carelon

Status: Revised

Effective Date: 11/05/2023

Doc ID: MSK02-1123.1

Last Review Date: 04/12/2023

Approval and implementation dates for specific health plans may vary. Please consult the applicable health plan for more details.

Clinical Appropriateness Guidelines

Musculoskeletal

Appropriate Use Criteria: Joint Surgery

Proprietary

Table of Contents

Description and Application of the Guidelines

The Carelon Clinical Appropriateness Guidelines (hereinafter “the Carelon Clinical Appropriateness Guidelines” or the “Guidelines”) are designed to assist providers in making the most appropriate treatment decision for a specific clinical condition for an individual. The Guidelines establish objective and evidence-based criteria for medical necessity determinations, where possible, that can be used in support of the following:

- To establish criteria for when services are medically necessary
- To assist the practitioner as an educational tool
- To encourage standardization of medical practice patterns
- To curtail the performance of inappropriate and/or duplicate services
- To address patient safety concerns
- To enhance the quality of health care
- To promote the most efficient and cost-effective use of services

The Carelon guideline development process complies with applicable accreditation and legal standards, including the requirement that the Guidelines be developed with involvement from appropriate providers with current clinical expertise relevant to the Guidelines under review and be based on the most up-to-date clinical principles and best practices. Resources reviewed include widely used treatment guidelines, randomized controlled trials or prospective cohort studies, and large systematic reviews or meta-analyses. Carelon reviews all of its Guidelines at least annually.

Carelon makes its Guidelines publicly available on its website. Copies of the Guidelines are also available upon oral or written request. Additional details, such as summaries of evidence, a list of the sources of evidence, and an explanation of the rationale that supports the adoption of the Guidelines, are included in each guideline document.

Although the Guidelines are publicly available, Carelon considers the Guidelines to be important, proprietary information of Carelon, which cannot be sold, assigned, leased, licensed, reproduced or distributed without the written consent of Carelon.

Carelon applies objective and evidence-based criteria, and takes individual circumstances and the local delivery system into account when determining the medical appropriateness of health care services. The Carelon Guidelines are just guidelines for the provision of specialty health services. These criteria are designed to guide both providers and reviewers to the most appropriate services based on a patient’s unique circumstances. In all cases, clinical judgment consistent with the standards of good medical practice should be used when applying the Guidelines. Guideline determinations are made based on the information provided at the time of the request. It is expected that medical necessity decisions may change as new information is provided or based on unique aspects of the patient’s condition. The treating clinician has final authority and responsibility for treatment decisions regarding the care of the patient and for justifying and demonstrating the existence of medical necessity for the requested service. The Guidelines are not a substitute for the experience and judgment of a physician or other health care professionals. Any clinician seeking to apply or consult the Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment.

The Guidelines do not address coverage, benefit or other plan specific issues. Applicable federal and state coverage mandates take precedence over these clinical guidelines, and in the case of reviews for Medicare Advantage Plans, the Guidelines are only applied where there are not fully established CMS criteria. If requested by a health plan, Carelon will review requests based on health plan medical policy/guidelines in lieu of the Carelon Guidelines. Pharmaceuticals, radiotracers, or medical devices used in any of the diagnostic or therapeutic interventions listed in the Guidelines must be FDA approved or conditionally approved for the intended use. However, use of an FDA approved or conditionally approved product does not constitute medical necessity or guarantee reimbursement by the respective health plan.

The Guidelines may also be used by the health plan or by Carelon for purposes of provider education, or to review the medical necessity of services by any provider who has been notified of the need for medical necessity review, due to billing practices or claims that are not consistent with other providers in terms of frequency or some other manner.

General Clinical Guideline

Clinical Appropriateness Framework

Critical to any finding of clinical appropriateness under the guidelines for a specific diagnostic or therapeutic intervention are the following elements:

- Prior to any intervention, it is essential that the clinician confirm the diagnosis or establish its pretest likelihood based on a complete evaluation of the patient. This includes a history and physical examination and, where applicable, a review of relevant laboratory studies, diagnostic testing, and response to prior therapeutic intervention.
- The anticipated benefit of the recommended intervention is likely to outweigh any potential harms, including from delay or decreased access to services that may result (net benefit).
- Widely used treatment guidelines and/or current clinical literature and/or standards of medical practice should support that the recommended intervention offers the greatest net benefit among competing alternatives.
- There exists a reasonable likelihood that the intervention will change management and/or lead to an improved outcome for the patient.

Providers may be required to submit clinical documentation in support of a request for services. Such documentation must a) accurately reflect the clinical situation at the time of the requested service, and b) sufficiently document the ordering provider's clinical intent.

If these elements are not established with respect to a given request, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would justify a finding of clinical appropriateness. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account to the extent permitted by law.

Simultaneous Ordering of Multiple Diagnostic or Therapeutic Interventions

Requests for multiple diagnostic or therapeutic interventions at the same time will often require a peer-to-peer conversation to understand the individual circumstances that support the medical necessity of performing all interventions simultaneously. This is based on the fact that appropriateness of additional intervention is often dependent on the outcome of the initial intervention.

Additionally, either of the following may apply:

- Current literature and/or standards of medical practice support that one of the requested diagnostic or therapeutic interventions is more appropriate in the clinical situation presented; or
- One of the diagnostic or therapeutic interventions requested is more likely to improve patient outcomes based on current literature and/or standards of medical practice.

Repeat Diagnostic Intervention

In general, repeated testing of the same anatomic location for the same indication should be limited to evaluation following an intervention, or when there is a change in clinical status such that additional testing is required to determine next steps in management. At times, it may be necessary to repeat a test using different techniques or protocols to clarify a finding or result of the original study.

Repeated testing for the same indication using the same or similar technology may be subject to additional review or require peer-to-peer conversation in the following scenarios:

- Repeated diagnostic testing at the same facility due to technical issues
- Repeated diagnostic testing requested at a different facility due to provider preference or quality concerns

- Repeated diagnostic testing of the same anatomic area based on persistent symptoms with no clinical change, treatment, or intervention since the previous study
- Repeated diagnostic testing of the same anatomic area by different providers for the same member over a short period of time

Repeat Therapeutic Intervention

In general, repeated therapeutic intervention in the same anatomic area is considered appropriate when the prior intervention proved effective or beneficial and the expected duration of relief has lapsed. A repeat intervention requested prior to the expected duration of relief is not appropriate unless it can be confirmed that the prior intervention was never administered. Requests for on-going services may depend on completion of previously authorized services in situations where a patient's response to authorized services is relevant to a determination of clinical appropriateness.

Shoulder Arthroplasty (Total/Partial/Revision Shoulder Replacement)

Description and Scope

Shoulder arthroplasty includes several procedures to replace components of the shoulder joint, in part or in total, with the goal of improving function and reducing pain. Prosthetic replacement of the humeral head and the glenoid (total arthroplasty) is most commonly performed for joint damage due to osteoarthritis. Total shoulder arthroplasty requires an intact medial glenoid to support the glenoid prosthesis.

Shoulder hemiarthroplasty (partial replacement) may be used to address isolated humeral head pathology (avascular necrosis), some fractures, or as an option for rotator cuff tear arthropathy.

Reverse total shoulder arthroplasty is similar to standard arthroplasty in that both components of the joint are replaced but the ball and socket portions of the joint are reversed, allowing the deltoid muscle to assume partial function of the rotator cuff. This procedure is typically utilized when there is concomitant rotator cuff disease.

This guideline addresses shoulder arthroplasty when performed as an **elective, non-emergent** procedure and not as part of the care of a congenital condition, acute or traumatic event such as fracture (excluding fracture of implant and periprosthetic fracture).

All shoulder arthroplasties are inclusive of the reattachment of any muscles divided for access to the shoulder, accompanying excision of osteophytes, acromioplasty, synovectomy and shoulder arthrotomy with associated removal of debris.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Clinical notes describing symptom duration and severity, specific functional limitations related to symptoms, and type and duration of all therapeutic measures provided. If conservative management is not appropriate, the reason must be clearly documented.

Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)

    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record

- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging reports obtained within the past 12 months describing the degree of cartilage damage as determined by either or both of the following methods:

- X-ray report or provider interpretation of x-rays that utilizes or can be correlated with the Kellgren-Lawrence grading system of osteoarthritis
- MRI report from a radiologist that utilizes or can be correlated with the modified Outerbridge or similar classification system related to articular cartilage injury and osteoarthritis

*See **Appendix** for a description of these grading systems.*

For x-ray interpretation, the provider shall submit a detailed imaging description that correlates with clinical findings of the requested procedure. In the absence of a detailed description, the provider may submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

For advanced imaging (CT, MRI, ultrasound, bone scan), there must be a report from a radiologist that correlates with clinical findings. In the absence of such a report, the summary findings from the radiology report should be included in the clinical records.

Imaging reports should be thorough and describe the presence or absence of subchondral cysts, subchondral sclerosis, periarticular osteophytes, joint subluxation, avascular necrosis, or bone on bone articulations. The degree of joint space narrowing should also be noted.

General Recommendations

Tobacco cessation. Adherence to a tobacco cessation program resulting in abstinence from tobacco for at least 6 weeks prior to surgery is strongly recommended.

Diabetes. It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to any joint replacement surgery.

Body mass index (BMI). It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

Where there are patient specific modifiable comorbidities that may adversely impact patient reported outcomes or the health status of the patient a shared decision-making process with the patient to discuss these modifiable comorbidities is strongly recommended and should be documented.

Specific Requirements

ALL of the following conditions must be present regardless of indication for which the procedure is being performed:

- Anticipated level of function should place limited demands on the shoulder joint
- Deltoid muscle must be intact
- Shoulder joint must be anatomically and structurally suited to receive selected implants (i.e., adequate bone stock to allow for firm fixation of implant)

Total Shoulder Arthroplasty

Total shoulder arthroplasty is considered medically necessary for ANY of the following indications:

- Proximal humerus fracture not amenable to internal fixation
- Malignancy involving the glenohumeral joint or surrounding soft tissue
- Advanced joint disease of the shoulder due to osteoarthritis rheumatoid arthritis, avascular necrosis (osteonecrosis), or post-traumatic arthritis when **ALL** of the following requirements are met:
    - Limited range of motion or crepitus of the glenohumeral joint on physical examination
    - Pain and loss of function of at least 6 months' duration that interferes with daily activities
    - Radiographic evidence of destructive degenerative joint disease as evidenced by 2 or more of the following:
        - Irregular joint surfaces
        - Glenoid sclerosis
        - Osteophyte changes
        - Flattened glenoid
        - Cystic changes in the humeral head
        - Joint space narrowing
    - Failure of conservative management of at least 6 weeks' duration (unless radiographs show Kellgren-Lawence grade 4)

Hemiarthroplasty

Hemiarthroplasty is considered medically necessary for ANY of the following indications:

- Proximal humerus fracture not amenable to internal fixation

- Malignancy involving the glenohumeral joint or surrounding soft tissue
- Advanced joint disease of the shoulder when criteria for total shoulder arthroplasty are met **AND** at least **ONE** of the following conditions is present:
    - Osteonecrosis of the humeral head without glenoid involvement
    - Advanced joint disease due to rotator cuff tear arthropathy
    - Glenoid bone stock inadequate to support a glenoid prosthesis
    - Glenohumeral osteoarthritis with irreparable rotator cuff tear

Reverse Shoulder Arthroplasty

Reverse shoulder arthroplasty is considered medically necessary for ANY of the following indications:

- Reconstruction after a tumor resection
- Glenohumeral osteoarthritis with irreparable rotator cuff tear
- Glenoid bone stock inadequate to support a glenoid prosthesis
- Failed hemiarthroplasty
- Failed total shoulder arthroplasty with non-repairable rotator cuff
- Shoulder fracture that is not repairable or cannot be reconstructed with other techniques
- Advanced joint disease of the shoulder when criteria for total shoulder arthroplasty are met **AND** the following condition is present:
    - Deficient rotator cuff with limited ability to actively flex the upper extremity to 90 degrees against gravity

Revision or Replacement of a Shoulder Prosthesis

Revision or replacement of a shoulder prosthesis is considered medically necessary for ANY of the following conditions when associated with pain and functional impairment:

- Aseptic loosening of one or more prosthetic components confirmed by imaging
- Fracture of one or more components of the prosthesis confirmed by imaging
- Reconstruction after the management of periprosthetic infection confirmed by gram stain and culture
- Instability of the glenoid or humeral components
- Migration of the humeral head

Contraindications

All procedures listed in this guideline are contraindicated when **ANY** of the following conditions are present:

- Active infection of the joint
- Active systemic bacteremia
- Active skin infection (exception recurrent cutaneous staph infections) or open wound within the planned surgical site of the shoulder
- Rapidly progressive neurologic disease
- Intra-articular corticosteroid injection within the past 6 weeks in the joint being replaced

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Total shoulder arthroplasty or hemiarthroplasty under conditions which would result in excessive stress on the implant including, but not limited to, Charcot joint and paralytic conditions of the shoulder
- Shoulder resurfacing, including total, hemi, or partial resurfacing (e.g., Copeland™, the Extended Articulating Surface (EAS)™ Resurfacing Heads, Global CAP™ CTA Resurfacing Shoulder Humeral Head)

Selected References

1. Carter MJ, Mikuls TR, Nayak S, Fehringer EV, Michaud K. Impact of total shoulder arthroplasty on generic and shoulder-specific health-related quality-of-life measures: a systematic literature review and meta-analysis. J Bone Joint Surg Am. 2012;94(17):e127.
2. Craig RS, Goodier H, Singh JA, Hopewell S, Rees JL. Shoulder replacement surgery for osteoarthritis and rotator cuff tear arthropathy. Cochrane Database Syst Rev. 2020;4(4):Cd012879.
3. Khan WS, Longo UG, Ahrens PM, Denaro V, Maffulli N. A systematic review of the reverse shoulder replacement in rotator cuff arthropathy, rotator cuff tears, and rheumatoid arthritis. Sports Med Arthrosc Rev. 2011;19(4):366-79.
4. Khazzam M, Gee AO, Pearl M. Management of Glenohumeral Joint Osteoarthritis. J Am Acad Orthop Surg. 2020;28(19):781-9.
5. Rasmussen JV. Outcome and risk of revision following shoulder replacement in patients with glenohumeral osteoarthritis. Acta Orthop Suppl. 2014;85(355):1-23.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

23470	Arthroplasty, glenohumeral joint; hemiarthroplasty
23472	Arthroplasty, glenohumeral joint; total shoulder (glenoid and proximal humeral replacement (eg, total shoulder))
23473	Revision of total shoulder arthroplasty, including allograft when performed; humeral or glenoid component
23474	Revision of total shoulder arthroplasty, including allograft when performed; humeral and glenoid component

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Shoulder Arthroscopy and Open Procedures

Description and Scope

Arthroscopy is a surgical procedure in which a small fiberoptic camera is inserted into the joint through a small incision. In addition to allowing the surgeon to visualize the joint, arthroscopy may also be utilized for treatment of a variety of conditions involving the joint structures.

This guideline addresses shoulder arthroscopy and open procedures when performed as an **elective, non-emergent procedure** and not as part of the care of an acute fracture.

All arthroscopic procedures of the shoulder are inclusive of diagnostic arthroscopy and manipulation under anesthesia.

All open procedures of the shoulder are inclusive of manipulation under anesthesia. Open rotator cuff repair procedures are inclusive of diagnostic arthroscopy.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Imaging report. The provider shall submit a detailed imaging report for studies obtained within the past 12 months. In the absence of a detailed report, the provider may submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

For x-ray interpretation, the provider shall submit a detailed imaging description that correlates with clinical findings of the requested procedure. In the absence of a detailed description, the provider may submit a radiologist's report.

For advanced imaging (CT, MRI, ultrasound, bone scan), there must be a report from a radiologist that correlates with clinical findings. In the absence of such a report, the summary findings from the radiology report should be included in the clinical records.

Conservative management. In the majority of cases, a period of conservative management is appropriate prior to intervention. Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)

    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation should be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting severity reporting. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Shoulder Arthroscopy

Diagnostic arthroscopy

Diagnostic arthroscopy of the shoulder joint is considered medically necessary for synovial biopsy or tissue harvest (chondrocyte), or when the involved joint meets **ALL** of the following criteria:

- Presence of **ONE** of the following symptoms
    - Significant pain and functional limitation
    - Instability (e.g., giving way, catching, clicking, locking)
    - Limited range of motion
- Presence of **ONE** of the following physical exam findings
    - Limited range of motion
    - Joint swelling
    - Inconclusive specific diagnostic exam maneuvers
    - Local muscle weakness or atrophy

- Inconclusive x-ray and/or advanced imaging studies
- Failure of at least 6 weeks of conservative management

Exclusion

In-office diagnostic arthroscopy (e.g., mi-eye 2®) is considered **not medically necessary**.

Removal of loose body

Removal of loose body is considered medically necessary when **BOTH** of the following are present:

- Radiographic evidence of acute, post-traumatic, intra-articular foreign body or displaced fracture fragment (larger than the size of an arthroscopy cannula [5 mm or larger] when other shoulder procedure codes are authorized)
- Shoulder pain associated with grinding, catching, locking, or popping, and exam findings confirm pain with limited range of motion

Exclusion

Removal of loose body for Kellgren-Lawrence grade 4 osteoarthritis is considered **not medically necessary**.

Rotator Cuff Repair

For primary rotator cuff repair, adherence to a tobacco cessation program resulting in abstinence from tobacco for at least 6 weeks prior to surgery is strongly recommended.

Acute full thickness tear

Rotator cuff repair is considered medically necessary for an acute full thickness tear when **ALL** of the following criteria are met:

- Traumatic injury within the preceding 3 months with no preexisting shoulder pain (For traumatic injuries that occurred more than 3 months ago, see chronic or degenerative full thickness tear)
- Shoulder pain ≥ 4 on the VAS scale exacerbated by movement
- Weakness of rotator cuff muscle(s)
- Physical exam demonstrating a positive response to at least **ONE** of the following tests:
  - Drop arm test
  - Painful arc test
  - Full/empty can test
  - Weakness of external/internal rotation
- Advanced imaging confirms features of an acute full thickness or high-grade partial tear

Chronic or degenerative full thickness tear

Rotator cuff repair is considered medically necessary for a chronic or degenerative full thickness tear when **ALL** of the following criteria are met:

- Gradual onset of shoulder pain in the absence of a significant traumatic event within the preceding 3 months
- Pain ≥ 4 on the VAS scale which interferes with age-appropriate activities of daily living
- Weakness of rotator cuff muscle(s)

- Physical exam demonstrating a positive response to at least **ONE** of the following tests:
    - Drop arm test
    - Painful arc test
    - Full/empty can test
    - Weakness of external/internal rotation or abduction
- Recent advanced imaging confirms features of a degenerative full thickness tear
- Failure of at least 6 weeks of conservative management

Partial thickness tear

Rotator cuff repair is considered medically necessary for a partial thickness tear when **ALL** of the following criteria are met:

- Pain ≥ 4 on the VAS scale which interferes with age-appropriate activities of daily living
- Weakness of rotator cuff muscle(s)
- Physical exam demonstrating a positive response to at least **ONE** of the following tests:
    - Drop arm test
    - Painful arc test
    - Full/empty can test
    - Weakness of external rotation
- Recent advanced imaging confirms a partial thickness tear
- Symptoms present for at least 3 months
- Failure of at least 6 weeks of conservative management

Contraindications

Rotator cuff repair is contraindicated when **ANY** of the following are present:

- Active infection of the joint
- Active systemic bacteremia
- Active skin infection (exception recurrent cutaneous staph infections) or open wound within the planned surgical site of the shoulder
- Rapidly progressive neurological disease

Revision Rotator Cuff Repair

Tobacco cessation requirement: adherence to a tobacco cessation program resulting in abstinence from tobacco for at least 6 weeks prior to revision surgery is required.

Revision rotator cuff repair

Revision rotator cuff repair is considered medically necessary when **ALL** of the following criteria are met:

- Documentation of nicotine-free status for at least 6 weeks prior to surgery
- Shoulder pain ≥ 4 on the VAS scale exacerbated by movement
- Weakness of rotator cuff muscle(s)
- Recent advanced imaging confirms a full thickness tear

- Failure of at least 12 weeks of conservative management

Contraindications

Revision rotator cuff repair is contraindicated when **ANY** of the following apply or are present:

- Rotator cuff arthropathy defined as a combination of arthritis and lack of rotator cuff
- Recent history of a revision surgery
- Active infection of the joint
- Active systemic bacteremia
- Active skin infection (exception recurrent cutaneous staph infections) or open wound within the planned surgical site of the shoulder
- Rapidly progressive neurological disease
- Wheelchair bound and/or assistive device dependent

Exclusions for Rotator Cuff Repair

Indications other than those addressed in rotator cuff repair and revision surgery are considered **not medically necessary** including, but not limited to, the following:

- Treatment of asymptomatic, full thickness rotator cuff tears
- Deltoid or rotator cuff paralysis
- Use of xenografts or biologic scaffold for augmentation or bridging reconstruction
- Use of platelet-rich plasma or other biologics
- Concomitant subacromial decompression/acromioplasty

Labrum Repair

Labral tear including superior labral anterior-posterior (SLAP) tears

Labrum repair is considered medically necessary when **ALL** of the following criteria are met:

- Shoulder pain ≥ 4 on the VAS scale which interferes with age-appropriate activities of daily living
- Symptoms aggravated by heavy lifting, pushing, and overhead motion
- Physical exam demonstrating a positive response to at least **ONE** of the following tests:
    - O'Brien (active compression) test
    - Anterior slide test
    - Biceps load test (I and II)
    - Pain provocation test
    - Crank test
    - Jobe relocation test
    - Forced shoulder abduction and elbow flexion test
    - Resisted supination external rotation test
- MRI demonstrating a labral tear that is not a Bankart lesion and is consistent with subjective and objective findings
- Failure of at least 12 weeks of conservative management

Other Arthroscopic and Open Procedures

Acromioclavicular arthritis

Partial claviculectomy (includes Mumford procedure) is considered medically necessary when **ALL** of the following criteria are met:

- Pain at the acromioclavicular (AC) joint aggravated by shoulder motion
- Positive cross-arm adduction test
- Tenderness over the acromioclavicular joint
- Imaging findings (x-ray or MRI) consistent with acromioclavicular joint arthritis (**ONE** of the following)
    - Moderate to severe degenerative joint disease of the acromioclavicular joint, distal clavicle edema, or osteolysis of the distal clavicle on MRI
    - Moderate to severe acromioclavicular joint arthritis on x-ray
- Failure of at least 12 weeks of conservative management

Adhesive capsulitis

Arthroscopically assisted lysis of adhesions/capsular release is considered medically necessary for post-traumatic, post-surgical, or idiopathic stiffness of the shoulder when **ALL** of the following criteria are met:

- Shoulder pain ≥ 4 on the VAS scale which interferes with age-appropriate activities of daily living
- Reduced passive range of motion of the affected glenohumeral joint by at least 50% compared to unaffected shoulder
- Failure of at least 12 weeks of conservative management

Manipulation under anesthesia (MUA) is considered medically necessary for post-traumatic, post-surgical, or idiopathic stiffness of the shoulder when **ALL** of the following criteria are met:

- Shoulder pain ≥ 4 on the VAS scale which interferes with age-appropriate activities of daily living
- Reduced passive range of motion of the affected glenohumeral joint by at least 50% compared to unaffected shoulder
- Failure of at least 12 weeks of conservative management

Chronic shoulder instability or laxity

Capsulorrhaphy (Bankart procedure) is considered medically necessary when **ALL** of the following criteria are met:

- History of a shoulder dislocation or recurrent subluxation
- Positive apprehension/relocation test
- Shoulder pain and/or instability which interferes with age-appropriate activities of daily living
- MRI demonstrates at least **ONE** of the following:
    - Bankart/labral lesion consistent with the clinical instability
    - Hill-Sachs lesion
    - Capsular tear
    - Capsular redundancy with clinical multidirectional instability
- Failure of at least 12 weeks of conservative management (unless history of traumatic dislocation and multiple dislocations during management)*

**For traumatic instability, early surgery may be considered for individuals with large bone defects or individuals under age 35.*

Subacromial impingement syndrome

Subacromial decompression/acromioplasty is considered medically necessary for **ANY** of the following indications:

- Symptomatic os acromiale
- Malunited fractures of the acromion/proximal humerus resulting in symptomatic mechanical impingement
- Local benign/malignant tumor resulting in symptomatic mechanical impingement

Subacromial decompression/acromioplasty is considered **not medically necessary** for all other indications.

Synovectomy

Synovectomy refers to removal of the synovial lining of the joint when it has become symptomatic due to inflammation, irritation, or pathology. Synovectomy may be performed in a single joint compartment (limited) or multiple compartments (extensive).

Partial or complete synovectomy is considered medically necessary when **BOTH** of the following criteria are met:

- Symptomatic (pain, swelling, limited function) synovitis caused by **ANY** of the following:
    - Synovial plica (partial synovectomy)
    - Inflammatory arthritides (e.g., rheumatoid arthritis, psoriatic arthritis)
    - Crystalline arthropathy (e.g., gout, pseudogout)
    - Felty's syndrome
    - Pigmented villonodular synovitis (PVNS)
    - Synovial hemangioma
    - Synovial chondromatosis/osteochondromatosis
    - Hemophilic synovitis or arthropathy
    - Infection (bacterial or fungal septic arthritis)
- Failure of at least 12 weeks of conservative management

Exclusion

A separate synovectomy performed for exposure or visualization, or for post-traumatic reactive synovitis is considered **not medically necessary**.

Debridement

Debridement of discrete structures of the shoulder (e.g., humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor complex, labrum, articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies]) is considered medically necessary when **ALL** of the following criteria are met:

- Shoulder pain unresponsive to 12 weeks of conservative management
- Surgical pathology is confirmed by imaging
- Limited debridement involves 1 or 2 discrete structures
- Extensive debridement involves 3 or more discrete structures

Tendinopathy of the long head of the biceps

Biceps tenodesis or tenotomy is considered medically necessary for shoulder pain when **ALL** of the following criteria are met:

- Pain in the front of the shoulder and/or clicking, popping or catching sensation when using the arm and shoulder
- Clinical exam is consistent with long head of biceps pathology (at least **two** of the following: anterior shoulder pain, weakness, tenderness over the biceps groove, pain in the anterior shoulder during resisted supination of the forearm [Yergason test], positive Speed test)
- MRI findings consistent with biceps tendinopathy **OR** when criteria for SLAP tear are met
- Failure of at least 12 weeks of supervised conservative management **OR** at least 6 weeks when criteria for another shoulder procedure are met

OR

- Symptomatic acute proximal biceps tear

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Subacromial (balloon) spacer

Selected References

1. Davies A, Singh P, Reilly P, Sabharwal S, Malhas A. Superior capsule reconstruction, partial cuff repair, graft interposition, arthroscopic debridement or balloon spacers for large and massive irreparable rotator cuff tears: a systematic review and meta-analysis. J Orthop Surg Res. 2022;17(1):552.
2. Gebremariam L, Hay EM, Koes BW, Huisstede BM. Effectiveness of surgical and postsurgical interventions for the subacromial impingement syndrome: a systematic review. Arch Phys Med Rehabil. 2011;92(11):1900-13.
3. Hughes JD, Davis B, Whicker E, Sprowls GR, Barrera L, Baradaran A, Sabzevari S, Burnham JM, Shah AA, Lin A. Nonarthroplasty options for massive, irreparable rotator cuff tears have improvement in range of motion and patient-reported outcomes at short-term follow-up: a systematic review. Knee Surg Sports Traumatol Arthrosc. 2022;16:16.
4. Huisstede BM, Koes BW, Gebremariam L, Keijsers E, Verhaar JA. Current evidence for effectiveness of interventions to treat rotator cuff tears. Man Ther. 2011;16(3):217-30.
5. Itoi E. Rotator cuff tear: physical examination and conservative treatment. J Orthop Sci. 2013;18(2):197-204.
6. Karjalainen TV, Jain NB, Page CM, Lähdeoja TA, Johnston RV, Salamh P, Kavaja L, Ardern CL, Agarwal A, Vandvik PO, Buchbinder R. Subacromial decompression surgery for rotator cuff disease. Cochrane Database Syst Rev. 2019;1(1):Cd005619.
7. Khazzam M, Gee AO, Pearl M. Management of Glenohumeral Joint Osteoarthritis. J Am Acad Orthop Surg. 2020;28(19):781-9.
8. Lähdeoja T, Karjalainen T, Jokihaara J, Salamh P, Kavaja L, Agarwal A, Winters M, Buchbinder R, Guyatt G, Vandvik PO, Ardern CL. Subacromial decompression surgery for adults with shoulder pain: a systematic review with meta-analysis. Br J Sports Med. 2020;54(11):665-73.
9. Li Y, Zhao L, Zhu L, Li J, Chen A. Internal fixation versus nonoperative treatment for displaced 3-part or 4-part proximal humeral fractures in elderly patients: a meta-analysis of randomized controlled trials. PloS one. 2013;8(9):e75464.
10. Mao F, Zhang DH, Peng XC, Liao Y. Comparison of Surgical versus Non-Surgical Treatment of Displaced 3- and 4-Part Fractures of the Proximal Humerus: A Meta-Analysis. J Invest Surg. 2015;28(4):215-24.
11. Saltychev M, Virolainen P, Laimi K. Conservative treatment or surgery for shoulder impingement: updated meta-analysis. Disability and rehabilitation. 2020;42(11):1634-5.
12. Song L, Miao L, Zhang P, Wang WL. Does concomitant acromioplasty facilitate arthroscopic repair of full-thickness rotator cuff tears? A meta-analysis with trial sequential analysis of randomized controlled trials. SpringerPlus. 2016;5(1):685.
13. Sun Z, Fu W, Tang X, Chen G, Li J. Systematic review and Meta-analysis on acromioplasty in arthroscopic repair of full-thickness rotator cuff tears. Acta Orthop Belg. 2018;84(1):54-61.

14. Vandvik PO, Lähdeoja T, Ardern C, Buchbinder R, Moro J, Brox JI, Burgers J, Hao Q, Karjalainen T, van den Bekerom M, Noorduyn J, Lytvyn L, Siemieniuk RAC, Albin A, Shunjie SC, Fisch F, Proulx L, Guyatt G, Agoritsas T, Poolman RW. Subacromial decompression surgery for adults with shoulder pain: a clinical practice guideline. BMJ. 2019;364:l294.
15. Weber S, Chahal J. Management of Rotator Cuff Injuries. J Am Acad Orthop Surg. 2020;28(5):e193-e201.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

23000	Removal of subdeltoid calcareous deposit
23020	Capsular contracture release (eg, Sever type procedure)
23105	Arthrotomy; glenohumeral joint, with synovectomy, with or without biopsy
23107	Arthrotomy, glenohumeral joint, with joint exploration, with or without removal of loose or foreign body
23120	Claviculectomy; partial
23130	Acromioplasty or acromionectomy, partial, with or without coracoacromial ligament release
23410	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; acute
23412	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; chronic
23415	Coracoacromial ligament release, with or without acromioplasty
23420	Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (includes acromioplasty)
23430	Tenodesis of long tendon of biceps
23440	Resection or transplantation of long tendon of biceps
23450	Capsulorrhaphy, anterior; Putti-Platt procedure or Magnuson-type operation
23455	Capsulorrhaphy, anterior; with labral repair (eg, Bankart procedure)
23460	Capsulorrhaphy, anterior, any type; with bone block
23462	Capsulorrhaphy, anterior, any type; with coracoid process transfer
23465	Capsulorrhaphy, glenohumeral joint, posterior, with or without bone block
23466	Capsulorrhaphy, glenohumeral joint, any type multidirectional instability
23700	Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded)
29805	Arthroscopy, shoulder, diagnostic, with or without synovial biopsy (separate procedure)
29806	Arthroscopy, shoulder, surgical; capsulorrhaphy
29807	Arthroscopy, shoulder, surgical; repair of SLAP lesion
29819	Arthroscopy, shoulder, surgical; with removal of loose body or foreign body
29820	Arthroscopy, shoulder, surgical; synovectomy, partial
29821	Arthroscopy, shoulder, surgical; synovectomy, complete
29822	Arthroscopy, shoulder, surgical; debridement, limited, 1 or 2 discrete structures (eg, humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor complex, labrum,

	articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies])
29823	Arthroscopy, shoulder, surgical; debridement, extensive, 3 or more discrete structures (eg, humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor complex, labrum, articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies])
29824	Arthroscopy, shoulder, surgical; distal claviculectomy including distal articular surface
29825	Arthroscopy, shoulder, surgical; with lysis and resection of adhesions, with or without manipulation
29826	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with coracoacromial ligament (i.e., arch) release, when performed (list separately in addition to code for primary procedure)
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
29828	Arthroscopy, shoulder, surgical; biceps tenodesis

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Hip Arthroplasty (Total/Partial/Revision Hip Replacement, Acetabuloplasty, Resection Arthroplasty)

Description and Scope

Total hip arthroplasty (THA), also referred to as total hip replacement (THR), involves removal of the femoral head and acetabulum and placement of a prosthesis anchored to the bone. Numerous implants composed of various biomaterials have been approved by the U.S. Food and Drug Administration (FDA) for use in hip arthroplasty. The goal of the procedure is long-term pain relief and restoration of function. All arthroplasty and acetabuloplasty/resection arthroplasty procedures are inclusive of synovectomy, removal of osteophytes, removal of loose bodies, manipulation of the hip, and release or repair of structures to gain entrance to the hip joint.

Degenerative joint disease, or osteoarthritis, is the most common condition leading to the need for total hip arthroplasty. Other conditions that may also cause significant hip joint damage include neoplasm, femoral fracture, avascular necrosis (osteonecrosis), inflammatory arthritis (e.g., rheumatoid arthritis) and developmental hip dysplasia.

This guideline addresses hip arthroplasty when performed as an **elective, non-emergent** procedure and not as part of the care of an acute fracture (excluding fracture of implant and periprosthetic fracture).

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Clinical notes describing symptom duration and severity, specific functional limitations related to symptoms, and type and duration of all therapeutic measures provided. If conservative management is not appropriate, the reason must be clearly documented.

Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)
    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record

- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging reports obtained within the past 12 months describing the degree of cartilage damage as determined by either or both of the following methods:

- X-ray report or provider interpretation of x-rays that utilizes or can be correlated with the Kellgren-Lawrence grading system of osteoarthritis
- MRI report from a radiologist that utilizes or can be correlated with the modified Outerbridge or similar classification system related to articular cartilage injury and osteoarthritis

*See **Appendix** for a description of these grading systems.*

For x-ray interpretation, the provider shall submit a detailed imaging description that correlates with clinical findings of the requested procedure. In the absence of a detailed description, the provider may submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

For advanced imaging (CT, MRI, ultrasound, bone scan), there must be a report from a radiologist that correlates with clinical findings. In the absence of such a report, the summary findings from the radiology report should be included in the clinical records.

Imaging reports should be thorough and describe the presence or absence of subchondral cysts, subchondral sclerosis, periarticular osteophytes, joint subluxation, avascular necrosis, or bone on bone articulations. The degree of joint space narrowing should also be noted.

General Recommendations

Tobacco cessation. Adherence to a tobacco cessation program resulting in abstinence from tobacco for at least 6 weeks prior to surgery is strongly recommended.

Diabetes. It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to any joint replacement surgery.

Body mass index (BMI). It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

Where there are patient specific modifiable comorbidities that may adversely impact patient reported outcomes or the health status of the patient a shared decision-making process with the patient to discuss these modifiable comorbidities is strongly recommended and should be documented.

Primary Total Hip Arthroplasty

Primary total hip arthroplasty is considered medically necessary for **ANY** of the following indications:

- Primary and secondary tumors of the proximal femur
- Hip fracture or complications including malunion, nonunion or failed prior fixation
- Failed previous hip fracture fixation
- Avascular necrosis (osteonecrosis) with unresponsive severe pain
- Revision of hip arthrodesis
- Joint damage or destruction due to osteoarthritis, inflammatory disease or other chronic condition when **ALL** of the following requirements have been met:
    - Imaging evidence of significant joint destruction and cartilage loss, defined as Tönnis grade 3, modified Outerbridge grade III – IV, or Kellgren-Lawrence grade 3 – 4
    - Limited range of motion, antalgic gait and disabling pain of at least 3 months' duration
    - Pain with passive motion of the hip
    - Failure of at least 3 months of non-surgical conservative management (unless radiographs show Kellgren-Lawence grade 4)
    - Functional limitation secondary to hip pathology which interferes with the ability to perform age-appropriate daily activities

Primary Partial Hip Arthroplasty

Partial hip arthroplasty (unipolar, bipolar, hemi-) is considered medically necessary for **ANY** of the following indications:

Femoral neck fracture not amenable to internal fixation or total hip arthroplasty, or previous fixation failed

Partial hip resurfacing

Partial hip resurfacing of the femoral head is considered medically necessary when **ALL** of the following criteria are met:

- Osteonecrosis of the femoral head (less than 50% involvement) with subchondral collapse
- Imaging evidence of significant joint destruction and cartilage loss, defined as Tönnis grade 3, modified Outerbridge grade III – IV, or Kellgren-Lawrence grade 3 – 4
- Limited range of motion, antalgic gait and disabling pain of at least 3 months' duration
- Pain with passive motion of the hip
- Failure of at least 3 months of non-surgical conservative management (unless radiographs show Kellgren-Lawence grade 4)

- Functional limitation secondary to hip pathology which interferes with the ability to perform age-appropriate daily activities

Total hip resurfacing

Total hip resurfacing arthroplasty (HRA) is considered medically necessary when **ALL** of the following criteria are met:

- Active, fit individual
- Normal proximal femoral bone geometry and bone quality
- Otherwise eligible for a conventional primary total hip replacement (THR):
    - Imaging evidence of significant joint destruction and cartilage loss, defined as Tönnis grade 3, modified Outerbridge grade III – IV, or Kellgren-Lawrence grade 3 – 4
    - Limited range of motion, antalgic gait and disabling pain of at least 3 months' duration
    - Pain with passive motion of the hip
    - Failure of at least 3 months of non-surgical conservative management (unless radiographs show Kellgren-Lawence grade 4)
    - Functional limitation secondary to hip pathology which interferes with the ability to perform age-appropriate daily activities
- Likely to outlive a current conventional total hip replacement

Contraindications

Partial and total hip resurfacing are contraindicated when **ANY** of the following are present:

- Advanced age
- Severe osteoporosis
- Renal insufficiency
- Known metal hypersensitivity
- Inadequate bone stock to support the femoral implant
- Femoral neck or head cysts
- Severe hip dysplasia
- Small or bone-deficient acetabulum

Revision Total Hip Arthroplasty

Revision total hip arthroplasty is considered medically necessary when at least **ONE** of the following conditions is present:

- Aseptic loosening
- Substantial osteolysis of the weight bearing surfaces with or without periarticular osteolysis
- Progressive soft tissue or bone reaction including symptomatic synovitis
- Component instability, failure, or recall
- Displaced periprosthetic fracture or irreducible dislocation
- Hip reconstruction after previous removal of prosthesis due to infection or catastrophic failure
- Metal on metal implant:

    - An elevated synovial cobalt level
    - An increased cobalt/chromium level
- Recurrent disabling pain or significant functional disability that persists despite at least 3 months of conservative management in conjunction with **ANY** of the following:
    - Antalgic or Trendelenburg gait
    - Abnormal findings confirmed by plain radiography or imaging studies such as implant malposition or impingement
    - Leg length inequality
    - Audible noise

Acetabuloplasty (Whitman, Colonna, Haygroves, or cup type)*

Acetabuloplasty is considered medically necessary when **ONE** of the following is present:

- Acetabular arthritis where there is planned removal of articular cartilage and replacement with interposition tissue
- Hip instability due to a structurally deficient acetabulum where acetabular augmentation is planned

*See Code section for applicable CPT code 27120.

Resection Arthroplasty of the Hip

Resection arthroplasty of the hip, femoral head ostectomy, or Girdlestone resection arthroplasty is considered medically necessary when at least **ONE** of the following conditions is present:

- Painful stiff hip after infection (tuberculosis of the hip or otherwise)
- Peri-prosthetic infection
- Aseptic loosening of the hip
- Recurrent dislocation of the hip
- Failed internal fixation of a femoral neck fracture
- Unsalvageable failed hip replacement

Contraindications

Total and partial hip arthroplasty are contraindicated when **ANY** of the following are present:

- Active skin infection at the surgical site
- Active systemic infection
- Rapidly progressive neurological disease
- Neuropathic joint
- Intra-articular corticosteroid injection within the past 6 weeks in the joint being replaced

Exclusions

Indications for total hip arthroplasty, partial hip arthroplasty, total hip resurfacing, and partial hip resurfacing other than those addressed in this guideline are considered **not medically necessary**.

Selected References

1. American Academy of Orthopaedic Surgeons. Management of Osteoarthritis of the hip - evidence-based clinical practice guideline Rosemont IL: American Academy of Orthopedic Surgeons; 2017. Available from: https://www.aaos.org/globalassets/quality-and-practice-resources/osteoarthritis-of-the-hip/oa-hip-cpg_6-11-19.pdf.
2. Arbab D, König DP. Atraumatic Femoral Head Necrosis in Adults. Dtsch Arztebl Int. 2016;113(3):31-8.
3. Department of Veterans Affairs Department of Defense. VA/DoD Clinical Practice Guideline for the non-surgical management of hip & knee osteoarthritis, 2020, Version 2.0. Retrieved from https://www.healthquality.va.gov/guidelines/CD/OA/VADoDOACPG.pdf on May 17, 2023.
4. Hagel A, Siekmann H, Delank KS. Periprosthetic femoral fracture - an interdisciplinary challenge. Dtsch Arztebl Int. 2014;111(39):658-64.
5. National Institute for Health and Care Excellence. Hip fracture: management. London: National Institute for Health and Care Excellence (NICE); 2023 Jan 6. (NICE Clinical Guidelines, No. 124.) Available from: nice.org.uk.
6. Nelson AE, Allen KD, Golightly YM, Goode AP, Jordan JM. A systematic review of recommendations and guidelines for the management of osteoarthritis: The chronic osteoarthritis management initiative of the U.S. bone and joint initiative. Semin Arthritis Rheum. 2014;43(6):701-12.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

27120	Acetabuloplasty; (eg, Whitman, Colonna, Haygroves, or cup type)
27122	Acetabuloplasty; resection, femoral head (eg, Girdlestone procedure)
27125	Hemiarthroplasty, hip, partial (eg, femoral stem prosthesis, bipolar arthroplasty)
27130	Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft
27132	Conversion of previous hip surgery to total hip arthroplasty, with or without autograft or allograft
27134	Revision of total hip arthroplasty; both components, with or without autograft or allograft
27137	Revision of total hip arthroplasty; acetabular component only, with or without autograft or allograft
27138	Revision of total hip arthroplasty; femoral component only, with or without allograft
S2118	Metal-on-metal total hip resurfacing, including acetabular and femoral components

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Hip Arthroscopy

Description and Scope

Hip arthroscopy is most often utilized in diagnosing and treating conditions of the joint space which impede normal function and result in pain and disability. A more recent application of this procedure is treatment of femoroacetabular impingement syndrome (FAIS), a condition of the hip in which the acetabular rim of the pelvis articulates abnormally with the femoral head. Over time, contact may result in damage to joint cartilage, potentially leading to degenerative joint disease. Hip arthroscopy has also been applied to the treatment of symptomatic labral tears not associated with advanced arthritis of the hip joint.

Surgical treatment of FAIS and/or labral tears may involve an open approach, arthroscopic surgery, or a combination of the two. The surgical treatment of FAIS and labral tears is inclusive of the management of any chondral or soft tissue debridement that is done. It is also inclusive of diagnostic hip arthroscopy. FAIS surgery includes the following components: labral repair, acetabuloplasty, and femoroplasty.

This guideline addresses hip arthroscopy when performed as an **elective, non-emergent** procedure and not as part of the care of an acute fracture. It does not cover labral reconstructions, capsular plications, or endoscopic procedures done outside of the hip capsule.

Clinical Indications

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Imaging report. The provider shall submit a detailed imaging report for studies obtained within the past 12 months that correlates with clinical findings of the requested procedure. In the absence of a detailed report, the provider will be required to submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

For x-ray interpretation, the provider shall submit a detailed imaging description that correlates with clinical findings of the requested procedure. In the absence of a detailed description, the provider may submit a radiologist's report.

For advanced imaging (CT, MRI, ultrasound, bone scan), there must be a report from a radiologist that correlates with clinical findings. In the absence of such a report, the summary findings from the radiology report should be included in the clinical records.

Conservative management. In the majority of cases, a period of conservative management is appropriate prior to intervention. Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises

        - Compliance (documented or by clinician attestation on follow-up evaluation)
    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Table 1. Quantification of Hip Radiographic Measurements

Measurement, range	Description
Sharp (acetabular) angle	
33° - 38°	Normal
< 32°	Insignificant
39° - 42°	Borderline
> 42°	Dysplastic
Tönnis angle	
−10° to 10°	Normal
>10°	Acetabular dysplasia
< -10°	Pincer lesion
Lateral center-edge angle (CEA) of Wiberg	
22°-40°	Normal
< 20°	Dysplastic
≥ 20° and ≤ 25°	Borderline dysplastic
≥ 40°	Overcovered
Arthritis	
< 2 mm joint space	Indicative of arthritis best managed non arthroscopically
Alpha angle	
< 55°	Normal
> 55°	Cam femoroacetabular impingement

Mannava S, Geeslin AG, Frangiamore SJ, et al. Comprehensive Clinical Evaluation of Femoroacetabular Impingement: Part 2, Plain Radiography. Arthrosc Tech. 2017;6(5):e2003-e2009.

Hip Arthroscopy

See Table 1 for Quantification of Hip Radiographic Measurements.

Diagnostic arthroscopy

Diagnostic arthroscopy of the hip joint is considered medically necessary for synovial biopsy or tissue harvest (chondrocyte), or when the involved joint meets **ALL** of the following criteria:

- Presence of **ONE** of the following symptoms
  - Significant pain and functional limitation
  - Instability (e.g., giving way, catching, clicking, locking)
  - Limited range of motion
- Presence of **ONE** of the following physical exam findings
  - Limited range of motion
  - Joint swelling
  - Inconclusive specific diagnostic exam maneuvers

    - Local muscle weakness or atrophy
- Inconclusive x-ray and/or advanced imaging studies
- Failure of at least 6 weeks of conservative management

Exclusions

- In-office diagnostic arthroscopy (e.g., mi-eye 2®) is considered **not medically necessary**.
- Non-intraarticular hip procedures are considered **not medically necessary**.

Synovectomy

Any combination of these procedures is considered medically necessary when the following criteria are met:

- Hip pain associated with grinding, catching, locking or popping, and **ALL** of the following:
    - Failure of least 3 months of conservative management
    - Exam findings confirm pain with limited range of motion
    - Imaging (x-ray, CT, or MRI) which shows synovial proliferation, calcifications, nodularity, inflammation, or pannus

Exclusion

A separate synovectomy performed for exposure or visualization, or for post-traumatic reactive synovitis is considered **not medically necessary**.

Removal of loose body

Removal of loose body is considered medically necessary when **BOTH** of the following are present:

- Radiographic evidence of acute, post-traumatic, intra-articular foreign body or displaced fracture fragment (larger than the size of an arthroscopy cannula [5 mm or larger] when other hip procedure codes are authorized)
- Hip pain associated with grinding, catching, locking or popping, and exam findings confirm pain with limited range of motion

Exclusion

Removal of loose body for Kellgren-Lawrence grade 4 osteoarthritis is considered **not medically necessary**.

Arthroscopic treatment of femoroacetabular impingement syndrome (FAIS)

Acetabuloplasty – **ALL** of the following criteria are required:

- Moderate to severe hip pain (primarily in the groin) worsened by flexion activities (e.g., squatting or prolonged sitting) that interferes with activities of daily living, which is not explained by another diagnosis.
- Positive impingement sign on clinical examination, defined as pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur, or extension and external rotation)
- Imaging studies (radiographs, MRI or 3D computed tomography) suggesting a diagnosis of FAIS, including cam impingement and/or pincer impingement as evidenced by **ONE** or more of the following:
    - Lateral center-edge angle (CEA) of Wiberg ≥ 40 degrees
    - Coxa profunda or protrusion – acetabular fossa medial to ilioischial line

    - Posterior wall sign – cross-over sign
- Failure of conservative management for a duration of at least 3 months*, including avoidance of hip stretching or any activity that elicits or aggravates symptoms
- Documentation of a likely causal association between the femoroacetabular impingement morphology and damage to the acetabular margin or the femoral neck

Femoroplasty when **ALL** of the following criteria are met:

- Moderate to severe hip pain (primarily in the groin) worsened by flexion activities (e.g., squatting or prolonged sitting) that interferes with activities of daily living, which is not explained by another diagnosis.
- Positive impingement sign on clinical examination, defined as pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur, or extension and external rotation)
- Imaging studies (radiographs, MRI or 3D computed tomography) suggesting a diagnosis of FAIS, including cam impingement and/or pincer impingement as evidenced by **ONE** or more of the following:
    - Pistol-grip deformity
    - Femoral head-neck offset with an alpha angle greater than 55 degrees
- Failure of conservative management for a duration of at least 3 months*, including avoidance of hip stretching or any activity that elicits or aggravates symptoms

  ** Less than the full duration of conservative management is permitted in the presence of an alpha angle greater than 65 degrees (a measure of asphericity of the femoral head).*
- Documentation of a likely causal association between the femoroacetabular impingement morphology and damage, e.g., a pistol-grip deformity with a tear of the acetabular labrum and articular cartilage damage in the anterosuperior quadrant

Labral tear

Hip arthroscopy is considered medically necessary for treatment of labral tear when **ALL** of the following criteria are met:

- Moderate to severe hip pain (primarily in the groin) worsened by flexion activities (e.g., squatting or prolonged sitting) that interferes with activities of daily living, which is not explained by another diagnosis
- Positive impingement sign on clinical examination, defined as pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur, or extension and external rotation
- MRI report that defines or suggests a labral tear
- Failure of conservative management for a duration of at least 3 months, including avoidance of hip stretching or any activity that elicits or aggravates symptoms
- No evidence of advanced osteoarthritis, defined as Tönnis grade 2 or greater, or joint space of less than 2 mm
- No evidence of severe (Outerbridge grade IV) chondral damage

Exclusion

Arthroscopic lavage and debridement for advanced osteoarthritis of the hip joint is considered **not medically necessary**.

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- **For hip debridement/chondroplasty**
    - When performed solely for treatment of hip osteoarthritis (Kellgren-Lawrence grade 2 or greater, Tönnis grade 2 or greater)
- **For treatment of FAIS/Labral repair**
    - Use of capsular plication as the sole treatment of FAIS
    - Capsular plication, capsular repair, labral reconstruction, iliotibial band windowing, trochanteric bursectomy, abductor muscle repair, and/or iliopsoas tenotomy, when performed at the time of any FAIS surgery, would be considered a component of and incidental to the FAIS procedure
    - Evidence of advanced osteoarthritis, defined as Tönnis grade ≥ 2, or joint space narrowing ≤ 2 mm along the lateral/medial sourcil (roof or weight-bearing area of acetabulum)
    - Evidence of severe (Outerbridge grade IV) chondral damage
    - Positive broken Shenton line
    - Inclination Tönnis angle greater than 10-15 degrees
    - Labral repair in the presence of untreated severe hip dysplasia

Selected References

1. Bedi A, Kelly BT. Femoroacetabular impingement. J Bone Joint Surg Am. 2013;95(1):82-92.
2. de SA D, Phillips M, Philippon MJ, Letkemann S, Simunovic N, Ayeni OR. Ligamentum teres injuries of the hip: a systematic review examining surgical indications, treatment options, and outcomes. Arthroscopy. 2014;30(12):1634-41.
3. Kroger EW, Griesser MJ, Kolovich GP, Ellis TJ. Efficacy of surgery for internal snapping hip. Int J Sports Med. 2013;34(10):851-5.
4. Lustenberger DP, Ng VY, Best TM, Ellis TJ. Efficacy of treatment of trochanteric bursitis: a systematic review. Clin J Sport Med. 2011;21(5):447-53.
5. Mannava S, Geeslin AG, Frangiamore SJ, Cinque ME, Geeslin MG, Chahla J, Philippon MJ. Comprehensive Clinical Evaluation of Femoroacetabular Impingement: Part 2, Plain Radiography. Arthrosc Tech. 2017;6(5):e2003-e9.
6. Minkara AA, Westermann RW, Rosneck J, Lynch TS. Systematic Review and Meta-analysis of Outcomes After Hip Arthroscopy in Femoroacetabular Impingement. Am J Sports Med. 2019;47(2):488-500.
7. Nelson SJ, Webb ML, Lukasiewicz AM, Varthi AG, Samuel AM, Grauer JN. Is Outpatient Total Hip Arthroplasty Safe? J Arthroplasty. 2017;32(5):1439-42.
8. Oliver D, Griffiths R, Roche J, Sahota O. Hip fracture. BMJ Clin Evid. 2010; 2010:1110.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

29860	Arthroscopy, hip, diagnostic with or without synovial biopsy (separate procedure)

29861	Arthroscopy, hip, surgical; with removal of loose body or foreign body
29862	Arthroscopy, hip, surgical; with debridement/shaving of articular cartilage (chondroplasty), abrasion arthroplasty, and/or resection of labrum
29863	Arthroscopy, hip, surgical; with synovectomy
29914	Arthroscopy, hip, surgical; with femoroplasty (i.e., treatment of cam lesion)
29915	Arthroscopy, hip, surgical; with acetabuloplasty (i.e., treatment of pincer lesion)
29916	Arthroscopy, hip, surgical; with labral repair [when repair of the labral tear is associated with FAIS]

Unlisted Procedures

The following unlisted procedures (CPT 29999 – Unlisted procedure, arthroscopy) are not managed by Carelon Medical Benefits Management. Please contact the respective health plan for further assistance.

- Arthroscopic IT (Iliotibial) band lengthening
- Arthroscopic repair of gluteus medius or minimus
- Arthroscopic repair of gluteus medius or minimus (with biologic implant)
- Arthroscopic trochanteric bursectomy

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Knee Arthroplasty (Total/Partial/Revision Knee Replacement)

Description and Scope

Knee arthroplasty involves removal of some or all of the diseased articular surfaces of the knee, followed by resurfacing with metal and polyethylene prosthetic components. Numerous implants composed of various biomaterials have been approved by the U.S. Food and Drug Administration (FDA) for use in knee arthroplasty procedures. The goal of the procedure is long-term pain relief and restoration of function.

This guideline addresses total knee arthroplasty (TKA), revision TKA, patellar and patella femoral arthroplasty, and unicompartmental knee arthroplasty (UKA) performed as **elective, non-emergent** procedures and not as part of the care of a congenital condition, acute or traumatic event such as fracture (excluding periprosthetic fracture).

All knee arthroplasties are inclusive of the reattachment of any muscles divided for access to the knee, accompanying excision of osteophytes, synovectomy and knee arthrotomy with associated removal of debris.

Revision knee arthroplasty is inclusive of the exchange of some or all of the components of a prior knee replacement with permanent replacements. It is not inclusive of exchange of components for visualization or joint access alone.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Clinical notes describing symptom duration and severity, specific functional limitations related to symptoms, and type and duration of all therapeutic measures provided. If conservative management is not appropriate, the reason must be clearly documented.

Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)

    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record

- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging reports obtained within the past 12 months describing the degree of cartilage damage as determined by either or both of the following methods:

- X-ray report or provider interpretation of x-rays that utilizes or can be correlated with the Kellgren-Lawrence grading system of osteoarthritis
- MRI report from a radiologist that utilizes or can be correlated with the modified Outerbridge or similar classification system related to articular cartilage injury and osteoarthritis

*See **Appendix** for a description of these grading systems.*

For x-ray interpretation, the provider shall submit a detailed imaging description that correlates with clinical findings of the requested procedure. In the absence of a detailed description, the provider may submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

For advanced imaging (CT, MRI, ultrasound, bone scan), there must be a report from a radiologist that correlates with clinical findings. In the absence of such a report, the summary findings from the radiology report should be included in the clinical records.

Imaging reports should be thorough and describe the presence or absence of subchondral cysts, subchondral sclerosis, periarticular osteophytes, joint subluxation, avascular necrosis, or bone on bone articulations. The degree of joint space narrowing should also be noted.

General Recommendations

Tobacco cessation. Adherence to a tobacco cessation program resulting in abstinence from tobacco for at least 6 weeks prior to surgery is strongly recommended.

Diabetes. It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to any joint replacement surgery.

Body mass index (BMI). It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

Where there are patient specific modifiable comorbidities that may adversely impact patient reported outcomes or the health status of the patient a shared decision-making process with the patient to discuss these modifiable comorbidities is strongly recommended and should be documented.

Total Knee Arthroplasty

Elective total knee arthroplasty is considered medically necessary for ANY of the following indications:

- Post-traumatic arthritis with moderate to severe joint damage
- Primary or metastatic tumor with limb salvage surgery
- Unicompartmental, bicompartmental, tricompartmental, or isolated patellofemoral joint damage or destruction due to osteoarthritis, inflammatory disease, avascular necrosis (osteonecrosis), or other chronic conditions when **ALL** of the following criteria are met:
    - Imaging evidence of significant joint destruction and cartilage loss, defined as modified Outerbridge grade III - IV or Kellgren-Lawrence grade 3 - 4
    - Failure of at least 3 months of non-surgical conservative management (unless radiographs show Kellgren-Lawence grade 4)
    - Functional limitation secondary to knee pathology which interferes with the ability to perform age-appropriate daily activities

*See **Contraindications**.*

Unicompartmental Knee Arthroplasty/Partial Knee Replacement

Elective medial or lateral unicompartmental knee arthroplasty (UKA)/partial knee replacement (PKA) is considered medically necessary when ALL of the following criteria are met:

- Osteoarthritis isolated to the medial or lateral knee compartment with no degenerative changes in the opposite compartment
- Intact anterior cruciate ligament or documentation of stable knee examination (UKA may done with concurrent ACL reconstruction if all other criteria are met)
- Less than 10 degrees of fixed varus deformity for medial UKA
- Less than 15 degrees of fixed valgus deformity for lateral UKA
- Failure of at least 3 months of non-surgical conservative management (unless radiographs show Kellgren-Lawence grade 4)

Contraindications

Medial and lateral UKA are contraindicated when **ANY** of the following conditions are present:

- Inflammatory arthritis
- Moderate-to-severe degenerative changes of the lateral facet of the patellofemoral joint when considering medial compartment replacement (Kellgren-Lawrence 3 or 4)

- Anterior cruciate ligament deficiency
- Flexion contracture greater than 15 degrees
- Fixed varus deformity greater than 10 degrees
- Fixed valgus deformity greater than 15 degrees
- Flexion less than 110 degrees
- Previous meniscectomy in another compartment

*See **Contraindications**.*

Patellofemoral Arthroplasty

Elective patellofemoral arthroplasty is considered medically necessary when ALL of the following criteria are met:

- **ONE** of the following disease states:
  - Advanced symptomatic primary or secondary isolated patellofemoral osteoarthritis (PFOA)
  - Failed extensor mechanism unloading procedures (e.g., lateral retinacular release, reconstruction of the medal patellar femoral ligament, quadricepsplasty, and bony procedures for realignment involving the tibial tuberosity)
  - Symptomatic patellofemoral cartilage defects greater than 4 cm^2 after a failed cartilage repair procedure, such as autologous chondrocyte implantation (ACI)
- Failure of at least 3 months of non-surgical conservative management
- Functional limitation secondary to knee pathology which interferes with the ability to perform age-appropriate daily activities

Contraindications

Patellofemoral arthroplasty is contraindicated when **ANY** of the following conditions are present:

- Tibiofemoral osteoarthritis
- Inflammatory arthritis
- Patellofemoral malalignment
- Knee instability (ligaments and/or menisci injuries)
- Limb malalignment (valgus deformity greater than 8 degrees or varus deformity greater than 5 degrees)
- Fixed flexion contracture greater than 10 degrees

*See **Contraindications** including those specific to **patellofemoral arthroplasty** above.*

Primary Hinge Arthroplasty

Primary hinge arthroplasty is considered medically necessary when ONE of the following criteria are met:

- Global ligament instability
- Severe bone loss or deformity
- Absence or deficit of muscular control
- Tumoral surgery (bone block resection with ligamentous insertions needed)
- Congenital dislocation of knee

- Ankylosis with severe instability after surgical exposition

*See **Contraindications**.*

Revision of Prior Knee Arthroplasty

Revision of prior knee arthroplasty is considered medically necessary when ANY of the following conditions are present:

- Aseptic loosening
- Substantial osteolysis of the distal femur, proximal tibia, or patella
- Progressive soft tissue or bone reaction including bearing surface wear or symptomatic synovitis
- Component instability, malalignment, failure, or recall
- Displaced periprosthetic fracture or irreducible dislocation
- Previous removal of knee prosthesis due to infection or catastrophic failure
- Reconstruction after treatment of post knee replacement infection
- Recurrent disabling pain or significant functional disability that persists despite at least 3 months of conservative management in conjunction with **ANY** of the following:
    - Antalgic gait
    - Abnormal findings confirmed by plain radiography or imaging studies such as implant malposition or impingement
    - Knee stiffness attributable to the prior implants that has failed at least 6 weeks of conservative treatment

*See **Contraindications**.*

Contraindications

All procedures listed in this guideline are contraindicated* when **ANY** of the following conditions are present:

- Active skin infection at the surgical site
- Active systemic infection
- Rapidly progressive neurologic disease
- Extensor mechanism deficiency, not amendable to surgical correction
- Neuropathic joint
- Intra-articular corticosteroid injection within the past 6 weeks in the joint being replaced

**For specific contraindications, refer to each section of this guideline.*

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Bi-unicompartmental knee arthroplasty (medial and lateral tibiofemoral compartments with absence of patellofemoral osteoarthritis)
- Bicompartmental arthroplasty (e.g., medial and patellofemoral compartments of the knee)
- Focal resurfacing of a single knee joint defect

- Unicompartmental free-floating (unfixed) interpositional device

Selected References

1. American Academy of Orthopaedic Surgeons. Management of Osteoarthritis of the Knee (Arthroplasty) Evidence-Based Clinical Practice Guideline. https://www.aaos.org/oak3cpg Published August 30, 2021.
2. Aujla RS, Esler CN. Total Knee Arthroplasty for Osteoarthritis in Patients Less Than Fifty-Five Years of Age: A Systematic Review. J Arthroplasty. 2017;32(8):2598-603.e1.
3. Nelson AE, Allen KD, Golightly YM, Goode AP, Jordan JM. A systematic review of recommendations and guidelines for the management of osteoarthritis: The chronic osteoarthritis management initiative of the U.S. bone and joint initiative. Semin Arthritis Rheum. 2014;43(6):701-12.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

27437	Arthroplasty, patella; without prosthesis
27438	Arthroplasty, patella; with prosthesis
27440	Arthroplasty, knee; tibial plateau
27441	Arthroplasty, knee, tibial plateau; with debridement and partial synovectomy
27442	Arthroplasty, femoral condyles or tibial plateau(s), knee
27443	Arthroplasty, femoral condyles or tibial plateau(s), knee; with debridement and partial synovectomy
27445	Arthroplasty, knee, hinge prosthesis (eg, Walldius type)
27446	Arthroplasty, knee, condyle and plateau; medial OR lateral compartment
27447	Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patella resurfacing (total knee arthroplasty)
27486	Revision of total knee arthroplasty, with or without allograft; 1 component
27487	Revision of total knee arthroplasty, with or without allograft; femoral and entire tibial component
27488	Removal of prosthesis, including total knee prosthesis, methylmethacrylate with or without insertion of spacer, knee

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Knee Arthroscopy and Open Procedures

Description and Scope

Knee arthroscopy is a surgical procedure in which a fiberoptic camera is inserted into the knee joint through a small incision. In addition to allowing the surgeon to visualize the joint, arthroscopy may also be utilized for treatment of a variety of conditions involving the joint structures.

This guideline addresses knee arthroscopy when performed as an **elective, non-emergent** procedure and not as part of the care of an acute fracture.

Articular cartilage lesions in weight-bearing joints often fail to heal spontaneously and may be associated with pain, loss of function, and long-term complications such as osteoarthritis. A number of surgical techniques have been developed to treat these lesions.

Procedures to treat focal articular cartilage defects can be classified as:

1. Palliative (lavage, chondroplasty)
2. Reparative (microfracture, abrasion arthroplasty)
3. Restorative (autologous chondrocyte implantation, osteochondral allograft, or osteochondral autograft)*.

**See Treatment of Osteochondral Defects*

Chondroplasty or debridement is a smoothing or shaving of symptomatic partial-thickness cartilage lesions or chondral flaps (unstable mechanical source of pain).

Microfracture involves drilling multiple holes through the subchondral bone to promote bleeding and fibrocartilage growth.

Abrasion arthroplasty involves abrading the subchondral bone to the depth necessary to promote bleeding and fibrocartilage growth.

Both microfracture and abrasion arthroplasty are typically performed on lesions less than 4 cm^2.

All arthroscopic and open knee procedure codes are inclusive of diagnostic arthroscopy and manipulation under anesthesia.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Imaging report. The provider shall submit a detailed imaging report for studies obtained within the past 12 months that correlates with clinical findings of the requested procedure. In the absence of a detailed report, the provider will be required to submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

For x-ray interpretation, the provider shall submit a detailed imaging description that correlates with clinical findings of the requested procedure. In the absence of a detailed description, the provider may submit a radiologist's report.

For advanced imaging (CT, MRI, ultrasound, bone scan), there must be a report from a radiologist that correlates with clinical findings. In the absence of such a report, the summary findings from the radiology report should be included in the clinical records.

Conservative management. In the majority of cases, a period of conservative management is appropriate prior to intervention. Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)
    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Knee Arthroscopy/Open Procedures

Diagnostic arthroscopy

Diagnostic arthroscopy of the knee joint is considered medically necessary for synovial biopsy or tissue harvest (chondrocyte), or when the involved joint meets **ALL** of the following criteria:

- Presence of **ONE** of the following symptoms
  - Significant pain and functional limitation
  - Instability (e.g., giving way, catching, clicking, locking)
  - Limited range of motion
- Presence of **ONE** of the following physical exam findings
  - Limited range of motion
  - Joint swelling
  - Inconclusive specific diagnostic exam maneuvers
  - Local muscle weakness or atrophy
- Inconclusive x-ray and/or advanced imaging studies
- Failure of at least 6 weeks of conservative management

Exclusion

In-office diagnostic arthroscopy (e.g., mi-eye 2®) is considered **not medically necessary**.

Removal of loose body

Removal of loose body is considered medically necessary when **BOTH** of the following are present:

- Radiographic evidence of acute, post-traumatic, intra-articular foreign body or displaced fracture fragment (larger than the size of an arthroscopy cannula [5 mm or larger] when other knee procedure codes are authorized)
- Knee pain associated with grinding, catching or popping

Exclusion

Removal of loose body for Kellgren-Lawrence grade 4 osteoarthritis is considered **not medically necessary**.

Meniscal repair or meniscectomy

Acute traumatic meniscal tear

Meniscal repair or meniscectomy is considered medically necessary for acute traumatic meniscal tear (sudden onset of joint-line pain associated with significant knee injury) when **ALL** of the following requirements are met:

- Knee injury within last 3 months with new onset knee pain
- Moderate to severe pain associated with functional limitation, which interferes with the ability to perform age-appropriate daily activities
- Symptoms of catching, locking, or instability
- Physical exam findings* of at least **TWO (2)** of the following:
  - Joint swelling or effusion

  - Positive McMurray or Apley test
  - Joint line tenderness
  - Reduced range of motion

  **If there is a planned concurrent ligament reconstruction and documented meniscal tear, physical exam findings specific to meniscus are not necessary.*

- Imaging confirms features of an acute meniscal tear (e.g., root avulsion, longitudinal vertical, radial, flap, posterolateral root, bucket handle, posterior horn, and complex tears, or displaced meniscal fragment)

Partial meniscectomy is considered medically necessary for symptomatic tears not amenable to repair, especially when the peripheral meniscal rim is intact.

Meniscal repair is considered medically necessary for symptomatic reducible tears that are peripheral (e.g., near the capsular attachment) and horizontal or longitudinal in nature.

Chronic degenerative meniscal tear

Meniscal repair or meniscectomy is considered medically necessary for chronic degenerative meniscal tear (without any history of significant acute trauma) when **ALL** of the following are present:

- Physical exam findings of at least **TWO (2)** of the following:
  - Joint swelling or effusion
  - Positive McMurray or Apley test
  - Joint line tenderness
  - Reduced range of motion
- Persistent or frequent mechanical symptoms (catching, locking, or instability) or failure of conservative management for at least 3 months
- Imaging demonstrating a meniscal tear consistent with the clinical presentation
- X-ray findings demonstrating no more than moderate osteoarthritis as evidenced by imaging showing **ONE** of the following:
  - Greater than or equal to 50% joint space preservation (mild to moderate)
  - Less than or equal to grade 2 Kellgren-Lawrence
  - Less than or equal to grade III modified Outerbridge changes

Exclusions

Indications other than those addressed in meniscal repair/meniscectomy are considered **not medically necessary** including, but not limited to, the following:

- Meniscal repair or meniscectomy for x-rays with Kellgren-Lawrence grade 3 or 4 changes and knee pain that precedes recent injury (see **Chronic degenerative meniscal tear**).
- Meniscal repair or partial meniscectomy when the meniscal tear is associated with Kellgren-Lawrence grade ≥ 3 or modified Outerbridge grade > III osteoarthritis of the knee (exception may be granted for patients under age 40).
- Partial meniscectomy for degenerative tears (horizontal cleavage, intrameniscal linear MRI signal penetrating one or both surfaces of the meniscus) with no associated mechanical symptoms.

Chondroplasty/debridement

Chondroplasty/debridement is considered medically necessary when **ALL** of the following criteria are met:

- Pain or mechanical symptoms
- Partial thickness cartilage lesion or unstable chondral flap documented by MRI
- Failure to respond to at least a 6-week course of conservative management in the absence of a chondral flap
- Radiographic imaging consistent with Kellgren-Lawrence grade 2 or lower

Note: Chondroplasty performed along with a meniscectomy in the same knee is considered part of the main (meniscectomy) procedure. Meniscectomy performed along with a chondroplasty in the same knee is considered part of the main (chondroplasty) procedure.

Abrasion arthroplasty/microfracture (knee including patella)

Abrasion arthroplasty/microfracture (knee including patella) is considered medically necessary when **ALL** of the following lesion and joint criteria are met:

- Absence of “kissing” knee lesions (lesion must be single and involve only one side of the joint)
- Lesion is largely contained with near normal surrounding articular cartilage and articulating cartilage.
- Full-thickness lesion involving a focal, (grade III or IV) isolated defect of the weight-bearing surface
- Documented minimal to absent degenerative changes in the surrounding articular cartilage (Outerbridge grade II or less), and normal-appearing hyaline cartilage surrounding the border of the defect
- Knee joint is stable, with functionally intact menisci (knee) and ligaments, and has normal alignment
- Lesion involves a focal, full thickness, (grade III or IV) isolated defect of the weight-bearing surface between 1 cm^2 and 2.5 cm^2

Corrective procedures (e.g., ligament or tendon repair, osteotomy for realignment, meniscal allograft transplant or repair) may be performed in combination with, or prior to, abrasion arthroplasty/microfracture.

Debridement/drainage/lavage

Debridement/drainage/lavage is considered medically necessary for **ALL** of the following conditions:

- Rheumatoid arthritis with failure of medical management (DMARDs)
- Septic joint or osteomyelitis
- Septic prosthetic joint
- Postoperative arthrofibrosis with limited range of motion and failure of at least 6 weeks of conservative management

Exclusion

Debridement or lavage for isolated primary diagnosis of osteoarthritis of the knee is considered **not medically necessary**.

Arthroscopically assisted lysis of adhesions

Arthroscopically assisted lysis of adhesions is considered medically necessary for post-traumatic, post-surgical, or idiopathic stiffness of the knee when **ALL** of the following criteria are met:

- Physical exam demonstrates limited range of motion of the knee, defined as less than 105 degrees of flexion or a flexion contracture greater than 10 degrees
- Range of motion of the knee has failed to improve despite 6 weeks of conservative management
- Failure of prior manipulation under anesthesia or manipulation under anesthesia is planned concurrently

Manipulation under anesthesia

Manipulation under anesthesia (MUA) is considered medically necessary for post-traumatic, post-surgical, or idiopathic stiffness of the knee when **ALL** of the following criteria are met:

- Physical exam demonstrates limited range of motion of the knee defined as less than 105 degrees of flexion or a flexion contracture greater than 10 degrees
- Range of motion of the knee has failed to improve despite 6 weeks of conservative management

Anterolateral ligament reconstruction or extra articular tenodesis

Reconstruction of the anterolateral ligament or an extra articular tenodesis for knee stability may be required if **ANY** of the following criteria are met:

- Skeletal immaturity that makes ACL ligament reconstruction not feasible
- A revision ACL reconstruction is planned
- Positive pivot shift or other evidence of rotational instability
- Ligamentous laxity as confirmed by use of Beighton or comparable score

Anterior cruciate ligament reconstruction

Anterior cruciate ligament (ACL) reconstruction is considered medically necessary when **ALL** of the following criteria are met:

- There is not advanced knee arthritis (Kellgren-Lawrence grade 4)
- A diagnosis of ACL tear as established by **EITHER** of the following:
    - Exam findings of a positive anterior drawer sign, pivot shift test or Lachman test
    - Report of CT or MRI which demonstrates an ACL tear
- At least **ONE** of the following scenarios is present:
    - ACL tear occurring in conjunction with a meniscal tear or ligamentous injury (i.e., medial or posterior collateral ligament, posterior cruciate ligament, or posterolateral corner ligamentous injury)
    - The patient is involved in a physically demanding occupation (e.g., firefighter, law enforcement, construction), or regularly engages in activities which include cutting, jumping, and/or pivoting (e.g., skiing, basketball, football)
    - Two (2) weeks of conservative care has been tried and failed (e.g., physical therapy, activity modification, oral analgesics)

Posterior cruciate ligament repair or reconstruction

Posterior cruciate ligament (PCL) repair or reconstruction is considered medically necessary when **ALL** of the following criteria are met:

- There is not advanced knee arthritis (Kellgren-Lawrence grade 4)
- A diagnosis of PCL tear as established by **EITHER** of the following:
    - Exam findings of a positive posterior drawer sign, reversed pivot shift test, or posterior sag sign
    - CT or MRI performed within the past 12 months demonstrating a PCL tear
- Associated ligamentous injuries (i.e., injury to posterolateral corner of the knee, medial collateral ligament tear, ACL tear, avulsion fracture of fibular head or avulsion of the tibia distal to the lateral plateau)

Posterolateral corner injury

Posterolateral corner reconstruction is considered medically necessary when **ALL** of the following criteria are met:

- Imaging confirmation of injury to the posterolateral structures
- Exam findings consistent with a posterolateral corner injury
- Associated ligamentous injuries necessitating treatment

Collateral or extra-articular ligament injury

Collateral or extra-articular ligament reconstruction is considered medically necessary when **EITHER** of the following criteria are met:

- Diagnosis of ligament injury by **EITHER** of the following with conservative management for 6 weeks:
    - Advanced imaging evidence of a complete tear
    - Physical exam findings consistent with instability due to the ligament injury
- Associated ligamentous injury treatment

Patellar compression syndrome (lateral patellofemoral impingement)

Lateral retinacular release is considered medically necessary when **ALL** of the following criteria are met:

- Positive lateral patellar tilt established on imaging (axial view)
- Failure of at least 6 months of conservative management
- Radiographic imaging consistent with Kellgren-Lawrence grade 2 or lower patellofemoral osteoarthritis
- At least **ONE** of the following is present:
    - Positive patella glide test
    - Positive patella tilt test
    - Lateral femoral trochlear or lateral patella facet cartilage lesion confirmed by imaging within the past 12 months, when symptoms are consistent with a cartilage defect

Exclusion

Lateral retinacular release for central or medial tracking of the patella is considered **not medically necessary**.

Quadricepsplasty

Quadricepsplasty is considered medically necessary for knee extension contracture secondary to prior femur/knee fracture or surgery when **ALL** of the following criteria are met:

- Knee flexion less than 90 degrees
- Failure of at least 12 weeks of conservative management
- Failure of an arthroscopic lysis of adhesions

Distal realignment procedures

Distal realignment procedures (tibial tubercle transfer) for patellar instability (subluxation/dislocation) are considered medically necessary in skeletally mature patients when **ALL** of the following criteria are met:

- Recurrent patellofemoral instability associated with pain that limits function
- Failure of at least 12 weeks of conservative management that includes physical therapy
- Radiographic imaging consistent with Kellgren-Lawrence grade 2 or lower patellofemoral osteoarthritis

- Presence of at least **ONE** of the following:
    - Tibial tubercle-trochlear groove (TT-TG) distance > 20 mm
    - Patella alta (e.g., Caton-Deschamps index > 1.2)

Medial patellofemoral ligament reconstruction

Medial patellofemoral ligament (MPFL) reconstruction is considered medically necessary when **EITHER** of the following apply:

- Performed in combination with distal realignment for patellofemoral instability
- **ALL** of the following criteria are met:
    - Recurrent patellofemoral instability associated with pain that limits function **OR** Failure of at least 12 weeks of conservative management
    - Radiographic imaging consistent with Kellgren-Lawrence grade 2 or lower patellofemoral osteoarthritis
    - Presence of tibial tubercle-trochlear groove (TT-TG) distance < 20 mm, normal trochlear morphology, and absence of patella alta (e.g., Caton-Deschamps index < 1.2)

Plica resection

Plica resection is considered medically necessary when at least **TWO of the following** (5) **are present AND BOTH additional criteria are met**:

- Anteromedial knee joint line pain, especially at the medial femoral condyle
- Audible clicking or snap during knee motion – painful arc 30 to 60 degrees
- Pain with activities: ascending and descending stairs, squatting, rising from a chair, or sitting for extended periods
- Positive Hughston plica test or positive duvet test (duvet between knees for relief)
- Visible or palpable (tender) plica

Additional criteria (BOTH are required)

- Exclusion of other causes of anteromedial knee pain
- Failure of at least 12 weeks of conservative management

Excision of popliteal cyst

Excision of a popliteal cyst is considered medically necessary when the following is present:

- Posterior knee pain ≥ 4 on the VAS scale of at least 8 weeks' duration

Synovectomy (Limited)

Limited synovial excision is considered medically necessary when **BOTH** of the following criteria are met:

- **EITHER** of the following
    - Imaging confirmation of a primary localized synovial proliferative process (e.g., Hoffa's fat pad syndrome, plica, post procedure focal synovial hypertrophy)
    - Physical exam findings and/or symptoms correlate with the synovial proliferative process
- Documentation of at least 12 weeks of conservative management

Synovectomy (Extensive)

Synovectomy is considered medically necessary for **ANY** of the following conditions:

- Rheumatoid arthritis or other chronic inflammatory arthropathies with failure of conservative management
- Hemophilic joint disease
- Other diffuse synovial proliferative disorders, such as:
    - Localized pigmented villonodular synovitis
    - Synovial hemangioma
    - Synovial chondromatosis/osteochondromatosis
    - Infectious synovitis (bacterial or fungal septic arthritis)

Exclusion

A separate synovectomy performed for exposure or visualization, or for post-traumatic reactive synovitis is considered **not medically necessary**.

Repair of osteochondral defect

*See **Treatment of Osteochondral Defects** guideline.*

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** (see sections above for specific exclusions).

Selected References

1. American Academy of Orthopaedic Surgeons Management of Osteoarthritis of the Knee (NonArthroplasty) Evidence-Based Clinical Practice Guideline. https://www.aaos.org/oak3cpg Published August 30, 2021.
2. Arthroscopic Debridement of the Knee: An Evidence Update. Ontario health technology assessment series. 2014;14(13):1-43.
3. Beaufils P, Hulet C, Dhénain M, Nizard R, Nourissat G, Pujol N. Clinical practice guidelines for the management of meniscal lesions and isolated lesions of the anterior cruciate ligament of the knee in adults. Orthop Traumatol Surg Res. 2009;95(6):437-42.
4. Brignardello-Petersen R, Guyatt GH, Buchbinder R, Poolman RW, Schandelmaier S, Chang Y, Sadeghirad B, Evaniew N, Vandvik PO. Knee arthroscopy versus conservative management in patients with degenerative knee disease: a systematic review. BMJ Open. 2017;7(5):e016114.
5. Katz JN, Wright J, Spindler KP, Mandl LA, Safran-Norton CE, Reinke EK, Levy BA, Wright RW, Jones MH, Martin SD, Marx RG, Losina E. Predictors and Outcomes of Crossover to Surgery from Physical Therapy for Meniscal Tear and Osteoarthritis: A Randomized Trial Comparing Physical Therapy and Surgery. J Bone Joint Surg Am. 2016;98(22):1890-6.
6. Khan M, Evaniew N, Bedi A, Ayeni OR, Bhandari M. Arthroscopic surgery for degenerative tears of the meniscus: a systematic review and meta-analysis. Cmaj. 2014;186(14):1057-64.
7. Monk AP, Davies LJ, Hopewell S, Harris K, Beard DJ, Price AJ. Surgical versus conservative interventions for treating anterior cruciate ligament injuries. Cochrane Database Syst Rev. 2016;4(4):Cd011166.
8. Østerås H. A 12-week medical exercise therapy program leads to significant improvement in knee function after degenerative meniscectomy: a randomized controlled trial with one year follow-up. J Bodyw Mov Ther. 2014;18(3):374-82.
9. Papalia R, Osti L, Del Buono A, Denaro V, Maffulli N. Management of combined ACL-MCL tears: a systematic review. Br Med Bull. 2010;93:201-15.
10. Petersen W, Achtnich A, Lattermann C, Kopf S. The Treatment of Non-Traumatic Meniscus Lesions. Dtsch Arztebl Int. 2015;112(42):705-13.
11. Quinn RHM, J.; Pezold, R. The American Academy of Orthopaedic Surgeons Appropriate Use Criteria for Surgical Management of Osteoarthritis of the Knee. J Bone Joint Surg Am. 2017;99(8):697-9.
12. Smith TO, Postle K, Penny F, McNamara I, Mann CJ. Is reconstruction the best management strategy for anterior cruciate ligament rupture? A systematic review and meta-analysis comparing anterior cruciate ligament reconstruction versus non-operative treatment. Knee. 2014;21(2):462-70.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

27331	Arthrotomy, knee; including joint exploration, biopsy, or removal of loose or foreign bodies
27332	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial OR lateral
27333	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial AND lateral
27334	Arthrotomy, with synovectomy, knee; anterior OR posterior
27335	Arthrotomy, with synovectomy, knee; anterior AND posterior including popliteal area
27345	Excision synovial cyst popliteal space
27403	Arthrotomy with meniscus repair, knee
27405	Repair, primary, torn ligament and/or capsule, knee; collateral
27407	Repair, primary, torn ligament and/or capsule, knee; cruciate
27409	Repair, primary, torn ligament and/or capsule, knee; collateral and cruciate ligaments
27418	Anterior tibial tubercleplasty (eg, Maquet type procedure)
27420	Reconstruction of dislocating patella; (eg, Hauser type procedure)
27422	Reconstruction of dislocating patella; with extensor realignment and/or muscle advancement or release (eg, Campbell, Goldwaite type procedure)
27424	Reconstruction of dislocating patella; with patellectomy
27425	Lateral retinacular release, open
27427	Ligamentous reconstruction (augmentation), knee; extra-articular
27428	Ligamentous reconstruction (augmentation), knee; intra-articular (open)
27429	Ligamentous reconstruction (augmentation), knee; intra-articular (open) and extra-articular
27430	Quadricepsplasty (eg, Bennett or Thompson type)
27570	Manipulation of knee joint under general anesthesia (includes application of traction or other fixation devices)
29870	Arthroscopy, knee, diagnostic, with or without synovial biopsy (separate procedure)
29871	Arthroscopy, knee, surgical; for infection, lavage and drainage
29873	Arthroscopy, knee, surgical; with lateral release
29874	Arthroscopy, knee, surgical; for removal of loose body or foreign body (eg, osteochondritis dissecans fragmentation, chondral fragmentation)
29875	Arthroscopy, knee, surgical; synovectomy, limited (eg, plica or shelf resection) (separate procedure)
29876	Arthroscopy, knee, surgical; synovectomy, major, 2 or more compartments (eg, medial or lateral)
29877	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage (chondroplasty)
29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture

29880	Arthroscopy, knee, surgical; with meniscectomy (medial AND lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29881	Arthroscopy, knee, surgical; with meniscectomy (medial OR lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29882	Arthroscopy, knee, surgical; with meniscus repair (medial OR lateral)
29883	Arthroscopy, knee, surgical; with meniscus repair (medial AND lateral)
29884	Arthroscopy, knee, surgical; with lysis of adhesions, with or without manipulation (separate procedure)
29885	Arthroscopy, knee, surgical; drilling for osteochondritis dissecans with bone grafting, with or without internal fixation (including debridement of base of lesion)
29886	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion
29887	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion with internal fixation
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction
G0289	Arthroscopy, knee, surgical, for removal of loose body, foreign body, debridement/shaving of articular cartilage (chondroplasty) at the time of other surgical knee arthroscopy in a different compartment of the same knee

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Meniscal Allograft Transplantation of the Knee

Description

Meniscal allograft transplantation of the knee is a surgical procedure used to restore normal meniscal function by replacing a damaged or absent meniscus with donor cadaver allograft cartilage. The procedure is an option for a subset of patients who have pain or disability attributed to insufficient cushioning and lubrication of the joint.

A significant subset of these patients have undergone one or more procedures to remove portions of the meniscus due to tears or other injury. The goal of the procedure is reduction in pain, prevention of degenerative changes to the cartilage and subchondral bone, and restoration of the mechanical properties of the knee joint.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Operative report of a prior arthroscopic procedure and/or MRI of the knee performed within the past 12 months. The provider shall submit a detailed imaging report that correlates with clinical findings of the requested procedure. In the absence of a detailed report, the provider will be required to submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program which includes flexibility and muscle strengthening exercises that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)
    - **Exception to the physical therapy requirement** in unusual circumstances (for instance intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]

- Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Meniscal Allograft Transplantation of the Knee

Meniscal allograft transplantation of the knee is considered medically necessary as a treatment for individuals with significant partial (more than 50%) or complete loss of the meniscus, as documented by previous operative reports, MRI, or diagnostic arthroscopy, when **ALL** of the following criteria are met:

- Age 55 or younger and skeletally mature
- Knee pain refractory to conservative treatment
- Ligamentous stability either prior to surgery or achieved concurrently with meniscal transplantation
- Normal alignment without varus or valgus deformities
- Mild to moderate articular damage (Outerbridge grade II or less)

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Treatment for asymptomatic individuals with partial or complete loss of the meniscus
- Use of other meniscal implants incorporating materials such as collagen and polyurethane

Selected References

1. Beaufils P, Hulet C, Dhénain M, Nizard R, Nourissat G, Pujol N. Clinical practice guidelines for the management of meniscal lesions and isolated lesions of the anterior cruciate ligament of the knee in adults. Orthop Traumatol Surg Res. 2009;95(6):437-42.
2. De Bruycker M, Verdonk PCM, Verdonk RC. Meniscal allograft transplantation: a meta-analysis. Sicot-J. 2017;3:33.

3. Quinn RHM, J.; Pezold, R. The American Academy of Orthopaedic Surgeons Appropriate Use Criteria for Surgical Management of Osteoarthritis of the Knee. J Bone Joint Surg Am. 2017;99(8):697-9.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

29868	Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
G0428	Collagen meniscus implant procedure for filling meniscal defects (eg, CMI, collagen scaffold, Menaflex)

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Osteochondral Grafts

Description and Scope

Articular cartilage lesions in weight-bearing joints often fail to heal spontaneously and may be associated with pain, loss of function, and long-term complications such as osteoarthritis. A number of surgical techniques have been developed to treat these lesions, but an established therapy with long-term efficacy remains elusive.

Procedures to treat focal articular cartilage defects can be classified as:

1. Palliative (lavage, chondroplasty)
2. Reparative (microfracture, abrasion arthroplasty)
3. Restorative (autologous chondrocyte implantation, osteochondral allograft, or osteochondral autograft)*

The most widely used are bone marrow stimulation techniques to induce an influx of mesenchymal stem cells into the defect.

Chondroplasty or debridement is a smoothing or shaving of symptomatic partial-thickness cartilage lesions or chondral flaps (unstable mechanical source of pain). See knee arthroscopy section.

Microfracture involves drilling multiple holes through the subchondral bone to promote bleeding and fibrocartilage growth. See knee arthroscopy section.

Abrasion arthroplasty involves abrading the subchondral bone to the depth necessary to promote bleeding and fibrocartilage growth. See Knee Arthroscopy section.

Both microfracture and abrasion arthroplasty are typically performed on lesions less than 4 cm^2.

Other techniques involve transplantation of osteochondral tissue from non-weight bearing sites, autologous chrondrocyte transplant, and use of synthetic bone filler material or scaffolds.

This guideline addresses treatment of osteochondral defects of the knee, ankle, and other joints using the following procedures or devices:

- Autologous chondrocyte transplant (ACT)
- Minced cartilage repair
- Osteochondral allograft
- Osteochondral autograft (OATS/mosaicplasty)
- Resorbable synthetic bone filler materials
- Microfracture

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Operative report of a prior arthroscopic procedure and/or MRI of the knee performed within the past 12 months. The provider shall submit a detailed imaging report that correlates with clinical findings of the requested procedure. In the absence of a detailed report, the provider will be required to submit a report from an independent radiologist. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

Conservative management[1] must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
    - Physical therapy rendered by a qualified provider of physical therapy services
    - Supervised home treatment program that includes **ALL** of the following:
        - Participation in a patient-specific or tailored program
        - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
        - Compliance (documented or by clinician attestation on follow-up evaluation)
    - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
    - Anti-inflammatory medications and analgesics[2]
    - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants[2]
    - Intra-articular corticosteroid injection(s)[2]
    - Alternative therapies such as activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

[1] Additional condition- or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

[2] In the absence of contraindications

Clinical reevaluation. In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** of the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate.

Reporting symptom severity. Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Patient Selection Requirements

Candidates for procedures included in this guideline must meet **ALL** of the following requirements:

- Skeletal maturity as documented by closure of growth plates
- Disabling localized knee or ankle pain for at least 3 months, which has failed to respond to at least 6 weeks of conservative treatment, unless a symptomatic loose body is present
- Absence of localized or systemic infection
- No history of cancer in the bones, cartilage, fat or muscle of the affected limb
- Willingness and ability to comply with post-operative weight-bearing restrictions and rehabilitation

ALL of the following lesion and joint characteristics must be present:

- Lesion is discrete, single, and involves only one side of the joint
- Lesion is largely contained with near normal surrounding articular cartilage and articulating cartilage
- Joint space is normal without evidence of inflammation or degenerative changes
- Knee or ankle joint is stable with functionally intact menisci (knee) and ligaments, and normal alignment

Corrective procedures (e.g., ligament or tendon repair, osteotomy for realignment, meniscal allograft transplant or repair) may be performed in combination with, or prior to, transplantation.

Osteochondritis Dissecans (Juvenile and Adult)

Osteochondritis dissecans (OCD) is a distinct condition that develops primarily in children and adolescents. A focal area of ischemia in the bone results in a progressive separation of a small segment of bone and overlying cartilage. OCD affects the medial or lateral femoral condyles (not the patella, femoral trochlea, or tibial plateau) (AAOS AUC). OCD is usually regarded as either juvenile OCD (JOCD) (occurring with an open epiphyseal plate) or adult OCD (AOCD) (after the physis has closed). The etiology of OCD lesions remains unclear and is characterized by an aseptic necrosis in the subchondral bone area. OCD is not associated with acute trauma.

Juvenile OCD

Surgical treatment (e.g., microfracture, pin fixation) is considered medically necessary when **BOTH** of the following criteria are met:

- Failure of 3 months of conservative management (e.g., immobilization, restricted weight-bearing, avoidance of sports activities)
- Presence of an unstable lesion (based on advanced imaging or arthroscopic evaluation)

Adult OCD

Surgical treatment (e.g., microfracture, pin fixation, osteochondral graft) is considered medically necessary when **BOTH** of the following criteria are met:

- Failure of 3 months of conservative management (e.g., immobilization, restricted weight-bearing, avoidance of sports activities)
- Presence of an unstable lesion (based on advanced imaging or arthroscopic evaluation)

Osteochondral Allograft Transplantation

Cartilaginous defects of the knee

Osteochondral allograft transplantation to treat cartilaginous defects of the knee is considered medically necessary when **BOTH** of the following criteria are met:

- Size of the cartilage defect is greater than or equal to 1.0 cm^2 in total area, as documented by MRI or arthroscopy
- Condition involves a focal, full thickness, (grade III or IV) isolated defect of the weight-bearing surface of the medial or lateral femoral condyles or trochlear region (trochlear groove of the femur)

Cartilaginous defects of the talus

Osteochondral allograft transplantation to treat cartilaginous defects of the talus is considered medically necessary when **EITHER** of the following criteria are met:

- Large (area > 1.0 cm^2) or cystic (volume > 3.0 cm^3) osteochondral lesions of the talus when autografting would be inadequate due to lesion size, depth, or location
- Revision surgery after failed prior marrow stimulation for large (area > 1.0 cm^2) or cystic (volume > 3.0 cm^3) osteochondral lesions of the talus when autografting would be inadequate due to lesion size, depth, or location

Osteochondral Autograft Transplantation

Cartilaginous defects of the knee

Osteochondral autograft transplantation, either osteochondral autograft transplant (OAT) or autologous mosaicplasty, is considered medically necessary to treat cartilaginous defects of the knee when **ALL** of the following criteria are met:

- Size of the cartilage defect is between 1.0 cm and 2.5 cm^2 in total area, as documented by MRI or arthroscopy
- Condition involves a focal, full thickness, (grade III or IV) isolated defect of the knee involving the weight bearing surface of the medial or lateral femoral condyles or trochlear region (trochlear groove of the femur)
- Absence of “kissing” knee lesions (lesion must be single and involve only one side of the joint)

Cartilaginous defects of the talus

Osteochondral autograft transplantation or microfracture, either osteochondral autograft transplant (OAT) or autologous mosaicplasty, is considered medically necessary to treat cartilaginous defects of the talus when **EITHER** of the following criteria is met:

- Large (area > 1.0 cm^2) or cystic (volume > 3.0 cm^3) osteochondral lesions of the talus
- Revision surgery after failed marrow stimulation for osteochondral lesions of the talus

Autologous Chondrocyte Implantation

Cartilaginous defects of the knee/patella

Autologous chondrocyte implantation (ACI) is considered medically necessary to treat cartilaginous defects of the knee/patella when **ALL** of the following criteria are met:

- Primary chondral defect is present or prior surgical procedure failed to correct the defect
- Size of the cartilage defect is greater than or equal to 1.5 cm^2 in total area, as documented by MRI or arthroscopy (defects greater than 15 cm^2 may require more than one membrane)
- Condition involves a focal, full thickness, (grade III or IV) isolated unipolar defect of the knee involving the weight bearing surface of the medial or lateral femoral condyles or patellofemoral region (includes trochlear region, trochlear groove, and patella)

- Defect involves only the cartilage and not the subchondral bone. *(**Exception to this requirement**: treatment of osteochondritis dissecans [OCD] associated with a bony defect of 10 mm or less in depth, which has failed prior conservative treatment. OCD lesions associated with a bony lesion greater than 10 mm in depth must also undergo corrective bone grafting).*
- Documented minimal to absent degenerative changes in the surrounding articular cartilage (Outerbridge grade II or less), and normal-appearing hyaline cartilage surrounding the border of the defect
- Normal knee biomechanics or alignment and stability achieved concurrently with autologous chondrocyte implantation (ACI).

Contraindications

All procedures listed in this guideline are contraindicated when **ANY** of the following conditions are present:

- Known allergy to gentamicin or other aminoglycosides
- Known sensitivity to porcine or bovine cultures
- Severe osteoarthritis of the knee (Kellgren-Lawrence grade 3 or 4)
- Inflammatory arthritis, inflammatory joint disease, or uncorrected congenital blood coagulation disorders.
- Knee surgery within the previous 6 months (except surgery to procure a biopsy or a concomitant procedure to prepare the knee for a MACI implant)
- Inability to cooperate with a physician-prescribed post-surgical rehabilitation program

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Use of non-autologous mosaicplasty with resorbable synthetic bone filler materials including, but not limited to, plugs and granules to repair osteochondral defects of the knee or ankle
- Use of minced articular cartilage (whether synthetic, allograft or autograft) to repair osteochondral defects of the knee or ankle
- Use of decellularized osteochondral allograft plugs (e.g., Chondrofix®) or reduced osteochondral allograft discs (e.g., ProChondrix®, Cartiform®) to repair osteochondral defects of the knee or ankle
- Use of autologous chondrocyte implantation (ACI) in joints other than the knee (investigational)
- Allografts preserved by nonstandard tissue bank methods (e.g., Missouri Osteochondral Allograft Preservation System)
- Use of larger allografts that involve removing and replacing half or more of the articular surfaces of the knee as an alternative to traditional total joint replacement (e.g., hemi condylar or total condylar for degenerative conditions)

Selected References

1. Chambers HG, Shea KG, Carey JL. AAOS Clinical Practice Guideline: diagnosis and treatment of osteochondritis dissecans. J Am Acad Orthop Surg. 2011;19(5):307-9.
2. Devitt BM, Bell SW, Webster KE, Feller JA, Whitehead TS. Surgical treatments of cartilage defects of the knee: Systematic review of randomised controlled trials. Knee. 2017;24(3):508-17.
3. DiBartola AC, Wright BM, Magnussen RA, Flanigan DC. Clinical Outcomes After Autologous Chondrocyte Implantation in Adolescents' Knees: A Systematic Review. Arthroscopy. 2016;32(9):1905-16.

4. Goyal D, Goyal A, Keyhani S, Lee EH, Hui JH. Evidence-based status of second- and third-generation autologous chondrocyte implantation over first generation: a systematic review of level I and II studies. Arthroscopy. 2013;29(11):1872-8.
5. Mistry H, Connock M, Pink J, Shyangdan D, Clar C, Royle P, Court R, Biant LC, Metcalfe A, Waugh N. Autologous chondrocyte implantation in the knee: systematic review and economic evaluation. Health Technol Assess. 2017;21(6):1-294.
6. Mundi R, Bedi A, Chow L, Crouch S, Simunovic N, Sibilsky Enselman E, Ayeni OR. Cartilage Restoration of the Knee: A Systematic Review and Meta-analysis of Level 1 Studies. Am J Sports Med. 2016;44(7):1888-95.
7. Niemeyer P, Laute V, Zinser W, Becher C, Kolombe T, Fay J, Pietsch S, Kuzma T, Widuchowski W, Fickert S. A Prospective, Randomized, Open-Label, Multicenter, Phase III Noninferiority Trial to Compare the Clinical Efficacy of Matrix-Associated Autologous Chondrocyte Implantation With Spheroid Technology Versus Arthroscopic Microfracture for Cartilage Defects of the Knee. Orthop. 2019;7(7):2325967119854442.

Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant,* December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

20932	Allograft, includes templating, cutting, placement and internal fixation, when performed; osteoarticular, including articular surface and contiguous bone (List separately in addition to code for primary procedure)
20933	Allograft, includes templating, cutting, placement and internal fixation, when performed; hemicortical intercalary, partial (ie, hemicylindrical) (List separately in addition to code for primary procedure)
20934	Allograft, includes templating, cutting, placement and internal fixation, when performed; intercalary, complete (ie, cylindrical) (List separately in addition to code for primary procedure)
27412	Autologous chondrocyte implantation, knee
27415	Osteochondral allograft, knee, open [when specified as osteochondral allograft]
27416	Osteochondral autograft(s), knee, open (eg, mosaicplasty) includes harvesting of autograft[s])
28446	Open osteochondral autograft, talus (includes obtaining graft[s])
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (eg, mosaicplasty) (includes harvesting of the autograft)
29867	Arthroscopy, knee, surgical; osteochondral allograft (eg, mosaicplasty)
29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
29892	Arthroscopically aided repair of large osteochondritis dissecans lesion, talar dome fracture, or tibial plafond fracture, with or without internal fixation (includes arthroscopy)
J7330	Autologous cultured chondrocytes, implant
S2112	Arthroscopy, knee, surgical for harvesting of cartilage (chondrocyte cells)

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Appendix

Kellgren-Lawrence grading system for radiographic assessment of cartilage damage

Grade	Description
0	Normal
1	Doubtful narrowing of joint space and possible osteophytic lipping
2	Definite osteophytes, definite narrowing of joint space
3	Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour
4	Large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity of bone contour

Modified Outerbridge grading system for MRI assessment of cartilage damage

Grade	Description
0	Normal
I	Signal intensity alterations with an intact surface of the articular cartilage compared with the surrounding normal cartilage
II	Partial-thickness defect with fissures on the surface that do not reach subchondral bone or exceed 1.5 cm in diameter
III	Fissuring to the level of subchondral bone in an area with a diameter more than 1.5 cm
IV	Exposed subchondral bone head

Tönnis grading system for radiographic assessment of osteoarthritis

Grade	Description
0	No signs of osteoarthritis
1	Mild: increased sclerosis, slight narrowing of the joint space, no or slight loss of head sphericity
2	Moderate: small cysts, moderate narrowing of the joint space, and moderate loss of head sphericity
3	Severe: large cysts, severe narrowing or obliteration of the joint space, severe deformity of the head

History

Status	Review Date	Effective Date	Action
Revised	04/12/2023	11/05/2023 for commercial, Medicare and Medicaid except IA and LA; 04/14/2024 for IA and LA Medicaid	Independent Multispecialty Physician Panel (IMPP) review. Multiple joints: Added indications for removal of loose body. Added conservative management requirement for synovectomy, and exclusion for post-traumatic reactive synovitis; added indications for limited and extensive synovectomy in the knee. Shoulder: Modified conservative management requirements RCT, adhesive capsulitis, shoulder debridement. Added exclusions for subacromial balloon spacer and shoulder resurfacing. Added indications for symptomatic os acromiale and symptomatic mechanical impingement. Hip: Added indications for primary partial hip arthroplasty and partial/total hip resurfacing; added exclusion for non-intraarticular hip procedures. Knee: Modified conservative management requirements for unicompartmental knee arthroplasty. Revision knee arthroplasty – added indication for reconstruction after post knee replacement infection. Patellar compression syndrome – added exclusion for central or medial tracking of the patella. Osteochondral grafts: Revised patient selection requirements, added indications and exclusions. Added CPT codes 20932, 20933, 20934; HCPCS code S2118. Updated references. Added guidance for correct coding to code sections. Added required language per new Medicare regulations.
Revised	11/11/2021	09/11/2022	Independent Multispecialty Physician Panel (IMPP) review. For total shoulder arthroplasty, added fracture indication and exception for Kellgren-Lawence grade 4. For hemiarthroplasty, added indications for malignancy of the glenohumeral joint and for glenohumeral arthritis with irreparable rotator cuff tear (exclusion removed). For reverse shoulder arthroplasty, added indication for when glenoid bone stock inadequate to support prosthesis. For labrum repair, removed requirement that SLAP lesion is traumatic on MRI. For adhesive capsulitis, matched requirements in knee arthroscopy; reduced timeframe of conservative management to 6 weeks post-surgery for lysis of adhesions/capsular release and MUA. Added patellofemoral osteoarthritis as an indication for total knee arthroplasty. For knee arthroscopy, new indication for abrasion arthroplasty/microfracture; removed 12-week post-surgery requirement for MUA and arthroscopically assisted lysis of adhesions. Added CPT code 27345. Removed BMI from patient criteria in treatment of osteochondral defects. Added contraindications for autologous chondrocyte implantation per MACI package insert. Updated references.
Revised	12/03/2020	09/12/2021	IMPP review. Aligned conservative care definitions across musculoskeletal surgery and extremity imaging guidelines. Added a more rigorous definition of the supervised home PT requirement for cervical and lumbar surgery, and removed cognitive behavioral therapy as a conservative care modality. New indication for diagnostic shoulder, hip, and knee arthroscopy. Removed massive tear as a contraindication for rotator cuff repair. Added recurrent subluxation as a new indication for capsulorrhaphy. Added new criteria and removed foreign body criteria for synovectomy. New indication for debridement. Removed rotator cuff tear as a criterion for tenodesis/tenotomy in select patients. For primary total hip arthroplasty and total knee arthroplasty, added an exception to conservative management for end-stage osteoarthritis. For hip arthroscopy, modified conservative management requirements; added an exception to full conservative management based on alpha angle; removed age as an exclusion for FAIS but further defined radiographic exclusions. For knee arthroplasty, added degenerative change of the patellofemoral joint as a contraindication. For knee arthroscopy, more expansive approach to physical exam findings; aligned with criteria for MUA; added radiographic criteria for distal realignment procedures and MPFL reconstruction. New criteria for plica resection.
Revised	07/08/2020	03/14/2021	IMPP review. For knee arthroscopy and open procedures, added indications for quadricepsplasty, distal realignment procedures for patellar

Status	Review Date	Effective Date	Action
			instability (subluxation/dislocation), and medial patellofemoral ligament reconstruction. Added CPT codes 23000, 23020, 27418, 27420, 27422, 27424, and 27430.
Updated	-	01/01/2021	2021 Annual CPT code update: descriptions changed for 23466, 29822, and 29823.
Revised	08/12/2019	05/17/2020	IMPP review. Added steroid injection within the past 6 weeks as a contraindication for shoulder and hip arthroplasty. For shoulder arthroscopy, added exclusions for xenografts, platelet-rich plasma, and subacromial decompression, and removed indication for subacromial impingement with rotator cuff tear. Added new labral tear indication for hip arthroscopy. For knee arthroscopy, added new chondroplasty indication, narrowed use of lateral release to lateral compression as a cause for anterior knee pain or chondromalacia patella, added conservative management and advanced osteoarthritis exclusion for patellar compression syndrome. Added CPT codes 27425 and 27570.
Revised	11/28/2018	06/29/2019	IMPP review. All sections: Clarified conservative management options and removed nicotine-free documentation requirement. For shoulder arthroscopy, updated criteria for subacromial impingement syndrome and tendinopathy of the long head of the biceps. New indication for synovectomy/debridement. Added steroid injection exclusion for shoulder, hip, and knee arthroplasty. Updated criteria for primary and revision total hip arthroplasty; new guideline for resection arthroplasty. For hip arthroscopy, expanded appropriate techniques for FAI surgery to include acetabuloplasty and femoroplasty, added radiographic and clinical criteria to include FAIS-related symptoms. New guideline for elective patellofemoral arthroplasty, and added clinical scenarios for revision of prior knee arthroplasty. For knee arthroscopy, changes to meniscal repair/meniscectomy, and new guideline for arthroscopically assisted lysis of adhesions and manipulation under anesthesia. Meniscal allograft transplantation: Added exclusion for collagen meniscal implants. New criteria for talar osteochondral defects, allow patellar surface autologous chondrocyte implantation, and exclude use of decellularized osteochondral allograft plugs and reduced osteochondral allograft discs to repair osteochondral defects. Added CPT codes 27120, 27122, 27437, 27445, 27488, 28446, 29871, and 29892. Added HCPCS code G0428.
Revised	07/11/2018	03/09/2019	IMPP review. Added the General Clinical Guideline.
Updated	–	01/01/2019	2019 Annual CPT and HCPCS code updates: added 23700, G0289, G0428, J7330, and S2112.
Created	07/17/2017	11/01/2017	IMPP review. Original effective date.