AAOS
American Academy of Orthopaedic Surgeons

Review Report

Evidence-Based Clinical Practice Guideline on the Management of Acute Isolated Meniscal Pathology

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The Management of Acute Isolated Meniscal Pathology Clinical Practice Guideline

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 10 organizations with content expertise to review a draft of the clinical practice guideline during the three-week peer review period in January 2024.

Additionally, the draft was also provided to members of the AAOS Board of Directors (BOD), members of the Council on Research and Quality (CORQ), 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.

- Fifteen (15) individuals provided comments via the electronic structured peer review form. No reviewers asked to remain anonymous.
- All fifteen 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	Jorge Chahla, MD, PhD	Smith & Nephew
2	Patrick Smith, MD	American Academy of Orthopaedic Surgeons
3	John Schlechter, DO, FAAOS	Pediatric Orthopaedic Society of North America
4	Thomas Trojian, MD, MMB, FAMSSM	American Medical Society for Sports Medicine
5	Doug Evans, MD, FAAOS	American Academy of Orthopaedic Surgeons, Board of Councilors
6	Nicholas Perry, MD	American Academy of Orthopaedic Surgeons, Board of Councilors
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	American Physical Therapy Association
8	Carla Bridges, MD	J. Robert Gladden Orthopaedic Society
9	Michael Khadavi, MD	American Academy of Orthopaedic Surgeons
10	Jeanine Kolman, PT, DPT	American Academy of Orthopaedic Surgeons
11	Robert LaPrade, MD, PhD, FAAOS	American Academy of Orthopaedic Surgeons
12	Alex Habegger, PT, DPT, PhD	American Academy of Orthopaedic Surgeons
13	John Cherf, MD, MPH, MBA, FAAOS	American Academy of Orthopaedic Surgeons, Board of Councilors
14	Aaron Krych, MD, FAAOS	American Academy of Orthopaedic Surgeons
15	Stephanie Wong, MD, FAAOS	American Orthopaedic Society for Sports Medicine

Reviewer Demographics

Table 2: Reviewer Demographics

Reviewer Number	Name of Reviewer	Primary Specialty	Work Setting
1	Jorge Chahla, MD, PhD	Sports Medicine	Private Group or Practice
2	Patrick Smith, MD	Sports Medicine	Private Group or Practice
3	John Schlechter, DO, FAAOS	Pediatric Orthopaedics	Private Group or Practice
4	Thomas Trojian, MD, MMB, FAMSSM	Sports Medicine	Academic Practice
5	Doug Evans, MD, FAAOS	Sports Medicine	Academic Practice
6	Nicholas Perry, MD	Sports Medicine	Military
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	Other	Other
8	Carla Bridges, MD	Pediatric Orthopaedics	Academic Practice
9	Michael Khadavi, MD	Sports Medicine	Private Group or Practice
10	Jeanine Kolman, PT, DPT	Other	Other
11	Robert LaPrade, MD, PhD, FAAOS	Sports Medicine	Private Group or Practice
12	Alex Habegger, PT, DPT, PhD	Rehab/Prosthetics and Orthotics	Academic Practice
13	John Cherf, MD, MPH, MBA, FAAOS	Sports Medicine	Private Group or Practice
14	Aaron Krych, MD, FAAOS	Sports Medicine	Academic Practice
15	Stephanie Wong, MD, FAAOS	Sports Medicine	Academic 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	Jorge Chahla, MD, PhD	Yes										
2	Patrick Smith, MD	Yes										
3	John Schlechter, DO, FAAOS	Yes										
4	Thomas Trojian, MD, MMB, FAMSSM	No	No	Yes	No	No	No	Yes	No	No	No	Yes
5	Doug Evans, MD, FAAOS	Yes										
6	Nicholas Perry, MD	Yes										
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	No	No	No	No	No	No	No	No	No	Yes	No
8	Carla Bridges, MD	Yes										
9	Michael Khadavi, MD	No	Yes	Yes	No	Yes	No	No	No	No	No	No
10	Jeanine Kolman, PT, DPT	No	No	No	No	No	No	No	No	No	No	No
11	Robert LaPrade, MD, PhD, FAAOS	Yes										
12	Alex Habegger, PT, DPT, PhD	No	No	No	No	No	No	No	No	No	No	No
13	John Cherf, MD, MPH, MBA, FAAOS	Yes										
14	Aaron Krych, MD, FAAOS	Yes										
15	Stephanie Wong, 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	Jorge Chahla, MD, PhD	Strongly Agree	Agree	Strongly Agree	Neutral
2	Patrick Smith, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	John Schlechter, DO, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Thomas Trojian, MD, MMB, FAMSSM	Strongly Agree	Agree	Strongly Agree	Agree
5	Doug Evans, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Nicholas Perry, MD	Agree	Agree	Agree	Agree
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Carla Bridges, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
9	Michael Khadavi, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Jeanine Kolman, PT, DPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
11	Robert LaPrade, MD, PhD, FAAOS	Strongly Agree	Strongly Agree	Agree	Agree
12	Alex Habegger, PT, DPT, PhD	Strongly Agree	Strongly Agree	Strongly Agree	Agree
13	John Cherf, MD, MPH, MBA, FAAOS	Agree	Strongly Agree	Agree	Strongly Agree
14	Aaron Krych, MD, FAAOS	Agree	Agree	Agree	Agree
15	Stephanie Wong, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly 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	Jorge Chahla, MD, PhD	Neutral	Agree	Disagree	Neutral
2	Patrick Smith, MD	Strongly Agree	Strongly Agree	Strongly Agree	Agree
3	John Schlechter, DO, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Thomas Trojian, MD, MMB, FAMSSM	Disagree	Agree	Agree	Disagree
5	Doug Evans, MD, FAAOS	Agree	Strongly Agree	Strongly Agree	Agree
6	Nicholas Perry, MD	Agree	Agree	Agree	Agree
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Carla Bridges, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
9	Michael Khadavi, MD	Neutral	Strongly Agree	Strongly Agree	Strongly Agree
10	Jeanine Kolman, PT, DPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
11	Robert LaPrade, MD, PhD, FAAOS	Agree	Strongly Agree	Agree	Agree
12	Alex Habegger, PT, DPT, PhD	Agree	Strongly Agree	Strongly Agree	Neutral
13	John Cherf, MD, MPH, MBA, FAAOS	Agree	Strongly Agree	Strongly Agree	Strongly Agree
14	Aaron Krych, MD, FAAOS	Agree	Agree	Agree	Agree
15	Stephanie Wong, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly 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	Jorge Chahla, MD, PhD	Disagree	Agree	Neutral	Strongly Agree
2	Patrick Smith, MD	Strongly Agree	Strongly Agree	Strongly Agree	Neutral
3	John Schlechter, DO, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Thomas Trojian, MD, MMB, FAMSSM	Disagree	Agree	Strongly Agree	Agree
5	Doug Evans, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
6	Nicholas Perry, MD	Agree	Agree	Agree	Agree
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Carla Bridges, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
9	Michael Khadavi, MD	Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Jeanine Kolman, PT, DPT	Neutral	Neutral	Agree	Agree
11	Robert LaPrade, MD, PhD, FAAOS	Neutral	Agree	Agree	Strongly Agree
12	Alex Habegger, PT, DPT, PhD	Agree	Strongly Agree	Strongly Agree	Strongly Agree
13	John Cherf, MD, MPH, MBA, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
14	Aaron Krych, MD, FAAOS	Agree	Agree	Agree	Agree
15	Stephanie Wong, MD, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly 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	Jorge Chahla, MD, PhD	Neutral	Neutral	Strongly Agree	Agree
2	Patrick Smith, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
3	John Schlechter, DO, FAAOS	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
4	Thomas Trojian, MD, MMB, FAMSSM	Agree	Neutral	Strongly Agree	Agree
5	Doug Evans, MD, FAAOS	Strongly Agree	Neutral	Agree	Strongly Agree
6	Nicholas Perry, MD	Agree	Agree	Agree	Agree
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
8	Carla Bridges, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
9	Michael Khadavi, MD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
10	Jeanine Kolman, PT, DPT	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
11	Robert LaPrade, MD, PhD, FAAOS	Agree	Agree	Agree	Neutral
12	Alex Habegger, PT, DPT, PhD	Strongly Agree	Strongly Agree	Strongly Agree	Strongly Agree
13	John Cherf, MD, MPH, MBA, FAAOS	Agree	Agree	Agree	Agree
14	Aaron Krych, MD, FAAOS	Neutral	Neutral	Agree	Agree
15	Stephanie Wong, MD, FAAOS	Strongly Agree	Agree	Agree	Strongly 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	Jorge Chahla, MD, PhD	Recommend
2	Patrick Smith, MD	Strongly Recommend
3	John Schlechter, DO, FAAOS	Strongly Recommend
4	Thomas Trojian, MD, MMB, FAMSSM	Recommend
5	Doug Evans, MD, FAAOS	Recommend
6	Nicholas Perry, MD	Recommend
7	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	Strongly Recommend
8	Carla Bridges, MD	Recommend
9	Michael Khadavi, MD	Strongly Recommend
10	Jeanine Kolman, PT, DPT	Strongly Recommend
11	Robert LaPrade, MD, PhD, FAAOS	Recommend
12	Alex Habegger, PT, DPT, PhD	Strongly Recommend
13	John Cherf, MD, MPH, MBA, FAAOS	Strongly Recommend
14	Aaron Krych, MD, FAAOS	Recommend
15	Stephanie Wong, MD, FAAOS	Strongly Recommend

Reviewer Detailed Responses and Editorial Suggestions

Reviewer #1, Jorge Chahla, MD, PhD

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	Jorge Chahla, MD, PhD	Smith & Nephew	A. Pg# 1, Lines 3 Title Change to-Acute Isolated Meniscal Pathology Page # 1, Line 3: Title Revision Suggestion: Acute Isolated Meniscal Pathology Rationale: The current draft of the guidelines excludes a large proportion of patients with meniscal pathology that have concomitant injuries. Based on the most recent market analysis data (1), 1.2 million patients in the United States suffer from meniscal pathology out of which only 20% of meniscal tears get addressed. United states projections for 2024, estimates that 380,260K patients will undergo anterior cruciate ligament reconstruction (ACLR) out of which, 48-65% (5) of patients suffered from concomitant injuries (meniscal tear). Focusing the guidelines on isolated meniscal pathology and not including concomitant injury such as ACLR excludes 183-247K patient lives. Concomitant ACLR has a 84-88% success rate at 10 years (2). The second important point to note is the exclusion of root tears from the current guideline. Root tear is an acute meniscal pathology and accounts for 10-21% of all meniscal tear patient population (3,4). Based on the most recent market analysis data (1), 1.2 million patients suffer from meniscal pathology out of which only 20% of meniscal tears get addressed. Based on the same premise, 24-50K patient lives are excluded by the omission of root tear. We strongly suggest you include concomitant injuries (example: ACLR) and root tears in this guideline. If the scope of the guidelines to include concomitant and root tears is not feasible, we strongly suggest you revise the title to accurately reflect the content, “Acute Isolated Meniscal Pathology”. 1. 2024 SmartTRAK US Meniscal Repair Fixation market report 2. https://pubmed.ncbi.nlm.nih.gov/37341691/ 3. https://pubmed.ncbi.nlm.nih.gov/29517925/ 4. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9194705/ 5. Meniscal Root Tears: Current Concepts Review - PMC (nih.gov) B. Pg# 10, Lines 320,321 Patient population Clarify scope. Is root tear out of scope?

			C. Page # 10, Line 320, 321: Patient population Suggestion: Reconsider the scope of the guidelines to include Root tears and concomitant injury (especially ACLR). Clearly indicate if root tear is out of scope. See comments on page 1 line 3 for additional detail. Rationale: This decision excludes a large proportion of patients with an acute meniscus pathology (e.g. concomitant ligament tear) and consequently evidence on the management of the pathology. As stated previously, the guidelines exclude ~ 300-400K patient lives if the scope is remains to be narrow D. Page# 11, Lines 403-406 & page 12, lines 416-418: Potential benefits, Harm & Contraindications Revise section to keep goals together Suggestion: Revise section to keep goals together to include the long-term health of the joint in that goal (this is mentioned on page 12, lines 416-418) E. Pg #22, Lines 836-838 Cost Effectiveness/Resource Utilization Include evidence on cost effectiveness of meniscal repair in the medium to long term Suggestion: Include evidence on cost effectiveness of meniscal repair in the medium to long term (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10435400/) Rationale: provide a complete understanding on cost-effectiveness from injury to recovery and long term impact F. Pg #24, Line 877-879 Benefits/Harms of Implementation Consider emphasizing on patient education to facilitate rehab compliance, where appropriate. Suggestion: Consider emphasizing on patient education to facilitate rehab compliance G. Page #26, Line 897: Meniscus repair can improve patient outcomes compared to partial meniscectomy in select patients. Suggestion: Define guidance on "select" patients (i.e. who is suitable) based on age, BMI, tear type H. Page #26: Rationale: Line 905: Suggestion: To further educate your readers, update to include additional evidence to inform the rationale. See list of articles which are missed, appear to be eligible and not identified or considered in this review. • Enweze LC, Varshneya K, Sherman SL, Safran MR, Abrams GD. Risk of Subsequent Knee Arthroplasty After Sports Medicine Procedures. J Am Acad Orthop Surg Glob Res Rev. 2020;4(8):e2000125. • Kramer DE, Kalish LA, Martin DJ, et al. Outcomes After the Operative Treatment of Bucket-Handle Meniscal Tears in Children and Adolescents. Orthop J Sports Med. 2019;7(1). • Lee WQ, Gan JZW, Lie DTT. Save the meniscus – Clinical outcomes of meniscectomy versus meniscal repair. Journal of Orthopaedic Surgery. 2019;27(2). Note - Was considered an excluded because of concomitant ACLR but I believe the paper reports on a subset of isolated repair vs meniscectomy too.

			• Nepple JJ, Wright RW, Matava MJ, Brophy RH. Full-thickness knee articular cartilage defects in national football league combine athletes undergoing magnetic resonance imaging: Prevalence, location, and association with previous surgery. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2012;28(6):798-806. • Patel NM, Mundluru SN, Beck NA, Ganley TJ. Which Factors Increase the Risk of Reoperation After Meniscal Surgery in Children? Orthop J Sports Med. 2019;7(5). • Smith MV, Nepple JJ, Wright RW, Matava MJ, Brophy RH. Knee Osteoarthritis Is Associated with Previous Meniscus and Anterior Cruciate Ligament Surgery Among Elite College American Football Athletes. Sports Health. 2017;9(3):247-251 I. Page #26: Rationale, Line 905: Suggestion: Reconsider rationale text Rationale: Highlighting the results from Gan et al on longitudinal tears treated with partial meniscectomy performing better in short term compared to repair seems to not be reflective of the wider evidence which shows better outcomes for meniscus repair. Furthermore, the evidence consistently shows greater patient benefits at longer follow-up (e.g. Stein et al) and this doesn't come across clearly in the text. J. Page 26: Rationale, Line 922-924: Suggestion: Update wording of rationale and cost-effective sections. In addition, confirm and update the complications time frame in the rationale (example: within 30 d of operation). Update what specific complications were higher (infection and DVT) Rationale: The point of meniscectomy being cost-effective vs meniscal repair is at odds with the published health economic analysis https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10435400/ showing meniscus repair to consistently be cost-effective vs meniscectomy. K. Line 911-912: Meniscus repair can improve patient outcomes compared to partial meniscectomy in select patients .Cost-effectiveness. Rationale (ethics) Define guidance on "select" patients (i.e. who is suitable) based on age, BMI, tear type. Reconsider adding additional evidence, rewording text. L. Page #26: Rationale, Line 911-912: Expand rationale. In rationale on page #22, line 822 detail was given on the ethics of performing comparative research. This is also the case here and should be highlighted. The known benefits of meniscal repair now make it unethical to perform a RCT on meniscal repair vs. meniscectomy. M. Page #33, lines 1093-1094: Surgical Repair Technique guideline statement Suggestion: Reconsider the guideline statement and text. This is not reflective of available evidence and is subject to misinterpretation. Rationale: A recent systematic review considering studies providing a with-in study comparison of all-inside and inside-out repair showed no significant difference in the

			failure rate (https://pubmed.ncbi.nlm.nih.gov/33482623/) which is also in line with the findings from the other identified reviews in the guideline (these reviews considered single arm studies). Therefore, the statement that inside out reduces risk of repair failure is at odds with the body of evidence. The rationale highlights the research by Borque and colleagues; however, this finding does not appear to be consistent with the body of evidence identified in the comment above and maybe related to the specific population studies (elite athletes) something the authors state in their discussion. This should be removed, or the specific population identified as highlighting this finding without placing it in the full body of similar research and highlighting the specific population is not best practice in evidence-based decision making. N. Page #33: Surgical Repair Technique guideline statement Line 1102: Suggestion: Please remove the information from this study mentioned in the rationale (Papachristou et al). It appears to not be represented correctly. As per the guidelines document (line 1102) it mentions that the paper compares between inside out and all inside. On reading the paper it appears the focus is on comparing open vs. arthroscopic, cannot see any mention of an all-inside technique. Rationale: It is not very clear on the description of the open meniscal repair technique, yet their aim was to compare outcomes after open versus arthroscopic meniscal repairs. Open approach: "Fifteen patients were treated with an open procedure following diagnostic arthroscopy…during our early experience with open procedure, which was performed following diagnostic arthroscopy, only lesions situated in the anterior and middle third, less than 1.5 cm in length were repaired. Later, with the arthroscopic procedure, lesions of the whole body of the meniscus, between 1.5 and 2 cm in length were repaired." What we infer from this statement is that within the open repair technique group they performed some (no specification on how many) form of arthroscopic repairs/augmentation if the tears were on the body of the meniscus and were between 1.5 and 2 cm in length. However, results are not stratified by technique within the open repair cohort, so no distinction/conclusion are made for the open repair group. Arthroscopic approach: "Last 10 patients, the inside-out arthroscopic technique…" It is clear they used an inside-out technique for the arthroscopic cohort. Only 25 patients had a follow up greater than 3 months. Repairs were performed for white-white zone tears. O. Page #33: Line 1111 Benefits and Harms Please also highlight the risks of inside out technique. P. Needs rewording since it should be inside-out not outside in based on content of section. Consider the reduced risk of complications. Please clarify and specify- Which implants are the studies looking at? Can you add detail around the type of implants referred?

			Q. Page#33: Cost Effectiveness/Resource Utilization: Line 1118: Suggestion: Reword. Should be inside-out not outside in based on content of section. Consider the reduced risk of complications.

Workgroup Response to Reviewer #1

Dear Jorge Chahla, MD, PhD.,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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. The work group has voted to change the title of this guideline to Acute Isolated Meniscal Pathology and the manuscript has been modified. The scope, however, cannot be changed at this time but can be suggested for future CPGs.
B. Root tear is out of scope. Scope cannot be changed but can be suggested for future CPGs.
C. Root tear and concomitant injuries are out of scope. Scope cannot be changed but can be suggested for future CPGs.
D. Thank you for your comment, the draft has been modified.
E. Thank you for your comment, the draft has been modified.
F. Thank you for your comment, the draft has been modified.
G. Recommendation edited to update "select patients".
H. The articles were reviewed however did not meet inclusion criteria.
I. All evidence obtained from literature search much be represented in the rationale; Workgroup reviewed.
J. Thank you for your comment, the draft has been modified.
K. Thank you for your comment, the draft has been modified.
L. Thank you for your comment, the draft has been modified.
M. Thank you for your feedback. The recommendation and rationale have been modified.
N. Thank you for your comment, the draft has been modified.
O. Thank you for your comment, the draft has been modified.
P. Thank you for your comment, the draft has been modified.
Q. Thank you for your comment, the draft has been modified.

Reviewer #2, Patrick Smith, MD

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	Patrick Smith, MD	American Academy of Orthopaedic Surgeons	A. Overall, I am very supportive and comfortable with the guidelines as written. Thank you for allowing my input on this important project. B. I have reviewed the entire document very closely and the only change I would make is on line 1121-22 which states: "Both techniques are accepted treatment modalities for meniscal repair with the outside in repair being the gold standard. I believe this should state “inside out” repair is the gold standard.

Workgroup Response to Reviewer #2

Dear Patrick Smith, MD,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. Thank you for your comment, the draft has been modified.

Reviewer #3, John Schlechter, DO, 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.
3	John Schlechter, DO, FAAOS	Pediatric Orthopaedic Society of North America	A. Consider adding mention of duck walk test in conjunction with others for assessment of pathology Lines 695-796 Van der Post A, Noorduyn JCA, Scholtes VAB, Mutsaerts ELAR. What Is the Diagnostic Accuracy of the Duck Walk Test in Detecting Meniscal Tears? Clin Orthop Relat Res. 2017 Dec;475(12):2963-2969. doi: 10.1007/s11999-017-5475-6. Epub 2017 Aug 14. PMID: 28808951; PMCID: PMC5670062. Lines 876-881 well worded and prognostically useful Thank you for the invitation to review

Workgroup Response to Reviewer #3

Dear John Schlechter, DO, FAAOS,

Thank you for your expert review of the Management of Acute Isolated Meniscal Isolated Pathology 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 suggested article has been reviewed but did not meet inclusion criteria and therefore was excluded.

Reviewer #4, Thomas Trojian, MD, MMB, FAMSSM,

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	Thomas Trojian, MD, MMB, FAMSSM	American Academy of Orthopaedic Surgeons	A. The group's work on this CPG is extensive, and AMSSM appreciates the opportunity for feedback on Acute Meniscal Pathology CPG. We note this is a CPG intended to guide providers caring for acute not degenerative tears and no ligament injury. B. The AAOS Orthoinfo patient information on Meniscal Tears states, "Steroid injection. Your doctor may inject a corticosteroid medication into your knee joint to help eliminate pain and swelling. Other nonsurgical treatment. Biologics injections, such as platelet-rich plasma (PRP), are currently being studied and may show promise in the future for the treatment of meniscus tears." PICO 5 addresses injections, but it is not in the CPG. Neither of these treatments is addressed in this CPG prior to surgery. It would be essential to address the issue even if there is a lack of evidence to answer the question. Stating that there is insufficient evidence in the literature to support or refute the use of injections for acute meniscal tears would be necessary for all physicians practicing care of patients with acute meniscal tears. Some papers may not meet the inclusion criteria, but research indicates injection of steroids close to meniscal surgery are not beneficial to the meniscal repair. A consensus statement on this issue would be valuable as well. The injections should be discussed to guide physicians when their patients ask, mainly since injections are discussed on meniscus tears on the AAOS website. C. Next, it is unclear why Skou ST "Early Surgery or exercise and education for meniscal tears in young adults" NEJM EVID 2022; 1(2) DOI 10.1056/eviDoa2100038 was not included in the reviewed papers. It is an RCT, and the paper demonstrates the PT first (12 weeks) is not worse than going to surgery right away for acute meniscal tears. This paper fits perfectly into the surgical intervention after non-operative treatment. It is a high-quality study, and it would strengthen the quality of evidence. D. In the Physical Therapy section, the one paper cited for the MC "Squeeze" (Quotes around squeeze is the standard in the literature) in the paper's methods, the rehab technique is described thoroughly in a separate paper (case study). Therefore, we can't entirely agree that the technique is not straightforward. We do agree that the literature quality is very low, and consensus is all that can be made. More research is essential on this topic.

			E. If you added the information on injection to this CPG, we believe we would strongly recommend. Providers (Orthopaedic or non-operative Physicians) use injections in the pre-surgical period. Thank you for the opportunity to provide feedback.

Workgroup Response to Reviewer #4

Dear Thomas Trojian, MD, MMB, FAMSSM,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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 feedback, however, the workgroup did not feel this addition was warranted.
C. Thank you. The article was reviewed but did not meet inclusion criteria.
D. Thank you for your feedback.
E. Thank you for your feedback. The workgroup did not feel this addition was warranted.

Reviewer #5, Doug Evans, MD, 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	Doug Evans, MD, FAAOS	American Academy of Orthopaedic Surgeons, Board of Councilors	A. Thank you for allowing me to comment on these important clinical guidelines. Here are my comments on the document. The guidelines are well thought-out and well written. This work will definitely be a welcome tool for surgeons who treat meniscal injury. B. First, some general comments on the guidelines as a whole. After reading the work, I noted that there are several instances where specific notation should be made that when there is a displaced meniscal fragment, such as a bucket-handle tear, non-operative care may not be appropriate. I will point out several places in the document where some clarification that this treatment would only be recommended for non-displaced meniscal injury would be appropriate. In addition, there is essentially no discussion of meniscal root tears in these guidelines. While I realize that there is relatively little high-quality data to this point to guide treatment of meniscal root tears, they definitely could fall under the category of "acute meniscal pathology" so perhaps if the guidelines were to address some of the controversies involving root tears, simply stating that there is insufficient evidence to make a recommendation at this time would be appropriate. C. L171-3: Even in the absence of loss of motion, many patients with a displaced or displacing meniscus will benefit from surgical intervention. Consider changing the wording of this recommendation to "…that symptomatic patients with a displaced or displacing acute meniscal tear can benefit from acute surgical intervention." or perhaps "…that patients with mechanical symptoms (could define mechanical symptoms more discreetly if needed) and a displaced or displaceable meniscus tear..." D. L184-5: As noted above this should clarify that therapy may not be appropriate for displaced tears. Consider changing the recommendation to "…patients with acute, isolated, non-displaced meniscal tear…" E. L410-413: Risk of DVT and thromboembolism should be added here in addition to the described risks. F. L414-5: This definitive statement should be referenced. G. L771-2: Consider rewriting this sentence. I would suggest "…with added risks of an infection, when an arthrogram is performed, and radiation exposure".

			H. L777: This is personal preference, obviously, but the authors might consider using a different term than "significant", as that term can be expected to be supported in a scientific work. I. L778-9: This sentence is significantly truncated and missing punctuation and connectors. Perhaps this was done to save space, but, if not, the authors might consider rewriting it. J. L887-888: Consider adding to this statement to read "…is an acceptable treatment if the patient has failed non-operative treatment". K. - L890: As this recommendation is specifically targeted at tears less than 6 months from injury, consider rephrasing as "Meniscus surgery prior to 6 months after acute injury is feasible and performed regularly". L. L914-6: The second statement of "in certain circumstances" is redundant after the first qualification that this only relates to "certain tears" in the first line and could be removed. M. L998-9: There needs to be a clarification here that this would only be the case for non-displaced meniscal tears. Physical therapy to regain motion would not be appropriate in the setting of a displaced meniscus as it could lead to further damage to both the meniscus and the joint surface. N. L1006-8: Similarly, this needs clarification that this would not apply in the setting of a displaced meniscal injury. O. L1019: Consider revising to "…for acute, stable, non-displaced meniscal injury…" P. L1049: Similarly, I would suggest revising to "…with an acute, isolated, non-displaced meniscal injury…" Q. L1063-4: Same suggestion to include non-displaced as a qualifier. R. L1074-80: While Mulligan techniques can likely be helpful to patients undergoing physical therapy for meniscal injury these paragraphs are uncharacteristically specific in naming only these techniques. For this recommendation perhaps it would be better to phrase this as "physical therapy techniques, such as Mulligan techniques" or even "physical therapy that might include Mulligan techniques" might be more appropriate. This comes across as promoting Mulligan techniques specifically rather than the effect of physical therapy in general.

Workgroup Response to Reviewer #5

Dear Doug Evans, MD, FAAOS,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. The scope of the CPG was limited to isolated acute meniscal injury and as such topics like re-tears and root tears are excluded.
C. Thank you for your feedback. The recommendation language has been updated.
D. Thank you for your feedback. The workgroup did not feel this addition was warranted.
E. Thank you for your comment, the draft has been modified.
F. Thank you for your comment, the draft has been modified.
G. The workgroup did not feel this addition was warranted.
H. Thank you for your comment, the draft has been modified.
I. Thank you for your comment, the draft has been modified.
J. The workgroup did not feel this addition was warranted.
K. Thank you for your comment, the draft has been modified.
L. Thank you for your comment, the draft has been modified.
M. Thank you for your comment, the draft has been modified.
N. Thank you for your comment, the draft has been modified.
O. Thank you for your comment, the draft has been modified.
P. Thank you for your feedback. The workgroup did not feel this addition was warranted.
Q. Thank you for your comment, the draft has been modified.
R. Thank you for your comment, the draft has been modified.

Reviewer #6, Nicholas Perry, MD

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	Nicholas Perry, MD	American Academy of Orthopaedic Surgeons, Board of Councilors	A. Thank you for the opportunity to review your work. I know this represents many hours of reading and discussion. I appreciate the work and effort. B. 154 - Any room for increased specificity of "repair" - Repair of vertical tear, repair of root tear, repair of complex tear - as examples. C. 162 - I think you should switch the order of PRP and bone marrow venting. I think this places more emphasis on bone marrow venting, which I think has more evidence supporting it and is cheaper than PRP. D. 193 - I think this is poorly worded. It is implicating that Inside out has better repair strength because it will "reduce the risk of repair failure" while all inside has a lower risk profile but may not be as strong. Furthermore, it fails to capture that these techniques are sometimes best used bested on the position of the tear. For example, for a very anterior tear, the outside in repair maybe the only feasible option and I don think it has high risk profile or worse biomechanical properties compared to the other techniques. E. 145-190 - There is no mention of body/horn tear vs root tear. These are very different tears with different biomechanics. I think the failure to differential these tear patterns in a CPG is a missed opportunity. F. 745 - is there any room to discuss what MRI features should be concerned for meniscus tear? For example, signal change that surfaces to the joint versus signal change just within the meniscus tissue. Or Maybe discussing the limitations of MRI to look at if a meniscus has retorn or healed after a meniscus repair. G. 746 - Any comments on what power the magnet should be? If all the good studies have a 3T magnet, should we use a 1.5T magnet the same way? H. 794 - what about looking at healing or re-tear? What about specific MRI characteristics to look for to ID tear? ghost sign, surfacing signal change, double PCL sign, etc. I. 828 - any room for discussion of re-operation for a failed repair? If we are too aggressive in trying to fix all meniscus tears, how many people are going to have a second surgery to deride non-healing tissue? J. 840 - any room for discussion on what should be fixed and what should not? Complex tear? Or discussion of root vs vertical body tear? K. 844 - what about artificial meniscus replacement?

			L. 921 - Can you have further discussion on what tear types or tear locations are ideal for repair vs debridement? M. 934 - again, I would recommend switch PRP and bone marrow venting in the title. This also follows the format of your discussion since you often discuss bone marrow venting before you discussion PRP. N. 1121 - what about the outside in technique? O. It is rather vague and lacks specific detailed recommendation. There is no granularity about vertical or horizontal or complex or root tears. It is missing inside out repair as an option.

Workgroup Response to Reviewer #6

Dear Nicholas Perry, MD,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. The workgroup did not feel this addition was warranted. The scope of the CPG was limited to isolated acute meniscal injury and as such topics like re-tears and root tears are excluded.
C. Thank you for your feedback. The recommendation language has been modified.
D. The workgroup did not feel this addition was warranted.
E. The scope of the CPG was limited to isolated acute meniscal injury and as such topics like re-tears and root tears are excluded.
F. Thank you for your feedback. The workgroup did not feel this addition was warranted.
G. Thank you for your feedback. The workgroup did not feel this addition was warranted.
H. Thank you for your feedback. The workgroup did not feel this addition was warranted. As the scope is focused on acute isolated meniscal pathology we did not including reinjury.
I. Consideration was included in text. The workgroup did not feel this addition was warranted.
J. Comment addressed in future research.
K. The workgroup did not feel this addition was warranted.
L. The workgroup did not feel this addition was warranted.
M. Thank you for your feedback. The manuscript has been modified.
N. Thank you for your feedback. The workgroup did not feel this addition was warranted.
O. The scope of the CPG was limited to isolated acute meniscal injury and as such topics like re-tears and root tears are excluded. Inside out treatment is discussed in the "Options" section of the CPG.

Reviewer #7, Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT

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	Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT	American Physical Therapy Association	A. Thank you very much for the privilege of reviewing this important CPG which affects the population that physical therapists see. Overall, the CPG is performed according to established protocols and involved societies such as the American Physical Therapy Association to provide comments for which I was nominated to do. In general, any section that I did not provide comments are sections that have appropriate evidence-based contents and grading of recommendations. Here are some specific comments that I would like to propose for the AAOS CPG group to consider: B. Page 6, line 122 kindly provide definition of EtD framework. C. Page 31, line 1058 Reference "Soumya, 2020" is actually the first name of the author and could not be located in PUBMED, please consider revising to "Kasturi, 2020" which is the correct citation. D. Page 30, Lines 1040-1044 AND Page 34, Lines 1130-1143 These additional references were excluded in appendix 2, please explain why they were included here. E. Appendix 2, Page 4, Figure 1 Please address why both tables included van der Graff and Cook but these studies were excluded. Also, the Table on the right under Cook, 2021 has no entry. F. Appendix 2, pages 5-13 Please address why these tables included van der Graff and Cook but these studies were excluded. G. Appendix 2, Page 14, Figure 2 AND Appendix 2, Page 15, Table 10 Same recommendation: to change "Soumya, 2020" to "Kasturi, 2020." H. Appendix 2, Page 22, Figure 6 The adverse effect of reoperation should actually favor meniscus repair instead of menisectomy (see Appendix 2, Table 19, page 28) where meniscus repair was favored 4x while menisectomy was favored 1x.

Workgroup Response to Reviewer #7

Dear Emmanuel Yung, PT, DPT, PhD, OCS, FAAOMPT,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. Information concerning the EtD framework is included in the Methods section.
C. Name updated in manuscript documents.
D. These recommendations were consensus statements.
E. Methodology dictates that for consensus statements, the GDG is allowed to discuss literature not meeting inclusion criteria.
F. Appendix updated accordingly.
G. Appendix updated accordingly.
H. Appendix updated accordingly.

Reviewer #8, Carla Bridges, MD.

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	Carla Bridges, MD	J. Robert Gladden Orthopaedic Society	A. No comment.

Workgroup Response to Reviewer #8

Dear Carla Bridges, MD,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

I. No comment.

Reviewer #9, Michael Khadavi, MD.

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	Michael Khadavi, MD	American Academy of Orthopaedic Surgeons	A. Overall, this is well-written and will provide helpful guidance for surgeons and non-surgeons taking care of knee injuries. I only have a few suggestions. B. In the Physical Therapy section: Consider adding/specifying to this recommendation, "if there are no mechanical symptoms." If there are mechanical symptoms, we are dealing with a different category of meniscus pathology, and recommendation will be unique. C. We may consider adding a statement/question on these 2 topics: -solo orthobiologic treatments (PRP or BMC) for meniscus tears without mechanical symptoms before considering surgery. D. meniscectomy's role in the development and progression of knee OA. This topic is touched on in other questions but not dealt with head-on. E. Great work, happy to be a part of a multi-disciplinary team! Excellent, and all physicians who treat knee injuries would benefit from these updated evidence-based guidelines.

Workgroup Response to Reviewer #9

Dear Michael Khadavi, MD,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. Thank you for your feedback. The workgroup did not feel this addition was warranted.
C. Additions can be considered in future CPG updates.
D. The workgroup did not feel this addition was warranted. Progression to OA was addressed in the joint degeneration recommendation.
E. Thank you for your feedback.

Reviewer #10, Jeanine Kolman, PT, DPT

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.
10	Jeanine Kolman, PT, DPT	American Academy of Orthopaedic Surgeons	A. Q9: It appears that this criteria has been met, but I selected neutral because I am not a subject matter expert on this topic. B. Q10: Adding details about how the quality of each study was determined would enhance the methods section. Is the appraisal table based on use of a specific tool? How many people rated the articles and what happened if the raters disagreed about the quality of a study? C. Q11-12: Information not currently available may or may not represent potential concerns, as described above. D. Q15. I especially like the information presented in Table II. E. Thoughtful project design, nice layout and clear communication all contribute to a highly effective guideline.

Workgroup Response to Reviewer #10

Dear Jeanine Kolman, PT, DPT,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. Access to full AAOS CPG methodology is provided within the Methods section.
C. Thank you for the feedback.
D. Thank you for your feedback.
E. Thank you for your feedback.

Reviewer #11, Robert LaPrade, MD, PhD, 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.
11	Robert LaPrade, MD, PhD, FAAOS	American Academy of Orthopaedic Surgeons	A. Overall, it is recognized that the authors of this CPG were somewhat limited by the types of studies published in the literature. However, in the benefits and harms of implementation in other subsections, it would be recommended to be more forceful about some particular subsections rather than being more generic. It is clear to clinicians what is out there and any lack of information or clarity on a subject can make it difficult for patients to have appropriate treatment if insurance companies misinterpreted the information provided in this CPG and the literature was deficient on a topic, but the information provided was not the optimal manner in which the patients need to be taken care of. B. Line 19: "…protocol, because some patients…" C. Lines 131 – 134: It is the opinion of this reviewer that this is hard to believe that it is not highly recommended. It is very obvious in a busy clinical practice that any sort of meniscal resection leads to the development of arthritis. D. Lines 153 – 156: Once again, it is difficult to believe that there is a limited strength of opinion for meniscus repair on improving patient outcomes compared to partial meniscectomy. E. Line 175: "…that patients with a symptomatic acute meniscal tear…" F. Lines 387 – 389: Please also note that the type of meniscus tear should be noted here. There can be a big difference in return to play and abilities for a longitudinal tear versus a radial tear or a root tear. G. Lines 368 – 369: "Database; however, these results…" H. Lines 768 – 769: Please also include spinal implants. The spinal implants that deliver electrical impulses in many patients are main reason why this reviewer utilizes CT arthrograms to assess for meniscus tears. I. - Line 897: This reviewer would ask that this be changed to "compared to partial meniscectomy in all patients." Meniscus repair across all ages is important to preserve tissue. Even in older patients, where meniscus root tears can occur, the literature is clear that a meniscus root repair delays the onset of arthritis and slows down the rate of progression to a total knee arthroplasty compared to a partial medial meniscectomy. J. Line 963: "Rates of post-traumatic osteoarthritis…"

			K. Rationale: Please note that this review missed a level 3 paper by Dean CS, AJSM, 1341-1348, 2017 on the use of narrow venting for isolated meniscus tears compared to those meniscus repairs with a concurrent ACL reconstruction. L. Lines 1069 – 1072: Please also note that PT can improve the range of motion in patients prior to surgery for those with limitations in motion to reduce the risk of postoperative arthrofibrosis.

Workgroup Response to Reviewer #11

Dear Robert LaPrade, MD, PhD, FAAOS,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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 workgroup did not feel this addition was warranted.
B. This language is part of the standard AAOS CPG disclaimer.
C. Methodology dictates that evidence from a single high-quality study allows for the creation of moderate strength recommendations. Evidence quality for this recommendation was moderate and GDG decided not to upgrade the strength of recommendation.
D. Methodology dictates that low quality literature allows for the creation of limited strength recommendations. Evidence quality for this recommendation was low and GDG decided not to upgrade the strength of recommendation.
E. Thank you for your comment, the draft has been modified.
F. The scope of the CPG was limited to isolated acute meniscal injury and as such topics like re-tears and root tears are excluded.
G. Grammatical suggestion: original punctuation retained.
H. Thank you for your comment, the draft has been modified.
I. Thank you for your feedback. The workgroup did not feel this addition was warranted.
J. Thank you for your comment, the draft has been modified.
K. The article was reviewed but did not meet inclusion criteria.
L. The workgroup did not feel this addition was warranted.

Reviewer #12, Alex Habegger, PT, DPT, PhD

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.
12	Alex Habegger, PT, DPT, PhD	American Academy of Orthopaedic Surgeons	A. Line 1075: I would recommend using physical therapists instead of rehabilitation therapists. Physical therapists are doctorally trained and licensed professionals designing and implementing these rehab programs. Rehabilitation therapist is not a professional license or career.

Workgroup Response to Reviewer #12

Dear Alex Habegger, PT, DPT, PhD,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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, the draft has been modified.

Reviewer #13, John Cherf, MD, MPH, MBA, 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.
13	John Cherf, MD, MPH, MBA, FAAOS	American Academy of Orthopaedic Surgeons, Board of Councilors	A. Overall a very good CPG. There are some typographical/grammatical errors. Please review the surgical repair technique section as "outside in" appears to have been substituted for "inside out" and may need to be corrected (page 34).

Workgroup Response to Reviewer #13

Dear John Cherf, MD, MPH, MBA, FAAOS,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology Evidence-Based Clinical Practice Guideline. We will address your comments by guideline section in the order that you listed them.

A. The manuscript has been reviewed for grammatical errors and has been updated.

Reviewer #14, Aaron Krych, MD, 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.
14	Aaron Krych, MD, FAAOS	American Academy of Orthopaedic Surgeons	A. The overall content reveals the low level of evidence currently available for meniscus injuries. The future research suggestions are particularly helpful to identify current gaps in data that would be valuable to pursue. B. Lines 1004-1010: The harm of not operating on a knee with loss of motion due to a meniscus tear should also be considered (i.e. flexion contracture).

Workgroup Response to Reviewer #14

Dear Aaron Krych, MD, FAAOS,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. Thank you for your comment, the draft has been modified.

Reviewer #15, Stephanie Wong, MD, 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.
15	Stephanie Wong, MD, FAAOS	American Orthopaedic Society for Sports Medicine	A. Overall, excellent work on the Acute Meniscal Pathology CPG. B. Minor edits recommended below: Line 772- Would clarify that radiation exposure is a risk with CT (as compared to US where there is no additional risk of infection of radiation). C. Line 773-779- Should comment on accuracy of CT arthrography and US compared to MRI for diagnosis of acute meniscal pathology. D. Line 821- The wording of this sentence is a bit confusing. Surgical decision making should be based on location and type of tear. Would remove 'clinical outcomes. E. Line 826-827- Clinical outcomes in addition to radiographic outcomes should be listed. F. Line 836-838- This sentence should be re-worded as phrasing is confusing. G. Line 833-835- This is a bit of a reach to say meniscus preservation can prevent conversion to TKA. The literature is clear that many patients with knee OA (either symptomatic or radiolographic only) do not have TKA procedures. I would rephrase to state meniscus preservation, when successful, can prevent increased chondral loading which in turn can prevent development of OA changes. H. Lines 841-842- Feasibility of certain meniscus preservation techniques is of concern. Certain technologies listed in Future Research section including meniscus scaffolds remain rare procedures with limited studies reporting on long term outcomes. Meniscus transplantation is technically more challenging to perform than meniscal repair and allograft availability is limited in certain countries. Perhaps this section should be limited to repair of native meniscal tissue only. Preservation of meniscal tissue should be noted to be dependent on type of tear/tear location. I. Lines 844-845- Can you clarify what is meant by meniscal preserved debridement techniques? J. Lines 845-846- Again, a reach to state that meniscus repair reduces need for TKA. I would focus more on long term joint degeneration and development of OA. K. Lines 973-975- Additional randomized studies comparing bone marrow venting to PRP would also be helpful. L. Line 995- change to "early surgical repair"

			M. Line 1058- Would clarify that Mulligan technique and MC Squeeze technique are describing the same concept and would add brief description of technique.

Workgroup Response to Reviewer #15

Dear Stephanie Wong, MD, FAAOS,

Thank you for your expert review of the Management of Acute Isolated Meniscal Pathology 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.
B. Thank you for your feedback. The workgroup did not feel this addition was warranted.
C. Thank you for your comment, the draft has been modified.
D. Thank you for your comment, the draft has been modified.
E. Thank you for your comment, the draft has been modified.
F. Thank you for your comment, the draft has been modified.
G. Thank you for your comment, the draft has been modified.
H. Thank you for your feedback. The workgroup did not feel this addition was warranted.
I. Thank you for your comment, the draft has been modified.
J. Thank you for your comment, the draft has been modified.
K. Thank you for your comment, the draft has been modified.
L. Thank you for your comment, the draft has been modified.
M. Thank you for your comment, the draft has been modified.

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?