



AMERICAN ACADEMY OF
ORTHOPAEDIC SURGEONS

Return to Play to Pre-Injury Level Following Anterior Cruciate Ligament Injury

Appropriate Use Criteria

Adopted by:

The American Academy of Orthopaedic Surgeons Board of Directors
December 1, 2023

Endorsed by:

Please cite this Appropriate Use Criteria as:

American Academy of Orthopaedic Surgeons Return to Play to Pre-Injury Level Following Anterior Cruciate Ligament Injury Appropriate Use Criteria. www.aaos.org/aclreturntoplayauc Published December 1, 2023

Disclaimer

Volunteer physicians from multiple medical specialties created and categorized these Appropriate Use Criteria. These Appropriate Use Criteria are not intended to be comprehensive or a fixed protocol, as some patients may require more or less treatment or different means of diagnosis. These Appropriate Use Criteria represent patients and situations that clinicians treating or diagnosing musculoskeletal conditions are most likely to encounter. The clinician's independent medical judgment, given the individual patient's clinical circumstances, should always determine patient care and treatment.

Disclosure Requirement

In accordance with American Academy of Orthopaedic Surgeons (AAOS) policy, all individuals whose names appear as authors or contributors to this document filed a disclosure statement as part of the submission process. All authors provided full disclosure of potential conflicts of interest prior to participation in the development of these Appropriate Use Criteria. Disclosure information for all panel members can be found in Appendix B.

Funding Source

The American Academy of Orthopaedic Surgeons exclusively funded development of these Appropriate Use Criteria. The American Academy of Orthopaedic Surgeons received no funding from outside commercial sources to support the development of these Appropriate Use Criteria.

FDA Clearance

Some drugs or medical devices referenced or described in this document may not have been cleared by the Food and Drug Administration (FDA) or may have been cleared for a specific use only. The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or device he or she wishes to use in clinical practice.

Copyright

All rights reserved. Reproduction, storage in a retrieval system, or transmission, in any form, or by any means, electronic, mechanical, photocopying, recording, or otherwise, of any part of this document, requires prior written permission from AAOS.

Published xxxx by the American Academy of Orthopaedic Surgeons (AAOS)
9400 West Higgins Road
Rosemont, IL 60018
First Edition
Copyright 2023 the American Academy of Orthopaedic Surgeons



To View All AAOS and AAOS-Endorsed Evidence-Based clinical practice guidelines and Appropriate Use Criteria in a User-Friendly Format, Please Visit the OrthoGuidelines Web-Based App at www.orthoguidelines.org or by downloading to your smartphone or tablet via the Apple and Google Play stores!



To view the clinical practice guideline for this topic, please visit https://www.orthoguidelines.org/topic?id=1042&tab=all_guidelines

Contents

WRITING PANEL	5
RATING PANEL.....	6
RATING PANEL MODERATOR	7
AAOS STAFF.....	7
INTRODUCTION	8
OVERVIEW	8
INTERPRETING THE APPROPRIATENESS RATING	9
METHODS	10
DEVELOPING CRITERIA.....	10
FORMULATING INDICATIONS AND SCENARIOS.....	11
CREATING DEFINITIONS AND ASSUMPTIONS	12
LITERATURE REVIEW	12
RATING PANEL MODIFICATIONS TO WRITING PANEL DOCUMENT.....	12
DETERMINING APPROPRIATENESS	12
DISSEMINATING APPROPRIATE USE CRITERIA	16
PATIENT INDICATIONS AND TREATMENTS	Error! Bookmark not defined.
INDICATIONS.....	18
TREATMENTS	18
RESULTS OF APPROPRIATENESS RATINGS	19
APPENDICES	39
APPENDIX A. DOCUMENTATION OF APPROVAL	39
APPENDIX B. DISCLOSURE INFORMATION	40
APPENDIX C. REFERENCES	42

WRITING PANEL

Henry Ellis, MD, FAAOS

American Academy of Orthopaedic Surgeons

Andrew Gordon, MD, PhD

American Academy of Orthopaedic Surgeons

Michael Gottlieb, MD

American College of Emergency Physicians

Dan Herman, MD

American Medical Society for Sports Medicine

Shawn Kane, MD

American Medical Society for Sports Medicine

Benjamin Ma, MD, FAAOS

American Orthopaedic Society for Sports Medicine

RATING PANEL

Robert Brophy, MD, FAAOS

American Academy of Orthopaedic Surgeons

Julie Dodds, MD, FAAOS

American Academy of Orthopaedic Surgeons

Kendall Hamilton, MD, FAAOS

American Academy of Orthopaedic Surgeons

Richard Ma, MD, FAAOS

American Orthopaedic Society for Sports Medicine

Caitlyn Mooney, MD

American Medical Society for Sports Medicine

Neeraj Patel, MD, MPH

American Academy of Orthopaedic Surgeons

Andrew Sheean, MD, FAAOS

American Orthopaedic Society for Sports Medicine

Michael Swartzon, MD, FAMSSM

American Medical Society for Sports Medicine

RATING PANEL MODERATOR

Stuart Fischer, MD, FAAOS

American Academy of Orthopaedic Surgeons

AAOS STAFF

Jayson Murray, MA

Managing Director, Clinical Quality and Value

Kaitlyn Sevarino, MBA, CAE

Director, Clinical Quality and Value

Frank Casambre, MPH

Manager, Clinical Quality and Value

Jennifer Rodriguez, MBA

Manager, Clinical Quality and Value

Tyler Verity

Medical Librarian, Clinical Quality and Value

Barbara Krause

Quality Improvement Specialist, Clinical Quality and Value

INTRODUCTION

OVERVIEW

The American Academy of Orthopaedic Surgeons (AAOS) has developed this Appropriate Use Criteria (AUC) to determine appropriateness of return to play following an anterior cruciate ligament (ACL) injury.

An “appropriate” healthcare service is one for which the expected health benefits exceed the expected negative consequences by a sufficiently wide margin.¹ Evidence-based information, in conjunction with the clinical expertise of physicians from multiple medical specialties, was used to develop the criteria in order to improve patient care and obtain the best outcomes while considering the subtleties and distinctions necessary in making clinical decisions. To provide the evidence foundation for this AUC, the AAOS Department of Clinical Quality and Value provided the writing panel and rating panel with the AAOS Clinical Practice Guideline on Anterior Cruciate Ligament Injuries, which can be accessed via the following link:

https://www.orthoguidelines.org/topic?id=1042&tab=all_guidelines

The purpose of this AUC is to help determine the appropriateness of clinical practice guideline recommendations for the heterogeneous patient population routinely seen in practice. The best available scientific evidence is synthesized with collective expert opinion on topics where gold standard randomized clinical trials are not available or are inadequately detailed for identifying distinct patient types. When there is evidence corroborated by consensus that expected benefits substantially outweigh potential risks, exclusive of cost, a procedure is determined to be appropriate. The AAOS uses the RAND/UCLA Appropriateness Method (RAM)¹ to assess the appropriateness of a particular treatment. This process includes reviewing the results of the evidence analysis, compiling a list of clinical

vignettes, and having an expert panel comprised of representatives from multiple medical specialties to determine the appropriateness of each of the clinical indications for treatment as “Appropriate,” “May be Appropriate,” or “Rarely Appropriate.” To access a more user-friendly version of the appropriate use criteria for this topic online, please visit our AUC web-based application at www.orthoguidelines.org/auc or download the OrthoGuidelines app from Google Play or Apple Store.

These criteria should not be construed as including all indications or excluding indications reasonably directed to obtaining the same results. The criteria intend to address the most common clinical scenarios facing qualified physicians managing patients seeking to return to play following an ACL injury. The ultimate judgment regarding any specific criteria should address all circumstances presented by the patient and the needs and resources particular to the locality or institution. It is also important to state that these criteria are not meant to supersede clinician expertise and experience or patient preference.

INTERPRETING THE APPROPRIATENESS RATING

To prevent misuse of these criteria, it is extremely important that the user of this document understands how to interpret the appropriateness ratings. The appropriateness rating scale ranges from one to nine and there are three main range categories that determine how the median rating is defined (i.e., 1-3 = “Rarely Appropriate”, 4-6 = “May Be Appropriate”, and 7-9 = “Appropriate”). Before these AUCs are consulted, the user should read through and understand all contents of this document.

INCIDENCE AND PREVALENCE

The annual rate of patients who present with anterior cruciate ligament injuries has been estimated at 200,000 in the United States alone². Although, the mean patient age (i.e., 29 years) for reconstruction remained constant from 1990 to 2006, the incidence of ACL reconstruction in patients aged >40 years has increased >200%—second in growth only to the <14-year age group^{3,4}.

ETIOLOGY

ACL rupture is typically the result of a traumatic, sports-related injury. This injury may be contact or non-contact. The majority of anterior cruciate ligament (ACL) injuries are non-contact injuries⁹. Female athletes have been reported to sustain non-contact ACL injuries at a rate higher than their male counterparts. Recent studies indicate a 2-4-fold increase in females compared to similarly trained males^{5,6,7,8}.

POTENTIAL BENEFITS, HARMS, AND CONTRAINDICATIONS

Most treatments are associated with some known risks, especially invasive and operative treatments. Contraindications vary widely based on the treatment administered. A particular concern when treating ACL injuries is routine surgical complications such as infection, DVT, anesthesia complications, etc. Other

complications associated with ACL surgery include recurrent instability including graft re-tear and contralateral ACL tear, postoperative loss of motion or arthrofibrosis, neurovascular injury, kneeling pain, etc. Additional factors may affect the physician’s choice of treatment including but not limited to associated injuries the patient may present with as well as the individual’s co-morbidities, skeletal maturity, and/or specific patient characteristics including obesity, activities, work demands, etc.

METHODS

This AUC for Return to Play to Pre-Injury Level Following ACL Injury is based on a review of the available literature and a list of clinical scenarios (i.e., criteria) constructed and rated by experts in orthopaedic surgery and other relevant medical fields. This section describes the methods adapted from RAM¹. This section also includes the activities and compositions of the various panels that developed, defined, reviewed, and rated the criteria.

Two panels participated in the development of the Return to Play to Pre-Injury Level Following ACL Injury AUC, a writing panel and a rating panel. Members of the writing panel developed a list of patient scenarios and relevant treatment options. Additional detail on how the writing panel developed the patient scenarios and treatments is below. The rating panel participated in two rounds of rating. During the first round, the rating panel was given approximately one month to independently rate the appropriateness of each the provided treatments for each of the relevant patient scenarios as 'Appropriate', 'May Be Appropriate', or 'Rarely Appropriate' via an electronic ballot. How the rating panel rates for appropriateness is described in more detail below. After the first round of appropriateness ratings were submitted, AAOS staff calculated the median ratings for each patient scenario and specific treatment. A virtual rating panel meeting was held on Saturday, July 9th, 2023. During this meeting rating panel members addressed the scenarios/treatments which resulted in disagreement from round one rating. The rating panel members discussed the list of assumptions, patient indications, and treatments to identify areas that needed to be clarified/edited. After the discussion and subsequent changes, the group was asked to re-rate their first-round ratings during the rating panel meeting, only if they were persuaded to do so by the discussion and available evidence. There was no attempt to obtain consensus about appropriateness.

The AAOS Committee on Evidence Based Quality and Value, the AAOS Research and Quality Council, and the AAOS Board of Directors sequentially approve all AAOS AUC.

DEVELOPING CRITERIA

Panel members of the Return to Play to Pre-Injury Level Following ACL Injury AUC developed patient scenarios using the following guiding principles:

1. **Comprehensive** – Covers a wide range of patients.
2. **Mutually Exclusive** - There should be no overlap between patient scenarios/indications.
3. **Homogenous** –The final ratings should result in equal application within each of the patient scenarios.
4. **Manageable** – Number of total rating items (i.e., # of patient scenarios x # of treatments) should be practical for the rating panel. Target number of total rating items should be >1500. This means that not all patient indications and treatments can be assessed within one AUC.

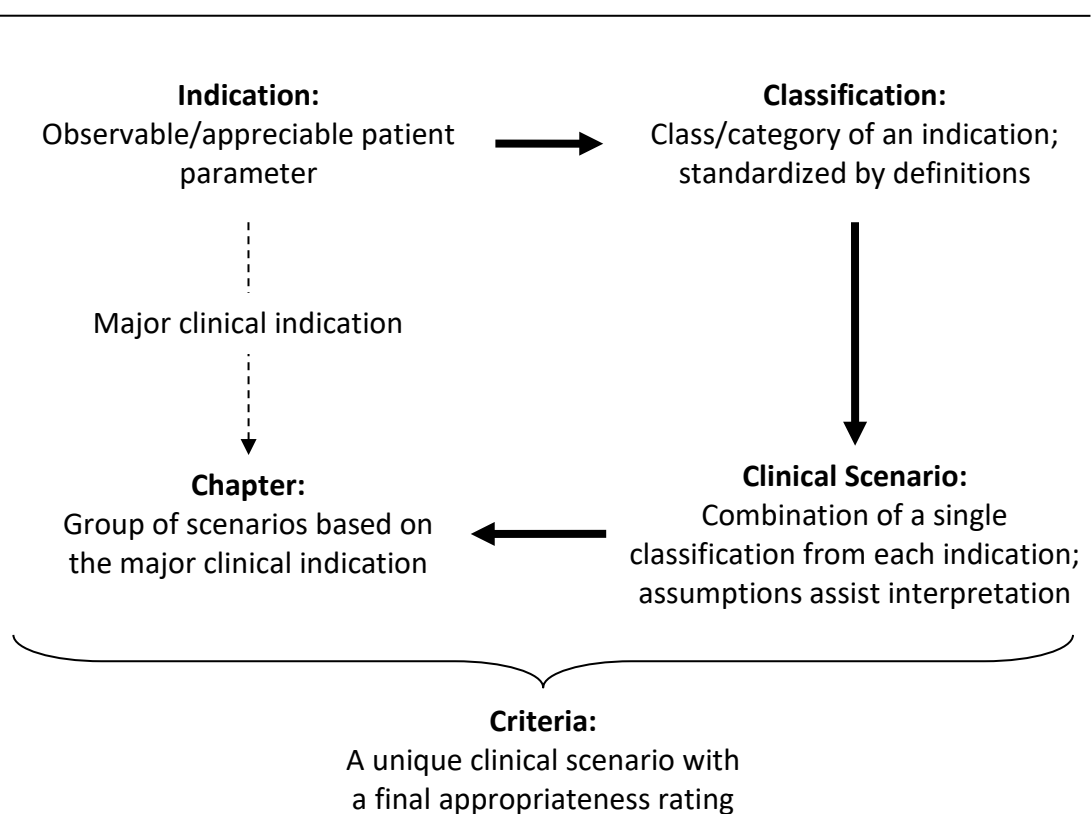
The writing panel developed the scenarios by categorizing patients in terms of indications evident during the clinical decision-making process. These scenarios relied upon definitions and general assumptions, mutually agreed upon by the writing panel during the development of the scenarios. These definitions and assumptions were necessary to provide consistency in the interpretation of the clinical scenarios among experts rating on the scenarios, and readers using the final criteria.

FORMULATING INDICATIONS AND SCENARIOS

The AUC writing panel began the development of the scenarios by identifying clinical indications typical of patients wishing to return to play following an ACL injury. Indications are most often parameters observable by the clinician, including symptoms or results of diagnostic tests.

Additionally, “human factor” (e.g., activity level) or demographic variables can be considered.

FIGURE 1. DEVELOPING CRITERIA



Indications identified in clinical trials, derived from patient selection criteria, included in AAOS Clinical Practice Guidelines

(https://www.orthoguidelines.org/topic?id=1042&tab=all_guidelines) served as a starting point for the writing panel, as well as ensured that these AUCs referenced the evidence base for this topic. The writing panel considered this initial list and other indications based on their clinical expertise and selected the most clinically relevant indications (Table 1). The writing panel then defined distinct classes for

each indication to stratify/categorize the indication (Table 1).

The writing panel organized these indications into a matrix of clinical scenarios that addressed all combinations of the classifications. The writing panel was given the opportunity to remove any scenarios that rarely occur in clinical practice but agreed that all scenarios were clinically relevant. The major clinical decision-making indications chosen by the writing panel divided the matrix of clinical

scenarios into chapters, as follows: ACL Tear Treatment, Level of Athletic Participation, Objective Knee Stability, Subjective Knee Stability, Functional Strength, Balance, and Knee Symmetry, and Time from Surgery or Initiation of Rehabilitation.

CREATING DEFINITIONS AND ASSUMPTIONS

The Return to Play to Pre-Injury Level Following ACL Injury AUC writing panel constructed concise and explicit definitions for the indications and classifications. This standardization helps ensure that the way the writing panel defined the patient indications is consistent among those reading the clinical scenario matrix or the final criteria. Definitions create explicit boundaries when possible and are based on standard medical practice or existing literature.

Additionally, the writing panel formulated a list of general assumptions in order to provide more consistent interpretations of a scenario. These assumptions differed from definitions in that they identified circumstances that exist outside of the control of the clinical decision-making process. Assumptions also address the use of existing published literature regarding the effectiveness of treatment and/or the procedural skill level of physicians. Assumptions also highlight intrinsic methods described in this document such as the role of cost considerations in rating appropriateness, or the validity of the definition of appropriateness. The main goal of assumptions is to focus scenarios so that they apply to the average patient presenting to an average physician at an average facility.

The definitions and assumptions should provide all readers with a common starting point in interpreting the clinical scenarios. The list of definitions and assumptions accompanied the matrix of clinical scenarios in all stages of AUC development and appears in the Writing Panel section of this document.

LITERATURE REVIEW

The Clinical Practice Guideline on the Management of Anterior Cruciate Ligament Injuries was used as the evidence base for this AUC (see here: https://www.orthoguidelines.org/topic?id=1042&tab=all_guidelines). This guideline helped to inform the decisions of the writing panel and rating panel where available and necessary.

RATING PANEL MODIFICATIONS TO WRITING PANEL DOCUMENT

At the start of the rating panel meeting, the rating panel was reminded that they could amend the original writing panel materials if the amendments resulted in more clinically relevant and practical criteria. To amend the original materials, a rating panel member must make a motion to amend, and another member must “second” that motion, after which a vote is conducted. If the majority of rating panel members voted “yes” to amend the original materials, the amendments were accepted.

DETERMINING APPROPRIATENESS

RATING PANEL

As mentioned above, a multidisciplinary panel of clinicians was assembled to determine the appropriateness of options for the Return to Play to Pre-Injury Level Following ACL Injury AUC. A non-rating moderator, who is an orthopaedic surgeon, but is not a specialist in the diagnosis or management of return to play following ACL injury, moderated the rating panel. The moderator was familiar with the methods and procedures of AAOS Appropriate Use Criteria and led the panel (as a non-rater) in discussions. Additionally, no member of the rating panel was involved in the development, i.e., writing panel, of the scenarios.

The rating panel used a modified Delphi procedure to determine appropriateness ratings. The rating panel participated in two

rounds of rating while considering evidence-based information provided in the literature review.

RATING APPROPRIATENESS

When rating the appropriateness of a scenario, the rating panel considered the following definition:

“An appropriate procedural step for a patient wishing to return to play following an ACL injury

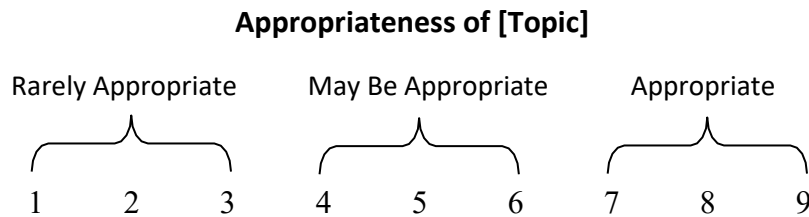
is one for which the option **is** generally acceptable, **is** a reasonable approach for the indication, and **is** likely to improve the patient’s health outcomes or survival.”

The rating panel rated each scenario using their best clinical judgment, taking into consideration the available evidence, for an average patient presenting to an average physician at an average facility as follows:

FIGURE 2. INTERPRETING THE 9-POINT APPROPRIATENESS SCALE

Rating	Explanation
7-9	<p>Appropriate: Appropriate for the indication provided, meaning treatment is generally acceptable and is a reasonable approach for the indication and is likely to improve the patient’s health outcomes or survival.</p>
4-6	<p>May Be Appropriate: Uncertain for the indication provided, meaning treatment may be acceptable and may be a reasonable approach for the indication, but with uncertainty implying that more research and/or patient information is needed to further classify the indication.</p>
1-3	<p>Rarely Appropriate: Rarely an appropriate option for management of patients in this population due to the lack of a clear benefit/risk advantage; rarely an effective option for individual care plans; exceptions should have documentation of the clinical reasons for proceeding with this care option (i.e., procedure is not generally acceptable and is not generally reasonable for the indication).</p>

Each panelist uses the scale below to record their response for each scenario:



ROUND ONE RATING

The first round of rating occurred after approval of the final indications, scenarios, and assumptions by the writing panel. The rating panel rated the scenarios electronically using the AAOS AUC Electronic Ballot Tool, a personalized ballot created by AAOS staff. There was no interaction between rating panel members while completing the first round of rating. Panelists considered the following materials:

- The instructions for rating appropriateness
- The completed literature review, that is appropriately referenced when evidence is available for a scenario
- The list of indications, definitions, and assumptions, to ensure consistency in the interpretation of the clinical scenarios

ROUND TWO RATING

The second round of rating occurred during the virtual rating panel meeting on July 9th, 2023. Prior to the meeting, each rating panelist received a personalized document that included his/her first-round ratings along with summarized results of the first-round ratings that resulted in disagreement. These results indicated the frequency of ratings for a scenario for all panelists. The document contained no identifying information for other panelists' ratings. The moderator also used a document that summarized the results of the panelists' first round rating. These personalized documents served as the basis for discussions of scenarios which resulted in disagreement.

During the discussion, the rating panel members were

allowed to add or edit the assumptions list, patient indications, and/or treatments if clarification was needed. Rating panel members were also able to record a new rating for any scenarios/treatments, if they were persuaded to do so by the discussion and/or the evidence. There was no attempt to obtain consensus among the panel members. After the final ratings were submitted, AAOS staff used the AAOS AUC Electronic Ballot Tool to export the median values and level of agreement for all rating items.

FINAL RATINGS

Using the median value of the second-round ratings, AAOS staff determined the final levels of appropriateness. Disagreement among raters can affect the final rating. Agreement and disagreement were determined using the BIOMED definitions of Agreement and Disagreement, as reported in the RAND/UCLA Appropriate Method User's Manual¹, for a panel of 8-10 rating members (see Figure 3 below). The 8-10 panel member disagreement cutoff was used for this rating panel. For this panel size, disagreement is defined as when ≥ 3 members' appropriateness ratings fell within the appropriate (7-9) and rarely appropriate (1-3) ranges for any scenario (i.e., ≥ 3 members' ratings fell between 1-3 and ≥ 3 members' ratings fell between 7-9 on any given scenario and its treatment). If there is still disagreement in the rating panel ratings after the last round of rating, that rating item is labeled as "5" regardless of median score. Agreement is defined as ≤ 5 panelists rated outside of the 3-point range containing the median.

FIGURE 3. DEFINING AGREEMENT AND DISAGREEMENT FOR APPROPRIATENESS RATINGS

	<u>Disagreement</u>	<u>Agreement</u>
Panel Size	Number of panelists rating in each extreme (1-3 and 7-9)	Number of panelists rating outside the 3-point region containing the median (1-3, 4-6, 7-9)
8,9,10	≥ 3	≤ 2
11,12,13	≥ 4	≤ 3
14,15,16	≥ 5	≤ 4
17,18,19	≥ 6	≤ 5

Adapted from RAM 1

The classifications in the table below determined final levels of appropriateness.

FIGURE 4. INTERPRETING FINAL RATINGS OF CRITERIA

Level of Appropriateness	Description
Appropriate	<ul style="list-style-type: none"> • Median panel rating between 7-9 and no disagreement
May Be Appropriate	<ul style="list-style-type: none"> • Median panel rating between 4-6 or • Median panel rating 1-9 with disagreement
Rarely Appropriate	<ul style="list-style-type: none"> • Median panel rating between 1-3 and no disagreement

REVISION PLANS

These criteria represent a cross-sectional view of current options for managing return to play following an ACL injury and may become outdated as new evidence becomes available or clinical decision-making indicators are improved. In accordance with guideline and appropriate use criteria standards, AAOS will update or withdraw these criteria in five years. AAOS will issue updates in accordance with new evidence, changing practice, rapidly emerging treatment options, and new technology.

DISSEMINATING APPROPRIATE USE CRITERIA



All AAOS AUCs can be accessed via a user-friendly app that is available via the OrthoGuidelines website (www.orthoguidelines.org/auc) or as a native app via the Apple and Google Play stores.

Publication of the AUC document is on the AAOS website at <https://www.aaos.org/quality/quality-programs/>. This document provides interested readers with full documentation about the development of Appropriate Use Criteria and further details of the criteria ratings.

AUCs are first announced by an Academy press release and then published on the AAOS website. AUC summaries are published in *AAOS Now* and the *Journal of the American Academy of Orthopaedic Surgeons (JAAOS)*. AUCs may also be promoted via JAAOS' Unplugged podcast. In addition, most appropriate use criteria are promoted at the AAOS Annual Meeting in the Resource Center.

The dissemination efforts of AUCs may include the AAOS Learning Management Systems (LMS), AAOS' Education by Specialty Area pages, webinars, and media briefings. In addition, AUCs are also promoted in relevant Continuing Medical Education (CME) courses. Specialty Societies that participated in the development of the AUC are invited to endorse the AUC and share the links to the online tool and full AUC pdf to their membership via their websites.

Other dissemination efforts outside of the AAOS include submitting AUCs to the Guidelines International Network and to other medical specialty societies' meetings.

PATIENT INDICATIONS AND TREATMENTS

AUC ASSUMPTIONS

BEFORE THESE APPROPRIATE USE CRITERIA ARE CONSULTED, IT IS ASSUMED THAT:

- This is a tool to determine whether it is appropriate for the patient to return to the activity (play) that caused the injury OR equivalent level of activity.
- This AUC is intended for patients seeking to re-engage in regular physical activity.
- The patient has met criteria for psychological readiness to return to sport.
- The patient has met criteria for functional range of motion.
- The patient has attested, or surgeon observes functional skills are performed adequately.
- If available, the patient is recommended to participate in an ongoing ACL-prevention program upon Return to Sport
- A functional test (or tests) for balance was performed.
- A functional test (or tests) for strength was performed.
- Rehabilitation can include activities such as physical therapy, strengthening exercises, other rehabilitation interventions etc.
- The knee is not indicated for surgical treatment of persistent (non-operative treatment) or recurrent (operative treatment) ACL insufficiency.
 - I.e., These scenarios do not apply when surgical treatment (reconstruction or revision) is indicated.

DEFINITIONS:

- Non-Operative Treatment: Including but not limited to Phased Supervised Physical Therapy, may or may not include bracing, activity modification.

DISCLAIMER:

Volunteer physicians from multiple medical specialties created and categorized these Appropriate Use Criteria. These Appropriate Use Criteria are not intended to be comprehensive or a fixed protocol, as some patients may require more or less treatment or different means of diagnosis. These Appropriate Use Criteria represent patients and situations that clinicians treating or diagnosing musculoskeletal conditions are most likely to encounter. The clinician's independent medical judgment, given the individual patient's clinical circumstances, should always determine patient care and treatment.

INDICATIONS

TABLE 1: PATIENT INDICATIONS AND CLASSIFICATIONS

ACL Tear Treatment	- Non-Operative
	- Operative
Level of Athletic Participation (e.g., MARS: Marx Activity Rating Scale)	- Low
	- High
Objective Knee Stability (e.g., Stable Lachman, Absence of Pivot, etc.)	- Objectively Stable
	- Objectively Unstable
Subjective Knee Stability (e.g., Patient's Report, dynamic tests related to sport (jump, pivot, etc.))	- Subjectively Stable
	- Subjectively Unstable
Functional Strength, Balance Limb Symmetry Index for Performance	- Low
	- Medium
	- High
Time from Surgery or Initiation of Rehabilitation	- 3 Months
	- 6 Months
	- 9 Months
	- 12 Months

TREATMENTS

- Continued Rehabilitation
- Modified Return to Play
- Full Return to Play

RESULTS OF APPROPRIATENESS RATINGS

For a user-friendly version of these appropriate use criteria, please access our AUC web-based application at www.orthoguidelines.org/auc. The OrthoGuidelines native app can also be downloaded via the Apple or Google Play stores.

Web-Based AUC Application Screenshot

AAOS
AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS

Home Quick Tour

APPROPRIATE USE CRITERIA: RETURN TO PLAY TO PRE-INJURY LEVEL [2023]

INDICATION PROFILE

ACL Tear Treatment ⓘ

Non-operative
 Operative

Level of Athletic Participation

Low
 High

Objective Knee Stability (e.g. Stable Lachman, Absence of Pivot, etc.)

Objectively Stable
 Objectively Unstable

Subjective Knee Stability (e.g., Patient's Report, Dynamic Tasks Related to Sport [jump, pivot, etc.])

Subjectively Stable
 Subjectively Unstable

Functional Strength, Balance Limb Symmetry Index for Performance

Low
 Medium
 High

Time from Surgery or Initiation of Rehabilitation

3 Months
 6 Months
 9 Months
 12 Months

PROCEDURE RECOMMENDATIONS

	Continued Rehabilitation	+	8
	Modified Return to Play		6
	Full Return to Play		3

E-mail Results Print Copy

Submit

RESULTS

The following Appropriate Use Criteria tables contain the final appropriateness ratings assigned by the members of the rating panel. Patient characteristics are found under the column titled "Scenario". The Appropriate Use Criteria for each patient scenario can be found within each of the treatment rows. These criteria are formatted by appropriateness, median rating, and + or - indicating agreement or disagreement amongst the rating panel, respectively.

Out of 576 total rating items, 204 (35.4%) rating items were rated as "Appropriate", 173 (30.0%) rating items were rated as "May Be Appropriate", and 199 (34.5%) rating items were rated as "Rarely Appropriate" (Figure 5). Additionally, the rating panel members were in statistical agreement on 312 (54.2%) rating items and statistical disagreement on 4 (0.7%) rating items. The remaining 260 rating items saw neither agreement nor disagreement (45.9%) (Figure 6).

FIGURE 5. BREAKDOWN OF APPROPRIATENESS RATINGS

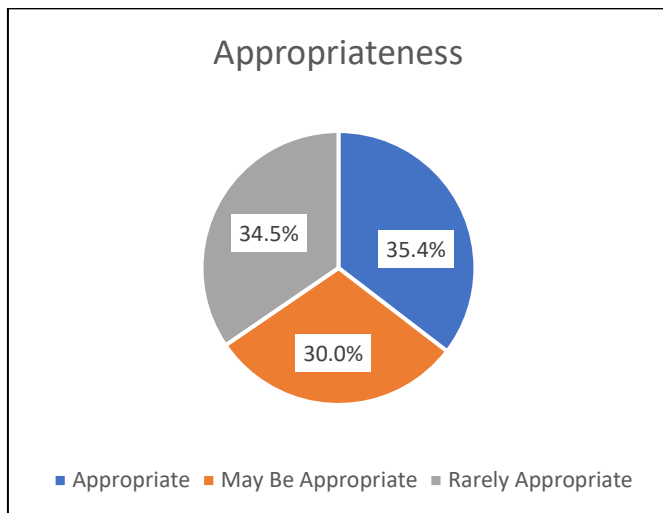


FIGURE 6. BREAKDOWN OF AGREEMENT AMONGST RATING PANEL

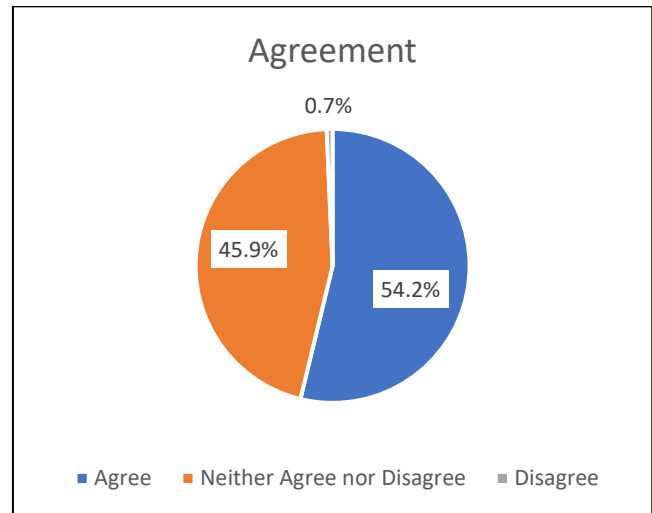


FIGURE 7. DISTRIBUTION OF APPROPRIATENESS ON 9-POINT RATING SCALE

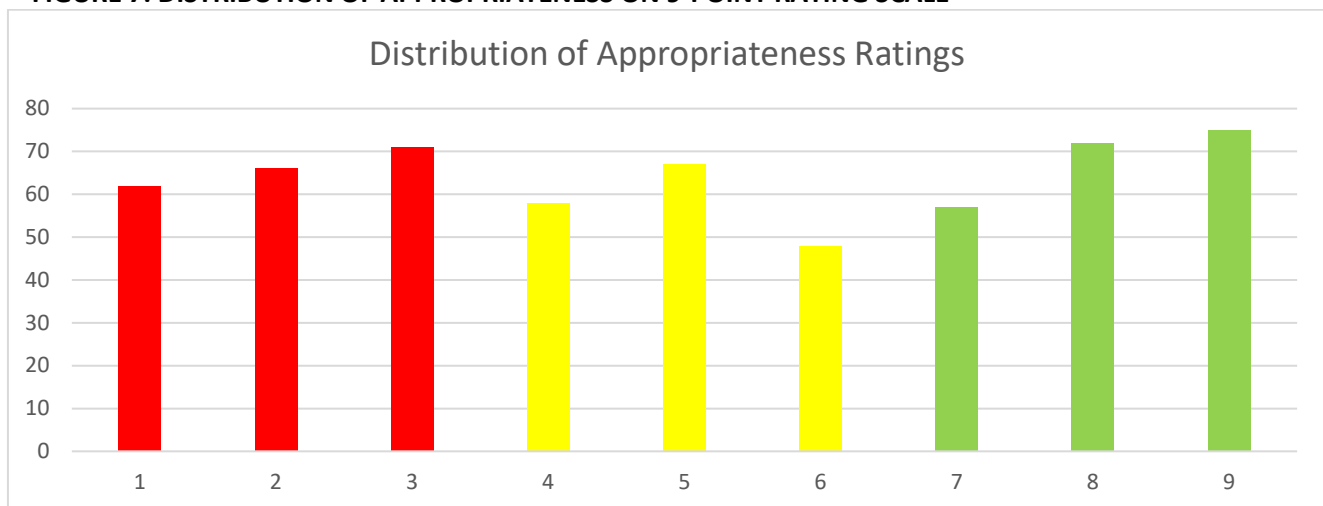


TABLE 2: APPROPRIATENESS RATINGS BY PATIENT SCENARIO

Interpreting the AUC tables:

- Each procedure contains the appropriateness (i.e., appropriate, may be appropriate, or rarely appropriate) for each patient scenario, followed by the median panel rating, and the panel’s agreement in parentheses.

Patient Indications	Treatment	Appropriateness Rating
Scenario 1: Non-operative, Low, Objectively Stable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 2: Non-operative, Low, Objectively Stable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 3: Non-operative, Low, Objectively Stable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 4: Non-operative, Low, Objectively Stable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 5: Non-operative, Low, Objectively Stable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 6: Non-operative, Low, Objectively Stable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [5] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 7: Non-operative, Low, Objectively Stable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [6]
Patient Indications	Treatment	Appropriateness Rating
Scenario 8: Non-operative, Low, Objectively Stable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [6]
Patient Indications	Treatment	Appropriateness Rating
Scenario 9: Non-operative, Low, Objectively Stable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	May Be Appropriate [6]

Scenario 10: Non-operative, Low, Objectively Stable, Subjectively Stable, High, 6 Months	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [6] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 11: Non-operative, Low, Objectively Stable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	May Be Appropriate [4]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [7] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 12: Non-operative, Low, Objectively Stable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	Rarely Appropriate [3] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 13: Non-operative, Low, Objectively Stable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 14: Non-operative, Low, Objectively Stable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [5] (-)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 15: Non-operative, Low, Objectively Stable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 16: Non-operative, Low, Objectively Stable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 17: Non-operative, Low, Objectively Stable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 18: Non-operative, Low, Objectively Stable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 19: Non-operative, Low, Objectively Stable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 20: Non-operative, Low, Objectively Stable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 21: Non-operative, Low, Objectively Stable, Subjectively Unstable, High, 3 Months	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 22: Non-operative, Low, Objectively Stable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 23: Non-operative, Low, Objectively Stable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 24: Non-operative, Low, Objectively Stable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	May Be Appropriate [5]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 25: Non-operative, Low, Objectively Unstable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 26: Non-operative, Low, Objectively Unstable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 27: Non-operative, Low, Objectively Unstable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 28: Non-operative, Low, Objectively Unstable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 29: Non-operative, Low, Objectively Unstable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 30: Non-operative, Low, Objectively Unstable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 31: Non-operative, Low, Objectively Unstable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [8]

Scenario 32: Non-operative, Low, Objectively Unstable, Subjectively Stable, Medium, 12 Months	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 33: Non-operative, Low, Objectively Unstable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 34: Non-operative, Low, Objectively Unstable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 35: Non-operative, Low, Objectively Unstable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 36: Non-operative, Low, Objectively Unstable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 37: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 38: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 39: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 40: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 41: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 42: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [8] (+)

Scenario 43: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 9 Months	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 44: Non-operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 45: Non-operative, Low, Objectively Unstable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 46: Non-operative, Low, Objectively Unstable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 47: Non-operative, Low, Objectively Unstable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 48: Non-operative, Low, Objectively Unstable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 49: Non-operative, High, Objectively Stable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 50: Non-operative, High, Objectively Stable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [4] (-)
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 51: Non-operative, High, Objectively Stable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 52: Non-operative, High, Objectively Stable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 53: Non-operative, High, Objectively Stable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [7]

Scenario 54: Non-operative, High, Objectively Stable, Subjectively Stable, Medium, 6 Months	Modified Return to Play	Appropriate [7] (+)
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 55: Non-operative, High, Objectively Stable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [6] (-)
Patient Indications	Treatment	Appropriateness Rating
Scenario 56: Non-operative, High, Objectively Stable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [7]
Patient Indications	Treatment	Appropriateness Rating
Scenario 57: Non-operative, High, Objectively Stable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 58: Non-operative, High, Objectively Stable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 59: Non-operative, High, Objectively Stable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	May Be Appropriate [4]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 60: Non-operative, High, Objectively Stable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	Rarely Appropriate [3] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 61: Non-operative, High, Objectively Stable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 62: Non-operative, High, Objectively Stable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 63: Non-operative, High, Objectively Stable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 64: Non-operative, High, Objectively Stable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 65: Non-operative, High, Objectively Stable, Subjectively Unstable, Medium, 3 Months	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 66: Non-operative, High, Objectively Stable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 67: Non-operative, High, Objectively Stable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 68: Non-operative, High, Objectively Stable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 69: Non-operative, High, Objectively Stable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 70: Non-operative, High, Objectively Stable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 71: Non-operative, High, Objectively Stable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 72: Non-operative, High, Objectively Stable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 73: Non-operative, High, Objectively Unstable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 74: Non-operative, High, Objectively Unstable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 75: Non-operative, High, Objectively Unstable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [8] (+)

Scenario 76: Non-operative, High, Objectively Unstable, Subjectively Stable, Low, 12 Months	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 77: Non-operative, High, Objectively Unstable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 78: Non-operative, High, Objectively Unstable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 79: Non-operative, High, Objectively Unstable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 80: Non-operative, High, Objectively Unstable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 81: Non-operative, High, Objectively Unstable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 82: Non-operative, High, Objectively Unstable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 83: Non-operative, High, Objectively Unstable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 84: Non-operative, High, Objectively Unstable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 85: Non-operative, High, Objectively Unstable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 86: Non-operative, High, Objectively Unstable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 87: Non-operative, High, Objectively Unstable, Subjectively Unstable, Low, 9 Months	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 88: Non-operative, High, Objectively Unstable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 89: Non-operative, High, Objectively Unstable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 90: Non-operative, High, Objectively Unstable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 91: Non-operative, High, Objectively Unstable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 92: Non-operative, High, Objectively Unstable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 93: Non-operative, High, Objectively Unstable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 94: Non-operative, High, Objectively Unstable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 95: Non-operative, High, Objectively Unstable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 96: Non-operative, High, Objectively Unstable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 97: Operative, Low, Objectively Stable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 98: Operative, Low, Objectively Stable, Subjectively Stable, Low, 6 Months	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 99: Operative, Low, Objectively Stable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 100: Operative, Low, Objectively Stable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	May Be Appropriate [5] (-)
Patient Indications	Treatment	Appropriateness Rating
Scenario 101: Operative, Low, Objectively Stable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 102: Operative, Low, Objectively Stable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 103: Operative, Low, Objectively Stable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [7]
Patient Indications	Treatment	Appropriateness Rating
Scenario 104: Operative, Low, Objectively Stable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	Appropriate [7] (+)
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 105: Operative, Low, Objectively Stable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 106: Operative, Low, Objectively Stable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 107: Operative, Low, Objectively Stable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	Rarely Appropriate [3]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 108: Operative, Low, Objectively Stable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	Rarely Appropriate [3]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 109: Operative, Low, Objectively Stable, Subjectively Unstable, Low, 3 Months	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 110: Operative, Low, Objectively Stable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 111: Operative, Low, Objectively Stable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 112: Operative, Low, Objectively Stable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 113: Operative, Low, Objectively Stable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 114: Operative, Low, Objectively Stable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 115: Operative, Low, Objectively Stable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 116: Operative, Low, Objectively Stable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 117: Operative, Low, Objectively Stable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 118: Operative, Low, Objectively Stable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 119: Operative, Low, Objectively Stable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [7]

Scenario 120: Operative, Low, Objectively Stable, Subjectively Unstable, High, 12 Months	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 121: Operative, Low, Objectively Unstable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 122: Operative, Low, Objectively Unstable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	Rarely Appropriate [3] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 123: Operative, Low, Objectively Unstable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 124: Operative, Low, Objectively Unstable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 125: Operative, Low, Objectively Unstable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 126: Operative, Low, Objectively Unstable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 127: Operative, Low, Objectively Unstable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 128: Operative, Low, Objectively Unstable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [6]
Patient Indications	Treatment	Appropriateness Rating
Scenario 129: Operative, Low, Objectively Unstable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 130: Operative, Low, Objectively Unstable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [7]

Scenario 131: Operative, Low, Objectively Unstable, Subjectively Stable, High, 9 Months	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 132: Operative, Low, Objectively Unstable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 133: Operative, Low, Objectively Unstable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 134: Operative, Low, Objectively Unstable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 135: Operative, Low, Objectively Unstable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 136: Operative, Low, Objectively Unstable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 137: Operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 138: Operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 139: Operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 140: Operative, Low, Objectively Unstable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 141: Operative, Low, Objectively Unstable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 142: Operative, Low, Objectively Unstable, Subjectively Unstable, High, 6 Months	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 143: Operative, Low, Objectively Unstable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 144: Operative, Low, Objectively Unstable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 145: Operative, High, Objectively Stable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 146: Operative, High, Objectively Stable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 147: Operative, High, Objectively Stable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8]
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 148: Operative, High, Objectively Stable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 149: Operative, High, Objectively Stable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 150: Operative, High, Objectively Stable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 151: Operative, High, Objectively Stable, Subjectively Stable, Medium, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [7] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 152: Operative, High, Objectively Stable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	May Be Appropriate [6]
	Modified Return to Play	Appropriate [7]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 153: Operative, High, Objectively Stable, Subjectively Stable, High, 3 Months	Modified Return to Play	Rarely Appropriate [2]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 154: Operative, High, Objectively Stable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 155: Operative, High, Objectively Stable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	May Be Appropriate [5]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Appropriate [8] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 156: Operative, High, Objectively Stable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	May Be Appropriate [4]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Appropriate [9] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 157: Operative, High, Objectively Stable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 158: Operative, High, Objectively Stable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 159: Operative, High, Objectively Stable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 160: Operative, High, Objectively Stable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 161: Operative, High, Objectively Stable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 162: Operative, High, Objectively Stable, Subjectively Unstable, Medium, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 163: Operative, High, Objectively Stable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [7] (+)

Scenario 164: Operative, High, Objectively Stable, Subjectively Unstable, Medium, 12 Months	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 165: Operative, High, Objectively Stable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 166: Operative, High, Objectively Stable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 167: Operative, High, Objectively Stable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3]
Patient Indications	Treatment	Appropriateness Rating
Scenario 168: Operative, High, Objectively Stable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 169: Operative, High, Objectively Unstable, Subjectively Stable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 170: Operative, High, Objectively Unstable, Subjectively Stable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 171: Operative, High, Objectively Unstable, Subjectively Stable, Low, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 172: Operative, High, Objectively Unstable, Subjectively Stable, Low, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 173: Operative, High, Objectively Unstable, Subjectively Stable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 174: Operative, High, Objectively Unstable, Subjectively Stable, Medium, 6 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [8]

Scenario 175: Operative, High, Objectively Unstable, Subjectively Stable, Medium, 9 Months	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 176: Operative, High, Objectively Unstable, Subjectively Stable, Medium, 12 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [5]
Patient Indications	Treatment	Appropriateness Rating
Scenario 177: Operative, High, Objectively Unstable, Subjectively Stable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 178: Operative, High, Objectively Unstable, Subjectively Stable, High, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 179: Operative, High, Objectively Unstable, Subjectively Stable, High, 9 Months	Continued Rehabilitation	Appropriate [7]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [4]
Patient Indications	Treatment	Appropriateness Rating
Scenario 180: Operative, High, Objectively Unstable, Subjectively Stable, High, 12 Months	Continued Rehabilitation	May Be Appropriate [5]
	Modified Return to Play	May Be Appropriate [6]
	Full Return to Play	May Be Appropriate [6]
Patient Indications	Treatment	Appropriateness Rating
Scenario 181: Operative, High, Objectively Unstable, Subjectively Unstable, Low, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [1] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 182: Operative, High, Objectively Unstable, Subjectively Unstable, Low, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 183: Operative, High, Objectively Unstable, Subjectively Unstable, Low, 9 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 184: Operative, High, Objectively Unstable, Subjectively Unstable, Low, 12 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 185: Operative, High, Objectively Unstable, Subjectively Unstable, Medium, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
	Continued Rehabilitation	Appropriate [9] (+)

Scenario 186: Operative, High, Objectively Unstable, Subjectively Unstable, Medium, 6 Months	Modified Return to Play	Rarely Appropriate [3]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 187: Operative, High, Objectively Unstable, Subjectively Unstable, Medium, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [2] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 188: Operative, High, Objectively Unstable, Subjectively Unstable, Medium, 12 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [5]
	Full Return to Play	Rarely Appropriate [3] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 189: Operative, High, Objectively Unstable, Subjectively Unstable, High, 3 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [2] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 190: Operative, High, Objectively Unstable, Subjectively Unstable, High, 6 Months	Continued Rehabilitation	Appropriate [9] (+)
	Modified Return to Play	Rarely Appropriate [3] (+)
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 191: Operative, High, Objectively Unstable, Subjectively Unstable, High, 9 Months	Continued Rehabilitation	Appropriate [8] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)
Patient Indications	Treatment	Appropriateness Rating
Scenario 192: Operative, High, Objectively Unstable, Subjectively Unstable, High, 12 Months	Continued Rehabilitation	Appropriate [7] (+)
	Modified Return to Play	May Be Appropriate [4]
	Full Return to Play	Rarely Appropriate [1] (+)

APPENDICES

APPENDIX A. DOCUMENTATION OF APPROVAL

AAOS BODIES THAT APPROVED THIS APPROPRIATE USE CRITERIA

Evidence-Based Quality and Value Committee: Approved on September 16, 2023

The AAOS Committee on Evidence Based Quality and Value consists of nineteen AAOS members who implement evidence-based quality initiatives such as clinical practice guidelines (CPGs), systematic literature reviews (SRs) and appropriate use criteria (AUCs). They also oversee the dissemination of related educational materials and promote the utilization of orthopaedic value products by the Academy's leadership and its members

Research and Quality Council: Approved on October 21, 2023

The Research and Quality Council promotes ethically and scientifically sound clinical and translational research to sustain patient care in musculoskeletal disorders. The Council also serves as the primary resource for educating its members, the public, and public policy makers regarding evidenced-based medical practice, orthopaedic devices and biologics, regulatory pathways and standards development, patient safety, and other related important research and quality areas. The Council is comprised of the chairs of the committees on Devices, Biologics, and Technology, Patient Safety, Research Development, U.S. and chair and section leaders of the Evidence Based Quality and Value committee. Also, on the Council are the second vice-president, three members at large, and representatives of the Diversity Advisory Board, Women's Health Issues Advisory Board, Board of Specialty Societies (BOS), Board of Councilors (BOC), Communications Cabinet, Orthopaedic Research Society (ORS), Orthopedic Research and Education Foundation (OREF).

Board of Directors: Approved on December 1, 2023

The 18-member AAOS Board of Directors manages the affairs of the AAOS, sets policy, and determines and continually reassesses the Strategic Plan.

APPENDIX B. DISCLOSURE INFORMATION

RETURN TO PLAY TO PRE-INJURY LEVEL FOLLOWING ACL INJURY WRITING PANEL MEMBER DISCLOSURES

[BLINDED FOR REVIEW]

RETURN TO PLAY TO PRE-INJURY LEVEL FOLLOWING ACL INJURY RATING PANEL MEMBER DISCLOSURES

[BLINDED FOR REVIEW]

APPENDIX C. REFERENCES

1. Fitch K, Bernstein SJ, Aguilar MD et al. *The RAND/UCLA Appropriateness Method User's Manual*. Santa Monica, CA: RAND Corporation; 2001.
2. Herzog MM, Marshall SW, Lund JL, Pate V, Mack CD, Spang JT. Trends in Incidence of ACL Reconstruction and Concomitant Procedures Among Commercially Insured Individuals in the United States, 2002-2014. *Sports Health*. 2018 Nov/Dec;10(6):523-31
3. Buller LT, Best MJ, Baraga MG, Kaplan LD: Trends in anterior cruciate ligament reconstruction in the United States. *Orthop J Sports Med* 2015;3:2325967114563664.
4. Mall NA, Chalmers PN, Moric M, et al.: Incidence and trends of anterior cruciate ligament reconstruction in the United States. *Am J Sports Med* 2014;42:2363-2370
5. Loes, M. de, Lars J. Dahlstedt, and Roland Thomée. "A 7-year study on risks and costs of knee injuries in male and female youth participants in 12 sports." *Scandinavian journal of medicine & science in sports* 10.2 (2000): 90-97.
6. Agel, Julie, Elizabeth A. Arendt, and Boris Bershadsky. "Anterior cruciate ligament injury in national collegiate athletic association basketball and soccer: a 13-year review." *The American journal of sports medicine* 33.4 (2005): 524-531.
7. Arendt, Elizabeth, and Randall Dick. "Knee injury patterns among men and women in collegiate basketball and soccer: NCAA data and review of literature." *The American journal of sports medicine* 23.6 (1995): 694-701
8. Gornitzky, Alex L., et al. "Sport-specific yearly risk and incidence of anterior cruciate ligament tears in high school athletes: a systematic review and meta-analysis." *The American journal of sports medicine* 44.10 (2016): 2716-2723.
9. Boden BP, Dean GS, Feagin JA Jr, Garrett WE Jr: Mechanisms of anterior cruciate ligament injury. *Orthopedics* 2000;23(6):573-578.