-34.43,-1.57)	**Treatment 1 Significant (P-value<.05)**
Lee, Ar, 2012	High Quality	Medication use (length of time)(duration of analgesia(min))	1 day	*G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	664(188.00)	*G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	553(155.00)	MeanDif	111(21.97,200.03)	**Treatment 1 Significant (P-value<.05)**
Lee, Ar, 2012	High Quality	Medication use (length of time)(duration of motor block)	Post-Op	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	302(145.00)	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	296(132.00)	MeanDif	6(-65.53,77.53)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, Ar, 2012	High Quality	Medication use (length of time)(duration of sensory block)	Post-Op	G1 (Magnesium) (20 mL of 0.5% bupivacaine + 2mL of 10% magnesium sulfate)	28	636(239.00)	G2 (Saline) (20 mL of 0.5% bupivacaine + 2 mL saline)	30	518(174.00)	MeanDif	118(9.77,226.23)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2015	High Quality	Opioid consumption(number of boluses used)	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	2.1(3.20)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	4.9(1.80)	MeanDif	-2.8(-4.66,-0.94)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2015	High Quality	Opioid consumption(number of patients using PCA)	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	33.33%	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	100.00%	RD	-0.67(-0.91,-0.42)	**Treatment 1 Significant (P-value<.05)**
Lee, Jj, 2015	High Quality	Opioid consumption(total amount of fentanyl (ug))	1 day	G1 (SSNB) (arthroscopy-guided SSNB using 10 mL 0.5 % ropivacaine with 1:200,000 epinephrine)	15	137.8(212.40)	G1 (control) (SSNB using 10 mL 0.9 % saline)	15	315.1(110.40)	MeanDif	-177.3(-298.44,-56.16)	**Treatment 1 Significant (P-value<.05)**
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	1 day	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	22.58%	*G2(Control) (general anesthesia only)	31	3.23%	RR	7.00(0.91,53.58)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	1 day	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	6.45%	*G2(Control) (general anesthesia only)	31	25.81%	RR	0.25(0.06,1.08)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	1 hour	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	0.00%	*G2(Control) (general anesthesia only)	31	29.03%	RD	-0.29(-0.45,-0.13)	Treatment 1 Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	1.5 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	19.35%	*G2(Control) (general anesthesia only)	31	9.68%	RR	2.00(0.55,7.29)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	1.75 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	3.23%	*G2(Control) (general anesthesia only)	31	12.90%	RR	0.25(0.03,2.11)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	12 hours	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	9.68%	*G2(Control) (general anesthesia only)	31	22.58%	RR	0.43(0.12,1.51)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	18 hours	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	32.26%	*G2(Control) (general anesthesia only)	31	19.35%	RR	1.67(0.69,4.02)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	2 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	9.68%	*G2(Control) (general anesthesia only)	31	9.68%	RR	1.00(0.22,4.58)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	2 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	16.13%	*G2(Control) (general anesthesia only)	31	22.58%	RR	0.71(0.25,2.01)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	3 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	22.58%	*G2(Control) (general anesthesia only)	31	6.45%	RR	3.50(0.79,15.54)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	3 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	6.45%	*G2(Control) (general anesthesia only)	31	9.68%	RR	0.67(0.12,3.72)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	3 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	19.35%	*G2(Control) (general anesthesia only)	31	9.68%	RR	2.00(0.55,7.29)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	3 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	3.23%	*G2(Control) (general anesthesia only)	31	3.23%	RR	1.00(0.07,15.28)	Not Significant (P-value>.05)
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	3.5 Days	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	62	8.06%	*G2(Control) (general anesthesia only)	62	6.45%	RR	1.25(0.35,4.44)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Liu, X. N., 2017	High Quality	Opioid consumption(rescue tramadol requirements)	6 hours	*G1(SISB) (1 injection 15 mL of 2% lidocaine and 15 mL of 2% levobupivacaine; GA protocol after)	31	3.23%	*G2(Control) (general anesthesia only)	31	29.03%	RR	0.11(0.01,0.83)	**Treatment 1 Significant (P-value<.05)**
Sun, Z., 2018	High Quality	Medication use (length of time)(Time to the first use of tramadol (hour))	1 hour	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	28(11.00)	g2(ropivacaine) (0.2% ropivacaine)	30	27(10.00)	MeanDif	1(-4.32,6.32)	
Sun, Z., 2018	High Quality	Opioid consumption(Number of patients to take tramadol within 48 h use)	Post-Op	g1(Dexmedetomidine + ropivacaine) (0.2% ropivacaine plus 2 ?g/kg dexmedetomidine)	30	6(.)	g2(ropivacaine) (0.2% ropivacaine)	30	12(.)	RR	0.50(0.22,1.16)	Not Significant (P-value>.05)

Table 258: Pico 12 Part 2k: Regional block vs. Control -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Borgeat, A., 2010	High Quality	PROs (specify)(quality of sleep during the first postoperative night)	Post-Op	g1(ropivacaine 0.2%) (infusion of ropivacaine 0.2% administered through an interscalene catheter for the first 48 hours after surgery)	40	27.50%	g2(ropivacaine 0.3%) (infusion of ropivacaine 0.3% administered through an interscalene catheter for the first 48 hours after surgery)	40	5.00%	RR	5.50(1.30,23.25)	**Treatment 1 Significant (P-value<.05)**
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Night awakenings>0)	1 day	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	7.89%	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	11.63%	RR	0.68(0.17,2.65)	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Night awakenings>0)	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	42.11%	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	44.19%	RR	0.95(0.58,1.57)	Not Significant (P-value>.05)
Fredrickson, M. J., 2011	High Quality	PROs (specify)(Pump dissatisfaction (cumbersomeness NRS)median)	2 Days	G1(2 ml h^-1 ropivacaine) (reduced dose mandatory 2 ml h^-1 ropivacaine+PRN bolus)	38	2(.)	G2(5 ml h^-1 ropivacaine) (PRN only' regimen incorporating a conventional but higher dose of 5 ml h^-1 ropivacaine)	43	2(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	1 day	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	9.2(1.90)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	6.7(1.50)	MeanDif	2.5(1.44,3.56)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	1 hour	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	2.9(1.90)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	2.4(1.70)	MeanDif	0.5(-0.62,1.62)	Not Significant (P-value>.05)
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	1.5 Days	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	9.5(1.30)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	6.9(1.30)	MeanDif	2.6(1.79,3.41)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	12 hours	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	8.8(1.60)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	5.9(1.40)	MeanDif	2.9(1.97,3.83)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	2 Days	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	9(1.50)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	7.2(1.70)	MeanDif	1.8(0.81,2.79)	**Treatment 1 Significant (P-value<.05)**
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	4 hours	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	6.7(1.60)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	3.9(1.40)	MeanDif	2.8(1.87,3.73)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ko, S. H., 2017	High Quality	PROs (specify)(Patient satisfaction score)	8 hours	g1(blinded SSNB+ANB+arthroscopically guided SSNB) (blinded SSNB and axillary nerve block of 10 mL 0.25% ropivacaine and received arthroscopically guided SSNB with 10 mL of 0.25% ropivacaine)	20	7.4(1.40)	g2(blinded SSNB ONLY) (blinded SSNB with 10 mL of 0.25% ropivacaine)	20	5.1(1.60)	MeanDif	2.3(1.37,3.23)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	1 day	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	6.9(1.20)	g1(ISB) (ultrasound-guided ISB alone)	24	5.9(1.70)	MeanDif	1(0.17, 1.83)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	1 hour	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	7.9(1.30)	g1(ISB) (ultrasound-guided ISB alone)	24	7.2(1.40)	MeanDif	0.7(-0.06,1.46)	Not Significant (P-value>.05)
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	1.5 Days	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	7.9(1.10)	g1(ISB) (ultrasound-guided ISB alone)	24	7.1(1.20)	MeanDif	0.8(0.15,1.45)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	12 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	6.2(1.40)	g1(ISB) (ultrasound-guided ISB alone)	24	4.3(1.40)	MeanDif	1.9(1.11,2.69)	**Treatment 1 Significant (P-value<.05)**
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	18 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	6.4(1.30)	g1(ISB) (ultrasound-guided ISB alone)	24	5.1(1.50)	MeanDif	1.3(0.51,2.09)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	2 Days	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	8.5(0.60)	g1(ISB) (ultrasound-guided ISB alone)	24	8.2(0.90)	MeanDif	0.3(-0.13,0.73)	Not Significant (P-value>.05)
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	3 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	7.8(1.10)	g1(ISB) (ultrasound-guided ISB alone)	24	7.3(1.40)	MeanDif	0.5(-0.21,1.21)	Not Significant (P-value>.05)
Lee, J. J., 2017	High Quality	PROs (specify)(patient's satisfaction)	6 hours	g1(ISB+SSNB) (ultrasound-guided ISB and arthroscopy-guided SSNB)	24	7.8(1.00)	g1(ISB) (ultrasound-guided ISB alone)	24	6(1.90)	MeanDif	1.8(0.94,2.66)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	PROs (specify)(Satisfaction score)	2 Days	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	6.4(1.40)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	2.3(1.80)	MeanDif	4.1(3.28,4.92)	Treatment 1
Shin, H. J., 2016	High Quality	PROs (specify)(Satisfaction score)	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	8.6(1.70)	g1(control) (arthroscopic shoulder surgery w/out ISB)	30	2.3(1.80)	MeanDif	6.3(5.41,7.19)	Treatment 1

Table 259: Pico 12 Part 2l: Regional block vs. Liposomal bupivacaine -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hadzic, A., 2005	High Quality	Adverse events/complications(Nausea)	Post-Op	g1(ISB) (interscalene brachial plexus block (0.75% ropivacaine))	25	12.00%	g2(GA) (fast-track general anesthesia followed by bupivacaine (0.25%) wound infiltration)	25	44.00%	RR	0.27(0.09,0.86)	**Treatment 1 Significant (P-value<.05)**
Hadzic, A., 2005	High Quality	Adverse events/complications(Vomiting)	Post-Op	g1(ISB) (interscalene brachial plexus block (0.75% ropivacaine))	25	0.00%	g2(GA) (fast-track general anesthesia followed by bupivacaine (0.25%) wound infiltration)	25	16.00%	RD	-0.16(-0.31,-0.01)	Treatment 1 Not Significant (P-value>.05)
Hadzic, A., 2005	High Quality	Hospital readmission(Hospital admission)	Post-Op	g1(ISB) (interscalene brachial plexus block (0.75% ropivacaine))	25	0.00%	g2(GA) (fast-track general anesthesia followed by bupivacaine (0.25%) wound infiltration)	25	16.00%	RD	-0.16(-0.31,-0.01)	Treatment 1 Not Significant (P-value>.05)

Table 260: Pico 12 Part 2l: Regional block vs. Liposomal bupivacaine -(Length of stay)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hadzic, A., 2005	High Quality	Length of stay(Bypass PACU)	Post-Op	g1(ISB) (interscalene brachial plexus block (0.75% ropivacaine))	25	76.00%	g2(GA) (fast-track general anesthesia followed by bupivacaine (0.25%) wound infiltration)	25	16.00%	RR	4.75(1.88,11.98)	**Treatment 1 Significant (P-value<.05)**
Hadzic, A., 2005	High Quality	Length of stay(Discharge time, min)	Post-Op	g1(ISB) (interscalene brachial plexus block (0.75% ropivacaine))	25	. %	g2(GA) (fast-track general anesthesia followed by bupivacaine (0.25%) wound infiltration)	25	. %	Author Reported	NA	Group 1 Significant (P-value<.05)

Table 261: Pico 12 Part 2l: Regional block vs. Liposomal bupivacaine -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hadzic, A., 2005	High Quality	PROs (specify)(Moderate/severe pain (VAS >3)))	Discharge	g1(ISB) (interscalene brachial plexus block (0.75% ropivacaine))	25	0.00%	g2(GA) (fast-track general anesthesia followed by bupivacaine (0.25%) wound infiltration)	25	64.00%	RD	-0.64(-0.83,-0.45)	Treatment 1 Not Significant (P-value>.05)

Table 262: Pico 12 Part 2m: Regional block vs. Pain pumps/catheter -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	Adverse events/complications(incidence of nausea, vomiting, or sedation each day)	1 day	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	40.48%	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2.33%	RR	17.40(2.42,124.99)	**Treatment 2 Significant (P-value<.05)**
Malik, T., 2016	High Quality	Adverse events/complications(incidence of nausea, vomiting, or sedation each day)	2 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	33.33%	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2.33%	RR	14.33(1.97,104.20)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	Adverse events/complications(incidence of nausea, vomiting, or sedation each day)	3 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	21.43%	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2.33%	RR	9.21(1.22,69.58)	**Treatment 2 Significant (P-value<.05)**

Table 263: Pico 12 Part 2m: Regional block vs. Pain pumps/catheter -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciccone, Ii W. J., 2008	High Quality	PROs (specify)(VAS score)	1 hour	g1(block only) (interscalene regional block)	20	. %	g2(Pump Only) (infusion pump with 0.5% bupivacaine)	19	. %	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Ciccone, Ii W. J., 2008	High Quality	PROs (specify)(VAS score)	2 hours	g1(block only) (interscalene regional block)	20	. %	g2(Pump Only) (infusion pump with 0.5% bupivacaine)	19	. %	Author Reported	NA	**Treatment 1 Significant (P-value<.05)**
Malik, T., 2016	High Quality	PROs (specify)(Median Pain at Rest)	1 day	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	4(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	1(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**
Malik, T., 2016	High Quality	PROs (specify)(Median Pain at Rest)	2 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	4(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	1(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	PROs (specify)(Median Pain at Rest)	3 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	3(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	3(.)	Author Reported	NA	Group 2 Significant (P-value<.05)
Malik, T., 2016	High Quality	PROs (specify)(median Pain With Movement)	1 day	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	8(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2(.)	Author Reported	NA	Group 2 Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	PROs (specify)(median Pain With Movement)	2 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	7(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2(.)	Author Reported	NA	Group 2 Significant (P-value<.05)
Malik, T., 2016	High Quality	PROs (specify)(median Pain With Movement)	3 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	6(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	4(.)	Author Reported	NA	Group 2 Significant (P-value<.05)
Park, J. Y., 2016	High Quality	PROs (specify)(Pain VAS score)	1 day	g2(PCA + SSNB) (suprascapular nerve block (SSNB) and patient-controlled anaesthesia (PCA))	36	4.6(1.30)	g1(PCA) (IV patient-controlled anaesthesia (PCA) pumps)	33	3.9(0.90)	MeanDif	0.7(0.18,1.22)	**Treatment 2 Significant (P-value<.05)**
Park, J. Y., 2016	High Quality	PROs (specify)(Pain VAS score)	1 hour	g2(PCA + SSNB) (suprascapular nerve block (SSNB) and patient-controlled anaesthesia (PCA))	36	7.2(1.20)	g1(PCA) (IV patient-controlled anaesthesia (PCA) pumps)	33	7.9(0.80)	MeanDif	-0.7(-1.18,-0.22)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Park, J. Y., 2016	High Quality	PROs (specify)(Pain VAS score)	1.5 Days	g2(PCA + SSNB) (suprascapular nerve block (SSNB) and patient-controlled anaesthesia (PCA))	36	4.9(1.20)	g1(PCA) (IV patient-controlled anaesthesia (PCA) pumps)	33	4.7(1.00)	MeanDif	0.2(-0.32,0.72)	Not Significant (P-value>.05)
Park, J. Y., 2016	High Quality	PROs (specify)(Pain VAS score)	12 hours	g2(PCA + SSNB) (suprascapular nerve block (SSNB) and patient-controlled anaesthesia (PCA))	36	6.6(1.30)	g1(PCA) (IV patient-controlled anaesthesia (PCA) pumps)	33	6.4(1.00)	MeanDif	0.2(-0.34,0.74)	Not Significant (P-value>.05)
Park, J. Y., 2016	High Quality	PROs (specify)(Pain VAS score)	2 Days	g2(PCA + SSNB) (suprascapular nerve block (SSNB) and patient-controlled anaesthesia (PCA))	36	3.4(1.20)	g1(PCA) (IV patient-controlled anaesthesia (PCA) pumps)	33	2.7(0.80)	MeanDif	0.7(0.22,1.18)	**Treatment 2 Significant (P-value<.05)**
Park, J. Y., 2016	High Quality	PROs (specify)(Pain VAS score)	6 hours	g2(PCA + SSNB) (suprascapular nerve block (SSNB) and patient-controlled anaesthesia (PCA))	36	5.1(1.10)	g1(PCA) (IV patient-controlled anaesthesia (PCA) pumps)	33	6.2(1.40)	MeanDif	-1.1(-1.70,-0.50)	**Treatment 1 Significant (P-value<.05)**

Table 264: Pico 12 Part 2m: Regional block vs. Pain pumps/catheter -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Ciccone, Ii W. J., 2008	High Quality	Medication use (length of time)(Recovery Room Oral narcotic consumption)	Post-Op	g1(block only) (interscalene regional block)	20	25(18.00)	g2(Pump Only) (infusion pump with 0.5% bupivacaine)	19	78.95%	RR	.(,,.)	**Treatment 1 Significant (P-value<.05)**
Malik, T., 2016	High Quality	Medication use (length of time)(median Opioid Doses)	1 day	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	8(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	0(.)	Author Reported	NA	Group 2 Significant (P-value<.05)
Malik, T., 2016	High Quality	Medication use (length of time)(median Opioid Doses)	2 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	8(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	0(.)	Author Reported	NA	Group 2 Significant (P-value<.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	Medication use (length of time)(median Opioid Doses)	3 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	6(.)	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	3(.)	Author Reported	NA	Group 2 Significant (P-value<.05)

Table 265: Pico 12 Part 2m: Regional block vs. Pain pumps/catheter -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	PROs (specify)(sleep disturbance each day(number of patients))	1 day	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	61.90%	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	4.65%	RR	13.31(3.37,52.59)	**Treatment 2 Significant (P-value<.05)**
Malik, T., 2016	High Quality	PROs (specify)(sleep disturbance each day(number of patients))	2 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	45.24%	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2.33%	RR	19.45(2.73,138.85)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Malik, T., 2016	High Quality	PROs (specify)(sleep disturbance each day(number of patients))	3 Days	g2(SSG) (single shot of 2.5 mg/kg of 0.5% bupivacaine up to 25 mL)	42	21.43%	g1(CG) (continuous interscalene brachial plexus block. 2.5 mg/kg of 0.5% bupivacaine up to 25 mL through a catheter followed by an infusion of 0.125% bupivacaine at 5 mL/h and a patient-controlled bolus of 5 mL hourly for 72 hours)	43	2.33%	RR	9.21(1.22,69.58)	**Treatment 2 Significant (P-value<.05)**

Table 266: Pico 12 Part 2n: Regional block vs. Perioperative steroids -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Watanabe, K., 2016	High Quality	Adverse events/complications(Nausea/vomiting)	1 day	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	0.00%	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	9.09%	RD	-0.09(-0.23,0.05)	Not Significant (P-value>.05)
Watanabe, K., 2016	High Quality	Adverse events/complications(Sleep disturbance)	1 day	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	77.27%	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	13.64%	RR	5.67(1.93,16.62)	**Treatment 2 Significant (P-value<.05)**

Table 267: Pico 12 Part 2n: Regional block vs. Perioperative steroids -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 day	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	3.22(2.35)	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	2.61(2.07)	MeanDif	0.61(-0.53,1.75)	Not Significant (P-value>.05)
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 month	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	1.52(1.59)	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	2.14(1.95)	MeanDif	-0.62(-1.49,0.25)	Not Significant (P-value>.05)
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	1 week	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	1.83(1.67)	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	1.68(1.52)	MeanDif	0.15(-0.67,0.97)	Not Significant (P-value>.05)
Lin, Y. H., 2015	High Quality	PROs (specify)(VAS)	3 months	G2 (xylocaine) (2 mL of 2% xylocaine (post-op opioid))	23	0.65(1.03)	G1 (xylocaine + corticosteroid) (1 mL of 2% xylocaine (post-op opioid) + 1 mL of corticosteroid)	44	1.98(2.34)	MeanDif	-1.33(-2.14,-0.52)	**Treatment 2 Significant (P-value<.05)**
Watanabe, K., 2016	High Quality	PROs (specify)(Wong-Baker Face Scale pain score)	1 day	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	3(.)	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	2(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Watanabe, K., 2016	High Quality	PROs (specify)(Wong-Baker Face Scale pain score)	1 week	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	2(.)	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	1(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**
Watanabe, K., 2016	High Quality	PROs (specify)(Wong-Baker Face Scale pain score)	12 hours	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	3.5(.)	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	0.5(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**
Watanabe, K., 2016	High Quality	PROs (specify)(Wong-Baker Face Scale pain score)	2 Days	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	2(.)	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	1(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 268: Pico 12 Part 2n: Regional block vs. Perioperative steroids -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Watanabe, K., 2016	High Quality	Opioid consumption(Pentazocine(mg) Consumption)	1 day	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	0.00%	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	0.00%	RD	0.00(-0.08,0.08)	Not Significant (P-value>.05)
Watanabe, K., 2016	High Quality	Other(duration of the motor block(hours))	Post-Op	g1(w/out betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 20 mL of 0.375 % ropivacaine)	22	10.4(.)	g2 (betamethasone) (Ultrasound-guided interscalene brachial plexus block, involving 19 mL of 0.375 % ropivacaine with 4 mg (1 mL) of betamethasone)	22	13.9(.)	Author Reported	NA	(betamethasone) Significant (P-value<.05)

Table 269: Pico 12 Part 2o: Regional block vs. Regional block -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of dyspnoea (%))	Post-Op	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	0.00%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	0.00%	RD	0.00(-0.04,0.04)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of dyspnoea (%))	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	0.00%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	0.00%	RD	0.00(-0.04,0.04)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of dyspnoea (%))	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	0.00%	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	0.00%	RD	0.00(-0.04,0.04)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of hoarseness (%))	Post-Op	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	22.45%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	30.43%	RR	0.74(0.37,1.46)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of hoarseness (%))	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	22.45%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	30.43%	RR	0.74(0.37,1.46)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of hoarseness (%))	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	22.45%	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	22.45%	RR	1.00(0.48,2.09)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of Horner syndrome (%))	Post-Op	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	48.98%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	45.65%	RR	1.07(0.70,1.64)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of Horner syndrome (%))	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	40.82%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	45.65%	RR	0.89(0.56,1.42)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Adverse events/complications(Incidence of Horner syndrome (%))	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	40.82%	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	48.98%	RR	0.83(0.54,1.30)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Adverse events/complications(dyspnea in PACU)	Post-Op	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	0.00%	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	8.33%	RD	-0.08(-0.29,0.12)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Adverse events/complications(dyspnea in PACU)	Post-Op	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	33.33%	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	8.33%	RR	4.00(0.52,30.76)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hartrick, Ct, 2012	High Quality	Adverse events/complications(dyspnea in PACU)	Post-Op	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	33.33%	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	0.00%	RD	0.33(0.05,0.61)	**Treatment 2 Significant (P-value<.05)**
Hartrick, Ct, 2012	High Quality	Adverse events/complications(mean reductions in contralateral diaphragm motion)	Post-Op	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	-56(144.93)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	-28(31.81)	MeanDif	-28(-111.95, 55.95)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Adverse events/complications(mean reductions in contralateral diaphragm motion)	Post-Op	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	-39(132.55)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	-28(31.81)	MeanDif	-11(-88.13,66.13)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Adverse events/complications(mean reductions in contralateral diaphragm motion)	Post-Op	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	-39(132.55)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	-56(144.93)	MeanDif	17(-94.13,128.13)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Adverse events/complications(mean reductions in ipsilateral diaphragm motion)	Post-Op	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	60(67.16)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	66(38.88)	MeanDif	-6(-49.91,37.91)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Adverse events/complications(mean reductions in ipsilateral diaphragm motion)	Post-Op	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	65(37.12)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	66(38.88)	MeanDif	-1(-31.41,29.41)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hartrick, Ct, 2012	High Quality	Adverse events/complications(mean reductions in ipsilateral diaphragm motion)	Post-Op	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	65(37.12)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	60(67.16)	MeanDif	5(-38.42,48.42)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	Adverse events/complications(dizziness)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	43.48%	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	9.09%	RR	4.78(1.18,19.42)	**Treatment 2 Significant (P-value<.05)**
Kim, Jy, 2016	High Quality	Adverse events/complications(dizziness)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	43.48%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	9.09%	RR	4.78(1.18,19.42)	**Treatment 2 Significant (P-value<.05)**
Kim, Jy, 2016	High Quality	Adverse events/complications(dizziness)	Post-Op	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	9.09%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	9.09%	RR	1.00(0.15,6.48)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	Adverse events/complications(Horner's syndrome)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	17.39%	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	22.73%	RR	0.77(0.24,2.48)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Jy, 2016	High Quality	Adverse events/complications(Horner's syndrome)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	17.39%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	4.55%	RR	3.83(0.46,31.62)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	Adverse events/complications(Horner's syndrome)	Post-Op	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	22.73%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	4.55%	RR	5.00(0.63,39.39)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	Adverse events/complications(nausea and vomiting)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	52.17%	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	4.55%	RR	11.48(1.63,81.04)	**Treatment 2 Significant (P-value<.05)**
Kim, Jy, 2016	High Quality	Adverse events/complications(nausea and vomiting)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	52.17%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	18.18%	RR	2.87(1.09,7.56)	**Treatment 2 Significant (P-value<.05)**
Kim, Jy, 2016	High Quality	Adverse events/complications(nausea and vomiting)	Post-Op	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	4.55%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	18.18%	RR	0.25(0.03,2.06)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Jy, 2016	High Quality	Adverse events/complications(urinary retention)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	21.74%	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	9.09%	RR	2.39(0.52,11.07)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	Adverse events/complications(urinary retention)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	21.74%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	9.09%	RR	2.39(0.52,11.07)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	Adverse events/complications(urinary retention)	Post-Op	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	9.09%	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	9.09%	RR	1.00(0.15,6.48)	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	Adverse events/complications(complications: hematoma formation, Horner's syndrome, hoarseness, respiratory distress)	2 Days	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	13.33%	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	6.67%	RR	2.00(0.40,10.11)	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	Adverse events/complications(Hemidiaphragmatic paralysis)	2 Days	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	60.00%	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	33.33%	RR	1.80(1.00,3.23)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, J-H, 2011	High Quality	Adverse events/complications(post-op nausea and vomiting)	2 Days	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	3.33%	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	6.67%	RR	0.50(0.05,5.22)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	100.00%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	96.67%	RD	0.03(-0.05,0.12)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	63.33%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	30.00%	RR	2.11(1.15,3.89)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	Adverse events/complications(No weakness)	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	90.00%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	63.33%	RR	1.42(1.06,1.91)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	100.00%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	93.33%	RD	0.07(-0.04,0.17)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	63.33%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	2(.)	RR	9.50(2.42,37.25)	**Treatment 2 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 0))	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	96.67%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	56.67%	RR	1.71(1.24,2.35)	**Treatment 2 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	Adverse events/complications(numbness(severity 2))	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.00%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	1 day	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.00%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	0.00%	RD	0.00(-0.06,0.06)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	6.67%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	43.33%	RR	0.15(0.04,0.62)	**Treatment 1 Significant (P-value<.05)**
Shin, H. J., 2016	High Quality	Adverse events/complications(severe weakness)	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.00%	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	3.33%	RD	-0.03(-0.12,0.05)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	Clinical outcomes (specify)(Oxygen saturation)	1 hour	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	94(3.00)	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	93(3.00)	MeanDif	1(-0.52,2.52)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Thackeray, E. M., 2013	High Quality	Adverse events/complications(Postoperative diaphragm function)	Post-Op	G2 (ISBPB w 0.25% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.25% bupivacaine)	14	78.57%	G1 (ISBPB w 0.125% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.125% bupivacaine)	14	21.43%	RR	3.67(1.30,10.37)	**Treatment 1 Significant (P-value<.05)**
Thackeray, E. M., 2013	High Quality	Other(change in oxygen saturation%)	Post-Op	G2 (ISBPB w 0.25% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.25% bupivacaine)	14	-4.3(2.10)	G1 (ISBPB w 0.125% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.125% bupivacaine)	14	-2.6(2.10)	MeanDif	-1.7(-3.26,-0.14)	**Treatment 2 Significant (P-value<.05)**

Table 270: Pico 12 Part 2o: Regional block vs. Regional block -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	1 day	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	3.33(3.13)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	3.67(2.88)	MeanDif	-0.34(-2.75,2.07)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	2.54(2.56)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	3.67(2.88)	MeanDif	-1.13(-3.31,1.05)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	2.54(2.56)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	3.33(3.13)	MeanDif	-0.79(-3.08,1.50)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	2 Days	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	2.08(2.51)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	2.67(2.79)	MeanDif	-0.59(-2.71,1.53)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	2.15(2.17)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	2.67(2.79)	MeanDif	-0.52(-2.52,1.48)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	2.15(2.17)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	2.08(2.51)	MeanDif	0.07(-1.81,1.95)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	3 months	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	2.42(3.29)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	11	1.5(1.69)	MeanDif	0.92(-1.19,3.03)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	3 months	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	1.15(1.31)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	11	1.5(1.69)	MeanDif	-0.35(-1.59,0.89)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	3 months	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	1.15(1.31)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	2.42(3.29)	MeanDif	-1.27(-3.27,0.73)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	Discharge	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	1.58(3.13)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	2.67(3.61)	MeanDif	-1.09(-3.79,1.61)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	Discharge	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	0.62(1.54)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	2.67(3.61)	MeanDif	-2.05(-4.27,0.17)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(NRS)	Discharge	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	0.62(1.54)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	1.58(3.13)	MeanDif	-0.96(-2.93,1.01)	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	PROs (specify)(VAS)	1 day	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	20(69.86)	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	20(83.84)	MeanDif	0(-39.05,39.05)	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	PROs (specify)(VAS)	12 hours	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	10(69.86)	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	20(41.92)	MeanDif	-10(-39.15,19.15)	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	PROs (specify)(VAS)	2 Days	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	20(55.89)	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	15(69.86)	MeanDif	5(-27.01,37.01)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Lee, J-H, 2011	High Quality	PROs (specify)(VAS)	6 hours	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	0(97.81)	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	10(55.89)	MeanDif	-10(-50.31,30.31)	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	PROs (specify)(VAS)	Post-Op	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	0(55.89)	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	0(55.89)	MeanDif	0(-28.28,28.28)	Not Significant (P-value>.05)
Oh, J. H., 2009	High Quality	PROs (specify)(Visual analog scale (VAS))	1 hour	g2(ISB-IB) (combination of single interscalene block with a continuous intra-bursal infusion of local anesthetics)	25	20(.)	g1(CISB) (continuous interscalene block)	25	40(.)	Author Reported	NA	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	PROs (specify)(pain score(numerical rating scale))	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	0.6(1.10)	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	1.1(1.60)	MeanDif	-0.5(-1.19,0.19)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	PROs (specify)(pain score(numerical rating scale))	8 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	2.5(1.50)	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	3.2(1.00)	MeanDif	-0.7(-1.35,-0.05)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Thackeray, E. M., 2013	High Quality	PROs (specify)(verbal pain score)	Discharge	G2 (ISBPB w 0.25% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.25% bupivacaine)	14	0(.)	G1 (ISBPB w 0.125% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.125% bupivacaine)	14	1(.)	Author Reported	NA	Group 1 Significant (P-value<.05)

Table 271: Pico 12 Part 2o: Regional block vs. Regional block -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2013	High Quality	Clinical outcomes (specify)(Patients with residual motor block)	1 day	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	10.20%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	2.17%	RR	4.69(0.57,38.68)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	Medication use (length of time)(median time of primary endpoint)	Post-Op	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	1405(.)	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	757(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Desmet, M., 2013	High Quality	Medication use (length of time)(median time of primary endpoint)	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	1405(.)	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	757(.)	Author Reported	NA	Group 1 Significant (P-value<.05)
Desmet, M., 2013	High Quality	Medication use (length of time)(median time of primary endpoint)	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	1405(.)	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	1405(.)	Author Reported	NA	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(cumulative ropivacaine infusion)	0.4 hours	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	131.6(48.07)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	111.3(31.11)	MeanDif	20.3(-12.10,52.70)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hartrick, Ct, 2012	High Quality	Opioid consumption(cumulative ropivacaine infusion)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	113(18.73)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	111.3(31.11)	MeanDif	1.7(-18.85,22.25)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(cumulative ropivacaine infusion)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	113(18.73)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	131.6(48.07)	MeanDif	-18.6(-47.79,10.59)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(cumulative ropivacaine infusion)	2 Days	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	236.1(38.53)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	210.8(65.75)	MeanDif	25.3(-17.82,68.42)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(cumulative ropivacaine infusion)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	219.8(41.89)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	210.8(65.75)	MeanDif	9(-35.11,53.11)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(cumulative ropivacaine infusion)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	219.8(41.89)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	236.1(38.53)	MeanDif	-16.3(-48.50,15.90)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(opioid consumption)	1 day	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	29.8(31.64)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	27.7(33.23)	MeanDif	2.1(-23.86,28.06)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(opioid consumption)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	13.4(6.89)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	27.7(33.23)	MeanDif	-14.3(-33.50,4.90)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(opioid consumption)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	13.4(6.89)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	29.8(31.64)	MeanDif	-16.4(-34.72,1.92)	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Hartrick, Ct, 2012	High Quality	Opioid consumption(opioid consumption)	2 Days	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	16.4(14.14)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	18.9(26.86)	MeanDif	-2.5(-19.67,14.67)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(opioid consumption)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	21.3(15.91)	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	18.9(26.86)	MeanDif	2.4(-15.26,20.06)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	Opioid consumption(opioid consumption)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	21.3(15.91)	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	16.4(14.14)	MeanDif	4.9(-7.14,16.94)	Not Significant (P-value>.05)
Thackeray, E. M., 2013	High Quality	Opioid consumption(if patient required treatment with opioids)	Post-Op	G2 (ISBPB w 0.25% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.25% bupivacaine)	14	0(.)	G1 (ISBPB w 0.125% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.125% bupivacaine)	14	7(18.00)	Author Reported	NA	Not Significant (P-value>.05)

Table 272: Pico 12 Part 2o: Regional block vs. Regional block -(Quality of life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2013	High Quality	PROs (specify)(patients satisfied)	Post-Op	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	91.84%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	84.78%	RR	1.08(0.93,1.26)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	PROs (specify)(patients satisfied)	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	93.88%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	84.78%	RR	1.11(0.96,1.28)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	PROs (specify)(patients satisfied)	Post-Op	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	93.88%	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	91.84%	RR	1.02(0.92,1.14)	Not Significant (P-value>.05)
Desmet, M., 2013	High Quality	PROs (specify)(Sleep disturbance)	1 day	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	28.57%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	58.70%	RR	0.49(0.29,0.81)	**Treatment 1 Significant (P-value<.05)**
Desmet, M., 2013	High Quality	PROs (specify)(Sleep disturbance)	1 day	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	22.45%	G1 (R) (Interscalene brachial plexus block w ropivacaine 0.5%)	46	58.70%	RR	0.38(0.22,0.68)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Desmet, M., 2013	High Quality	PROs (specify)(Sleep disturbance)	1 day	G3 (RD iv) (Interscalene brachial plexus block w ropivacaine 0.5% and i.v. dexamethasone 10 mg)	49	22.45%	G2 (RD) (Interscalene brachial plexus block w ropivacaine 0.5% and dexamethasone 10 mg)	49	28.57%	RR	0.79(0.40,1.56)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(patient satisfaction)	1 day	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	83.33%	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	83.33%	RR	1.00(0.70,1.43)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(patient satisfaction)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	91.67%	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	83.33%	RR	1.10(0.81,1.49)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(patient satisfaction)	1 day	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	91.67%	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	83.33%	RR	1.10(0.81,1.49)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(patient satisfaction)	2 Days	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	75.00%	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	83.33%	RR	0.90(0.60,1.36)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(patient satisfaction)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	83.33%	G1 (5 mL ropivacaine) (5 mL of 0.75% ropivacaine)	12	83.33%	RR	1.00(0.70,1.43)	Not Significant (P-value>.05)
Hartrick, Ct, 2012	High Quality	PROs (specify)(patient satisfaction)	2 Days	G3 (20 mL ropivacaine) (20 mL of 0.75% ropivacaine)	12	83.33%	G2 (10 mL ropivacaine) (10 mL of 0.75% ropivacaine)	12	75.00%	RR	1.11(0.74,1.68)	Not Significant (P-value>.05)
Kim, Jy, 2016	High Quality	PROs (specify)(procedural discomfort(median))	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	2(.)	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	2(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Kim, Jy, 2016	High Quality	PROs (specify)(satisfaction)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	9(.)	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	10(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**
Kim, Jy, 2016	High Quality	PROs (specify)(satisfaction)	Post-Op	G1 (FCCEB) (fluoroscopy-guided targeted continuous cervical epidural block using 0.2% ropivacaine)	23	9(.)	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	10(.)	Author Reported	NA	**Treatment 2 Significant (P-value<.05)**
Kim, Jy, 2016	High Quality	PROs (specify)(satisfaction)	Post-Op	G2 (UCISB-75) (ultrasound-guided continuous interscalene brachial plexus block with 0.75% ropivacaine)	22	10(.)	G3 (UCISB-20) (ultrasound-guided continuous interscalene brachial plexus block using 0.2% ropivacaine)	22	10(.)	Author Reported	NA	Not Significant (P-value>.05)
Lee, J-H, 2011	High Quality	PROs (specify)(satisfaction score)	2 Days	G1 (10 mL ropivacaine) (1 dose 10mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	4(2.79)	G2 (5 mL ropivacaine) (1 dose 5mL of 0.75% ropivacaine (interscalene brachial plexus block))	30	4(2.79)	MeanDif	0(-1.41,1.41)	Not Significant (P-value>.05)
Shin, H. J., 2016	High Quality	PROs (specify)(Satisfaction score)	2 hours	g3 (C5 ISB) (arthroscopic shoulder surgery w ISB with the C5 approach)	30	8.6(1.70)	G2(conventional ISB) (arthroscopic shoulder surgery W ISB with the conventional approach)	30	6.4(1.40)	MeanDif	2.2(1.41,2.99)	**Treatment 1 Significant (P-value<.05)**

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Thackeray, E. M., 2013	High Quality	PROs (specify)(Patient satisfaction)	2 Days	G2 (ISBPB w 0.25% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.25% bupivacaine)	14	6.6(.)	G1 (ISBPB w 0.125% bupivacaine) (ultrasound-guided interscalene brachial plexus catheter placement with 20 mL of 0.125% bupivacaine)	14	6.6(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 273: Pico 12 Part 2p: TENs vs. Control -(Complications)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Osti, L., 2015	High Quality	Adverse events/complications(mild to moderate capsulitis)	Post-Op	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	9.38%	g2(placebo) (rotator cuff repair and placebo treatment)	34	20.59%	RR	0.46(0.13,1.61)	Not Significant (P-value>.05)
Osti, L., 2015	High Quality	Adverse events/complications(severe capsulitis)	Post-Op	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	3.13%	g2(placebo) (rotator cuff repair and placebo treatment)	34	5.88%	RR	0.53(0.05,5.58)	Not Significant (P-value>.05)

Table 274: Pico 12 Part 2p: TENs vs. Control -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Osti, L., 2015	High Quality	PROs (specify)(Constant-Murley score)	2 years	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	92.6(7.90)	g2(placebo) (rotator cuff repair and placebo treatment)	34	92(7.20)	MeanDif	0.6(-3.05,4.25)	Not Significant (P-value>.05)
Osti, L., 2015	High Quality	PROs (specify)(Constant-Murley score)	3 months	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	67.8(8.40)	g2(placebo) (rotator cuff repair and placebo treatment)	34	62.6(7.80)	MeanDif	5.2(1.28,9.12)	**Treatment 1 Significant (P-value<.05)**
Osti, L., 2015	High Quality	PROs (specify)(UCLA score)	2 years	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	33.1(6.30)	g2(placebo) (rotator cuff repair and placebo treatment)	34	32.6(6.20)	MeanDif	0.5(-2.52,3.52)	Not Significant (P-value>.05)
Osti, L., 2015	High Quality	PROs (specify)(UCLA score)	3 months	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	27.5(5.70)	g2(placebo) (rotator cuff repair and placebo treatment)	34	24.5(5.70)	MeanDif	3(0.25, 5.75)	**Treatment 1 Significant (P-value<.05)**

Table 275: Pico 12 Part 2p: TENs vs. Control -(Function)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Osti, L., 2015	High Quality	Clinical outcomes (specify)(External rotation(degrees))	2 years	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	60.3(9.30)	g2(placebo) (rotator cuff repair and placebo treatment)	34	59(9.10)	MeanDif	1.3(-3.14,5.74)	Not Significant (P-value>.05)
Osti, L., 2015	High Quality	Clinical outcomes (specify)(External rotation(degrees))	3 months	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	61(8.70)	g2(placebo) (rotator cuff repair and placebo treatment)	34	52.3(11.20)	MeanDif	8.7(3.88,13.52)	**Treatment 1 Significant (P-value<.05)**
Osti, L., 2015	High Quality	Clinical outcomes (specify)(Forward flexion(degrees))	2 years	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	174(10.90)	g2(placebo) (rotator cuff repair and placebo treatment)	34	173(10.90)	MeanDif	1(-4.26,6.26)	Not Significant (P-value>.05)
Osti, L., 2015	High Quality	Clinical outcomes (specify)(Forward flexion(degrees))	3 months	G1(TENs) (arthroscopic rotator cuff repair and application of pulsed electromagnetic fields postoperatively)	32	166(10.70)	g2(placebo) (rotator cuff repair and placebo treatment)	34	152(11.60)	MeanDif	14(8.62,19.38)	**Treatment 1 Significant (P-value<.05)**

Table 276: Pico 12 Part 2p: TENs vs. Control -(Pain)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	1 day	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	6.52(.)	g2(Placebo) (Placebo TEN's)	16	7.75(.)	Author Reported	NA	Not Significant (P-value>.05)
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	1 week	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	3.61(2.10)	g2(Placebo) (Placebo TEN's)	16	5.75(1.20)	MeanDif	-2.14(-3.21,-1.07)	**Treatment 1 Significant (P-value<.05)**
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	1.5 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	5.95(.)	g2(Placebo) (Placebo TEN's)	16	7(.)	Author Reported	NA	Not Significant (P-value>.05)
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	12 hours	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	3.09(.)	g2(Placebo) (Placebo TEN's)	16	5.81(.)	Author Reported	NA	TENs Significant (P-value<.05)
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	2 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	5.31(.)	g2(Placebo) (Placebo TEN's)	16	6(.)	Author Reported	NA	Not Significant (P-value>.05)
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	3 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	4.36(.)	g2(Placebo) (Placebo TEN's)	16	5(.)	Author Reported	NA	Not Significant (P-value>.05)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	4 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	4(.)	g2(Placebo) (Placebo TEN's)	16	4.8(.)	Author Reported	NA	Not Significant (P-value>.05)
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	5 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	3.47(.)	g2(Placebo) (Placebo TEN's)	16	4.69(.)	Author Reported	NA	Not Significant (P-value>.05)
Mahure, S. A., 2017	Moderate Quality	PROs (specify)(Visual analog scale (VAS) pain scores)	6 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	3.06(.)	g2(Placebo) (Placebo TEN's)	16	3.81(.)	Author Reported	NA	Not Significant (P-value>.05)

Table 277: Pico 12 Part 2p: TENs vs. Control -(Post-op pain control)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Mahure, S. A., 2017	Moderate Quality	Medication use (length of time)(Percocet use)	1 week	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	25.19(10.00)	g2(Placebo) (Placebo TEN's)	16	33.82(14.30)	MeanDif	-8.63(-16.84,-0.42)	**Treatment 1 Significant (P-value<.05)**
Mahure, S. A., 2017	Moderate Quality	Medication use (length of time)(Percocet use)	2 Days	G1(TENs) (transcutaneous electrical nerve stimulation (TENS))	21	12.8(4.70)	g2(Placebo) (Placebo TEN's)	16	17.2(6.30)	MeanDif	-4.4(-8.08,-0.72)	**Treatment 1 Significant (P-value<.05)**

Table 2783: Pico 12 Part 2q: Regional Block vs. Other -(Quality of Life)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M., 2016	High Quality	PROs (specify) EQ-5D	2 years	G1 (Injection)	49	0.94 (0.07)	G2 (PRP)	54	0.96 (0.08)			Not Significant (P-value>.05)
Flury, M., 2016	High Quality	PROs (specify) General Health NRS	2 years	G1 (Injection)	49	8.3 (1.4)	G2 (PRP)	54	8.4 (1.8)			Not Significant (P-value>.05)

Table 2793: Pico 12 Part 2q: Regional Block vs. Other -(Composite)

Reference Title	Quality	Outcome Details	Duration	Treatment 1 (Details)	Group 1 N	Mean1/P1 (SD1)	Treatment 2 (Details)	Group 2 N	Mean2/P2 (SD2)	effect measure	Result (95% CI)	Favored Treatment
Flury, M., 2016	High Quality	PROs (specify) Constant score	2 years	G1 (Injection)	49	82.1 (9.5)	G2 (PRP)	54	82.7 (8)			Not Significant (P-value>.05)
Flury, M., 2016	High Quality	PROs (specify) OSS	2 years	G1 (Injection)	49	44.9 (4.9)	G2 (PRP)	54	46 (3.2)			Not Significant (P-value>.05)
Flury, M., 2016	High Quality	PROs (specify) ASES	2 years	G1 (Injection)	49	92.5 (12.8)	G2 (PRP)	54	92 (12)			Not Significant (P-value>.05)
Flury, M., 2016	High Quality	PROs (specify) Quick Dash	2 years	G1 (Injection)	49	8.8 (11.6)	G2 (PRP)	54	6.7 (8.7)			Not Significant (P-value>.05)