AAOS
American Academy of Orthopaedic Surgeons

Review Period Report

Evidence-Based Clinical Practice Guideline on the Management of Anterior Cruciate Ligament Injuries

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Overview of the Review Period

The reviews and comments related to this clinical practice guideline are reprinted in this document and posted on the AAOS website. All reviewers are required to disclose their conflict of interests.

Review Process:

AAOS contacted 9 organizations with content expertise to review a draft of the clinical practice guideline during the three-week peer review period in February 2022.

Additionally, the draft was also provided to members of the AAOS Board of Directors (BOD), members of the Research and Quality Council (RQC), members of the Board of Councilors (BOC), members of the Board of Specialty Societies (BOS) and members of the Committee on Evidence-Based Quality and Value (EBQV) for review and comment.

- Nine (9) individuals provided comments via the electronic structured peer review form. No reviewers asked to remain anonymous.
- All nine reviews were on behalf of a society and/or committee.
- The work group considered all comments and made some modifications when they were consistent with the evidence.

Reviewer Key

Each reviewer was assigned a number (see below). All responses in this document are listed by the assigned peer reviewer's number.

Table 1. Reviewer Key

Reviewer Number	Name of Reviewer	Society/ Committee Being Represented
1	Ryan Roach, MD	American Academy of Orthopaedic Surgeons
2	Flutura Hasa, MD	3M Company
3	Brant Sachleben, MD	Pediatric Orthopaedic Society of North America
4	Armando Vidal, MD, FAAOS	American Academy of Orthopaedic Surgeons, Board of Specialty Societies
5	Matthew Abdel, MD, FAAOS	American Academy of Orthopaedic Surgeons, Board of Directors
6	Sandra Shultz, PhD, ATC, CSCS	National Athletic Trainers' Association
7	Jenna Bryant, MD	American College of Emergency Physicians
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	American College of Sports Medicine
9	Ethan Lichtblau, MD, FAAOS	American Academy of Orthopaedic Surgeons, Key Informants Panel

Reviewer Demographics

Table 2: Reviewer Demographics

Reviewer Number	Name of Reviewer	Primary Specialty	Work Setting
1	Ryan Roach, MD	Sports Medicine	Academic Practice
2	Flutura Hasa, MD	Other	Other
3	Brant Sachleben, MD	Pediatric Orthopaedics	Academic Practice
4	Armando Vidal, MD, FAAOS	Sports Medicine	Academic Practice
5	Matthew Abdel, MD, FAAOS	Adult Hip	Academic Practice
6	Sandra Shultz, PhD, ATC, CSCS	Other	Other
7	Jenna Bryant, MD	Other	Academic Practice
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Sports Medicine	Academic Practice
9	Ethan Lichtblau, MD, FAAOS	Sports Medicine	Private Group or Practice

Reviewers' Disclosure Information

All reviewers are required to disclose any possible conflicts that would bias their review via a series of 10 questions (see Table 3). For any positive responses to the questions (i.e., "Yes"), the reviewer was asked to provide details on their possible conflict.

Table 3. Disclosure Question Key

Disclosure Question	Disclosure Question Details
A	A) Do you or a member of your immediate family receive royalties for any pharmaceutical, biomaterial or orthopaedic product or device?
B	B) Within the past twelve months, have you or a member of your immediate family served on the speakers bureau or have you been paid an honorarium to present by any pharmaceutical, biomaterial or orthopaedic product or device company?
C	C) Are you or a member of your immediate family a PAID EMPLOYEE for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
D	D) Are you or a member of your immediate family a PAID CONSULTANT for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
E	E) Are you or a member of your immediate family an UNPAID CONSULTANT for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
F	F) Do you or a member of your immediate family own stock or stock options in any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier (excluding mutual funds)
G	G) Do you or a member of your immediate family receive research or institutional support as a principal investigator from any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
H	H) Do you or a member of your immediate family receive any other financial or material support from any pharmaceutical, biomaterial or orthopaedic device and equipment company or supplier?
I	I) Do you or a member of your immediate family receive any royalties, financial or material support from any medical and/or orthopaedic publishers?
J	J) Do you or a member of your immediate family serve on the editorial or governing board of any medical and/or orthopaedic publication?

Table 4. Reviewer's Disclosure Information

Reviewer Number	Name of Reviewer	Disclosure Available via AAOS Disclosure System	A	B	C	D	E	F	G	H	I	J
1	Ryan Roach, MD	Yes										
2	Flutura Hasa, MD	No	No	No	No	No	No	Yes	No	No	No	No
3	Brant Sachleben, MD	Yes										
4	Armando Vidal, MD, FAAOS	Yes										
5	Matthew Abdel, MD, FAAOS	Yes										
6	Sandra Shultz, PhD, ATC, CSCS	No	No	No	No	No	No	No	No	No	No	No
7	Jenna Bryant, MD	No	No	No	No	No	No	No	No	No	No	No
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Yes										
9	Ethan Lichtblau, MD, FAAOS	Yes										

Reviewer Responses to Structured Review Form Questions

All reviewers are asked 16 structured review questions which have been adapted from the Appraisal of Guidelines for Research and Evaluation (AGREE) II Criteria*. Their responses to these questions are listed on the next few pages.

Table 5. Reviewer Responses to Structured Review Questions 1-4

Reviewer Number	Name of Reviewer	1. The overall objective(s) of the guideline is (are) specifically described.	2. The health question(s) covered by the guideline is (are) specifically described.	3. The guideline's target audience is clearly described.	4. There is an explicit link between the recommendations and the supporting evidence.
1	Ryan Roach, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
2	Flutura Hasa, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	Brant Sachleben, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Armando Vidal, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Agree
5	Matthew Abdel, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Sandra Shultz, PhD, ATC, CSCS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Jenna Bryant, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Agree	Agree	Agree	Strongly Agree
9	Ethan Lichtblau, MD, FAAOS	Agree	Agree	Agree	Agree

Table 6. Reviewer Responses to Structured Review Questions 5-8

Reviewer Number	Name of Reviewer	5. Given the nature of the topic and the data, all clinically important outcomes are considered.	6. The patients to whom this guideline is meant to apply are specifically described.	7. The criteria used to select articles for inclusion are appropriate.	8. The reasons why some studies were excluded are clearly described.
1	Ryan Roach, MD	Agree	Agree	Strongly Agree	Neutral
2	Flutura Hasa, MD	Strongly Agree	Agree	Agree	Agree
3	Brant Sachleben, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Armando Vidal, MD, FAAOS	Agree	Strongly Agree	Strongly Agree	Strongly Agree
5	Matthew Abdel, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Sandra Shultz, PhD, ATC, CSCS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Jenna Bryant, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Disagree	Agree	Agree	Agree
9	Ethan Lichtblau, MD, FAAOS	Agree	Agree	Agree	Agree

Table 7. Reviewer Responses to Structured Review Questions 9-12

Reviewer Number	Name of Reviewer	9. All important studies that met the article inclusion criteria are included	10. The validity of the studies is appropriately appraised.	11. The methods are described in such a way as to be reproducible	12. The statistical methods are appropriate to the material and the objectives of this guideline
1	Ryan Roach, MD	Agree	Agree	Agree	Agree
2	Flutura Hasa, MD	Agree	Strongly Agree	Agree	Agree
3	Brant Sachleben, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Armando Vidal, MD, FAAOS	Strongly Agree	Neutral	Strongly Agree	Strongly Agree
5	Matthew Abdel, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Sandra Shultz, PhD, ATC, CSCS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Jenna Bryant, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Agree	Agree	Agree	Agree
9	Ethan Lichtblau, MD, FAAOS	Agree	Agree	Agree	Agree

Table 8. Reviewer Responses to Structured Review Questions 13-16

Reviewer Number	Name of Reviewer	13. Important parameters (e.g., setting, study population, study design) that could affect study results are systematically addressed.	14. Health benefits, side effects, and risks are adequately addressed.	15. The writing style is appropriate for health care professionals.	16. The grades assigned to each recommendation are appropriate.
1	Ryan Roach, MD	Agree	Strongly Agree	Strongly Agree	Neutral
2	Flutura Hasa, MD	Agree	Agree	Strongly Agree	Agree
3	Brant Sachleben, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Armando Vidal, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Agree
5	Matthew Abdel, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Sandra Shultz, PhD, ATC, CSCS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
7	Jenna Bryant, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Neutral	Agree	Strongly Agree	Agree
9	Ethan Lichtblau, MD, FAAOS	Agree	Agree	Agree	Agree

Would you recommend these guidelines for use in clinical practice?

Reviewer Number	Name of Reviewer	Would you recommend these guidelines for use in clinical practice?
1	Ryan Roach, MD	Strongly Recommend
2	Flutura Hasa, MD	Strongly Recommend
3	Brant Sachleben, MD	Strongly Recommend
4	Armando Vidal, MD, FAAOS	Unsure
5	Matthew Abdel, MD, FAAOS	Strongly Recommend
6	Sandra Shultz, PhD, ATC, CSCS	Strongly Recommend
7	Jenna Bryant, MD	Strongly Recommend
8	Mark Hutchinson, MD, FAAOS, FACSM, FAANA	Recommend
9	Ethan Lichtblau, MD, FAAOS	Recommend

Reviewer Detailed Responses and Editorial Suggestions

Reviewer #1, Ryan Roach, M.D

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
1	Ryan Roach, M.D.	American Academy of Orthopaedic Surgeons	A. Overall comment: Need to be consistent in the way level/quality is discussed i.e., high level or high quality. B. Overall comment: Need to be consistent in the way numbers are written i.e., 3 versus three C. 391: Add increased "posterior" slope D. 694-697: date of injury E. 702-707: add dial testing at 30 and 90 F. 852-899: I think the rationale section is poorly written compared with other sections. This is a very important section and should be more clearly organized. G. In addition, the presented articles do not support a "strong recommendation" as defined above (as such, the strength expresses how possible it is that a recommendation will be overturned by future evidence. It is very difficult for future evidence to overturn a recommendation that is based on many high quality randomized controlled trials that show a large effect) with five high quality studies showing no difference. It seems that with this many studies showing no difference between the two options, there is significant opportunity for future studies to better define, and maybe change, this recommendation. H. In addition, age is an important variable in terms of outcomes in autograft and allograft ACLR and this should be discussed i.e., allograft may be considered in certain ages and activity levels. I. The "HQ" study by Nwachukwu is a Level 4 study. How is the considered high quality? J. Section should be added about allograft options. Not all allografts are created equal. High dose irradiated grafts are bad. Discuss research on types of allograft processing i.e., gamma irradiated, chemical and fresh frozen. K. Future studies should investigate newer allograft preparations against autograft and stratify by age and activity level. L. 929: Why is infection discussed here. If there is a difference in infection this should also be discussed in the rationale with discussion of associated studies.

			M. 1064: consider adding some biomechanical studies that have demonstrated over constraint N. Variation in the way articles are discussed ie “high LOE” versus “high quality”. This should be standardized through the text. O. 1075-1078 ALL reconstructions also require a graft in addition to time and implants P. 1093-1094 consider changing to “the impact of these procedures on high risk patients including adolescents and females. Q. 1249-1251 Sentence that begins “There is one high level…” reads awkwardly and should be revised. R. 1254-1255 “3 low level…” Need to be consistent in how numbers are written. S. 1307-1308 “Low-level” Low-quality is used above and needs to be consistent T. 1307-1308 “could not directly compare operative and non-operative treatment of MCL injuries” Then why are you referencing this study. Consider revising sentence or omitting reference. U. This is a great resource. I would add a section on allografts.

Workgroup Response to Reviewer #1

Dear Ryan Roach, M.D.,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Formatting has been modified for consistency.
B. Formatting has been modified for consistency.
C. Thank you for your feedback. The manuscript has been modified.
D. Thank you for your feedback. The manuscript has been modified.
E. Thank you for your feedback. The manuscript has been modified.
F. Thank you for your comment. The Introduction section has been modified.
G. Thank you for your feedback.
H. Thank you for the comment, an age consideration has been added to the recommendation and rationale.
I. Thank you for the comment; quality appraisals are done using standard validated tools to measure risk of bias.
J. Thank you for your comment.
K. Thank you for your comment.
L. Thank you for your feedback.
M. Thank you for your feedback.
N. Formatting has been modified for consistency.
O. Thank you for your comment.
P. Thank you for your comment.
Q. The guideline has been modified for clarity.
R. The formatting has been modified throughout the manuscript for consistency.
S. The formatting has been modified throughout the manuscript for consistency.
T. Thank you for your comment.
U. Thank you for your comment.

Reviewer #2, Flutura Hasa, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
2	Flutura Hasa, M.D.	3M Company	A. Thank you for the opportunity to review and comment on this draft guideline. Overall, the document is well-done, is based on current evidence and well evaluated. The statements are prospectively correct, and the scientific rationale and literature selected covers well the management of ACL injuries.

Workgroup Response to Reviewer #2

Dear Flutura Hasa, M.D.,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.

Reviewer #3, Brant Sachleben, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
3	Brant Sachleben, M.D.	Pediatric Orthopaedic Society of North America	A. The guideline appropriately answered questions based on available evidence. It did not attempt to overstep recommendations based on weaker studies. B. I do think a section on skeletally immature ACL reconstruction would have been appropriate to add.

Workgroup Response to Reviewer #3

Dear Brant Sachleben, M.D.,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.
B. Thank you for your comment.

Reviewer #4, Armando Vidal, M.D., FAAOS

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
4	Armando Vidal, M.D., FAAOS	American Academy of Orthopaedic Surgeons, Board of Specialty Societies	A. Overall, this CPG is well done and meticulously researched. I commend the committee for their hard work and attention to detail. B. I have questions / concerns regarding two of the recommendations. 1- Autograft versus Allograft It is clear that autograft is a superior graft choice in regard to failure rate and patient outcomes in young and active patients. This recommendation is accurate for that demographic. The data does not support this recommendation for older patients who have less engagement in ACL dependent activities. I feel that this recommendation although true for many of young athletes is not sufficiently thorough to be included in this CPG without further clarification and expansion C. 2-Post Operative Functional Knee Bracing It is unclear what topic the committee was trying to address with this recommendation - immediate post-operative bracing or functional return to sport bracing. The five articles used to justify this strong recommendation are a mix of both. Lindstrom, Mayr, Muller and Rissberg - All deal with postoperative bracing. Most sports medicine surgeons would not consider this functional bracing as this term is generally reserved for return to sport braces used at a much later time point. If the committee intended to offer an opinion on immediate postoperative bracing - the title of this recommendation needs to be amended to reflect current terminology and clinical use. Additionally, the reviewers need to consider that these papers include approximately 60 patients each - which is clearly underpowered to assess a low risk phenomenon such as graft re-tear. This jeopardizes the conclusions and significantly flaws this recommendation. The McDewitt paper truly deals with functional knee braces used for return to sport. These were used for 1 year in 100 patients. Although a well performed study - it is clearly underpowered and therefore conclusions cannot convincingly be drawn from this paper. In conclusion, I feel that this recommendation needs to be revised. The reviewers need to be clear on what form of ACL bracing they are referring to - immediate post

			braces (4 out of 5 papers) versus functional return to sport braces (1/5). Additionally, the strength of evidence and strength of the recommendation needs to be reconsidered given that the basis for this recommendation is on very small cohorts that are underpowered to answer this clinical question.

Workgroup Response to Reviewer #4

Dear Armando Vidal, M.D., FAAOS,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.
B. Thank you for your comment, an age consideration has been added to the recommendation and rationale.
C. Thank you for your comment. The recommendation has been reviewed and revised.

Reviewer #5, Matthew Abdel, M.D., FAAOS

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
5	Matthew Abdel, M.D., FAAOS	American Academy of Orthopaedic Surgeons, Board of Directors	A. No comment.

Workgroup Response to Reviewer #5

Dear Matthew Abdel, M.D., FAAOS,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for reviewing the guideline manuscript.

Reviewer #6, Sandra Shultz, PhD, ATC, CSCS

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
6	Sandra Shultz, PhD, ATC, CSCS	National Athletic Trainers' Association	A. I have participated in the process used to form these guidelines and know it to be rigorous. The recommendations are consistent with findings in the literature and up or down grading are well justified. A few minor comments in introduction (although I appreciate this is not the focus of the guidelines or extensively researched). B. Line 380 - A 2 to 8-fold increase is often reported but has not been consistently found to be that high - typically a 2-4 fold increase has been reported in females compared to similarly trained males. The reference used is a secondary reference and does not specifically site this number in text - of the references supporting greater incidence in females, 2 were secondary. The others largely support the 2-4 fold increase. See original studies by De Loes '00, Agel and Arendt '05, Arent and Dick '95, Gornitzky '16. C. Line 393 - I am not aware of compelling evidence that supports Q-Angle as a risk factor for ACL injuries in females. I would recommend citing where this was reported if that is the case. What is not mentioned here, is that two large multivariate (1 prospective, 1 case control) studies found that the combination of greater anterior knee laxity and greater BMI (along with family history in one of these studies) was among the strongest predictors of ACL injury in females. See Vacek AJSM 2016 and Uhorchak AJSM 2003. D. Line 394 - I am not sure this is accurate as written, and is not supported by the reference provided. There are 3 recent systematic reviews that all agree that a greater proportion of injuries have been identified in the follicular as compared to luteal phase. (Somerson 2019 who you cite, and Herzberg 2017 and Balanchandar 2017). If there is a question about the quality of evidence that supports these findings, I would suggest revising accordingly or otherwise clarifying the statement for accuracy. E. I would add that continued work is needed to identify the most important risk factors so these programs can be more targeted (thus leading to efficiency and reduced complexity). Additionally, we know that risk increases dramatically from 11-17 years of age in both sexes, and is when female risk surpasses male risk. This is a time of significant growth and development, and a better understanding of risk factor

			development in pediatric athletes will help us more accurately identify the earliest onset of risk and the best time to screen for and intervene on that risk.

Workgroup Response to Reviewer #6

Dear Sandra Shultz, PhD, ATC, CSCS,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for the positive feedback.
B. Thank you for your comment. We've incorporated your feedback into the section.
C. Thank you for your comment. We've incorporated your feedback into the section.
D. Thank you for your comment. We've incorporated your feedback into the section.
E. Thank you for your comment. Please see the Future Research section which addresses optimization of prevention programs.

Reviewer #7, Jenna Bryant, M.D.

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
7	Jenna Bryant, M.D.	American College of Emergency Physicians	A. Line 691 typographical error: date in citation is (...20014), should be 2004 (Pookarnjanamorakot 2004) B. Line 999 grammatical error: insert “of” between rate / complete ACL- specific agility exercises significantly reduced the rate ^of^ complete ACL tears 5.32 (1.11 to 15.58). There is”

Workgroup Response to Reviewer #7

Dear Jenna Bryant, M.D.,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your feedback. The guideline manuscript has been modified.
B. Thank you for your feedback. The guideline manuscript has been modified.

Reviewer #8, Mark Hutchinson, M.D., FAAOS, FACSM, FAANA

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
8	Mark Hutchinson, M.D., FAAOS, FACSM, FAANA	American College of Sports Medicine	A. Regarding number 5: ACL surgery has been very popular in the literature, and it is not possible to answer all questions. This consensus building targeted a limited number of focused questions. B. The overall guidelines respond to several important questions. Since it is NOT comprehensive, the paper should acknowledge is limitations in this regard. C. Regarding surgical timing, the way the initial line is written appears to promote surgery for all patients that meet indications and that all procedures be performed before the 3 month time frame. This miss-represents best practice in the field. I would suggest that the first line read "When treatment is indicated "and elected by the patient" that ...I would further suggest for this guideline that we be very cautious about including the specific date of 3 months. The consensus is clear that earlier surgery is beneficial for the reasons outlined...once motion has been achieved, swelling is resolved, and the knee is physiologically in a better state to take on the challenge of additional surgical trauma. The exact timeline of 3 months is NOT supported overwhelmingly by the literature.....why not 10 weeks or 16 weeks. Only one study references 3 months while others talk about 6 months. Best recommendation is to avoid the exact 3 month reference and simply conclude the guideline that earlier and (when the knee is physiologically in baseline state with motion and swelling that surgery should be considered. D. Regarding the section on autograft versus allograft; This section once again tends to over-reach, It is clear from the literature that autograft is preferred over allograft IN YOUNGER ATHLETES. I am not convinced that the same is true for older patients and master athletes. Thus the existing statement would appear to preclude allograft in those groups which is not the current standard and I assume not the intent of this working group E. Regarding repair vs reconstruction: This practice guideline once again comes off as absolute recon versus not repair. I was surprised by the absolute nature of this conclusion despite the papers reference to Martha Murray's work and others which demonstrate some protentional of repair with wraps and augmentation especially in younger groups. While I am NOT a repair guy, I believe the final practice guidelines

			needs to take this into account. Thereby saying that for most patients reconstruction and not repair remains the best practice; however in select patients such as avulsion injuries and young patients that meet the Murray criteria that repair still may be considered F. My last suggestion reflects a gap in your guidelines which would be most impactful but does not appear to have been considered. Regarding return to play, in addition to regaining full range of motion, optimizing motor strength and core balance, and allowing appropriate time for graft maturation time, physicians should include a psychological/confidence readiness assessment prior to return to play.

Workgroup Response to Reviewer #8

Dear Mark Hutchinson, M.D., FAAOS, FACSM, FAANA,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. Thank you for your comment.
B. Thank you for your comment. Please see the section on our methodology as it discusses that the PICO questions are drafted a priori.
C. Thank you for your comment. The work group considered this as a point of contention and concluded that including 3 months is appropriate.
D. Thank you for your comment.
E. Thank you for your comment.
F. Thank you for your comment. This factor was presented, however, there was insufficient evidence and could not be included in the recommendation.

Reviewer #9, Ethan Lichtblau, M.D., FAAOS

Reviewer Number	Reviewer Name	Society or committee you are representing	Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline: The response(s) below also includes all editing suggestions received from the Additional Comments section of the structured review form.
9	Ethan Lichtblau, M.D., FAAOS	American Academy of Orthopaedic Surgeons, Key Informants Panel	A. No comment.

Workgroup Response to Reviewer #9

Dear Ethan Lichtblau, M.D., FAAOS,

Thank you for your expert review of the Management of Anterior Cruciate Ligament Injuries Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. No comment.

Appendix A – Structured Review Form

Review Questions (REQUIRED)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. The overall objective(s) of the guideline is (are) specifically described.	○	○	○	○	○
2. The health question(s) covered by the guideline is (are) specifically described.	○	○	○	○	○
3. The guideline's target audience is clearly described.	○	○	○	○	○
4. There is an explicit link between the recommendations and the supporting evidence.	○	○	○	○	○
5. Given the nature of the topic and the data, all clinically important outcomes are considered.	○	○	○	○	○
6. The patients to whom this guideline is meant to apply are specifically described.	○	○	○	○	○
7. The criteria used to select articles for inclusion are appropriate.	○	○	○	○	○
8. The reasons why some studies were excluded are clearly described.	○	○	○	○	○
9. All important studies that met the article inclusion criteria are included.	○	○	○	○	○
10. The validity of the studies is appropriately appraised.	○	○	○	○	○
11. The methods are described in such a way as to be reproducible.	○	○	○	○	○
12. The statistical methods are appropriate to the material and the objectives of this guideline.	○	○	○	○	○
13. Important parameters (e.g., setting, study population, study design) that could affect study results are systematically addressed.	○	○	○	○	○
14. Health benefits, side effects, and risks are adequately addressed.	○	○	○	○	○
15. The writing style is appropriate for health care professionals.	○	○	○	○	○
16. The grades assigned to each recommendation are appropriate.	○	○	○	○	○

Please provide a brief explanation of both your positive and negative answers in the preceding section. If applicable, please specify the draft page and line numbers in your comments. Please feel free to also comment on the overall structure and content of the Guideline:

Would you recommend these guidelines for use in clinical practice? (REQUIRED)

- ○ Strongly Recommend
- ○ Recommend
- ○ Would Not Recommend
- ○ Unsure

Additional Comments regarding this clinical practice guideline?