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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. Use of the Guidelines by any external AI entity without the express written permission of Carelon is prohibited.

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 confirms the diagnosis or establishes 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 delay or decreased access to services that may result (net benefit). Unless specifically stated, elective surgery with an infection or open wound at or near a surgical site would be potential harm to a patient.
- Widely used treatment guidelines, 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 lead to an improved health status for the patient.
- The requested intervention should match the intended treatment plan in the medical record.

Providers may be required to submit clinical documentation supporting 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 considered to the extent permitted by law.

If a surgeon performs an authorized surgery and intraoperatively finds it necessary to perform a procedure that was not previously authorized, the surgeon may submit a request for authorization post-service. The necessity for the procedure should be well documented in the operative report and submitted in a timely manner for appropriate review and coverage.

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 repeated request for a therapeutic intervention during the active authorization period for a prior request is not appropriate unless it can be confirmed that the prior intervention was never administered. Requests for ongoing 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.

All shoulder arthroplasties are inclusive of the division of, reattachment of, or relocation of any muscles and/or tendons 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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform 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, 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 and nicotine products 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 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 to discuss these modifiable comorbidities with the patient is strongly recommended and should be documented.

Specific Requirements

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

- Anticipated level of function should place limited demands on the shoulder joint
- Deltoid muscle must be functioning
- 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 (e.g., severe comminution, poor bone quality, multipart, displacement) or failed prior fixation
- Joint reconstruction for tumors involving the shoulder girdle or surrounding soft tissues
- Advanced joint disease of the shoulder due to osteoarthritis, rheumatoid arthritis, avascular necrosis (osteonecrosis), or post-traumatic arthritis when **ALL** the following criteria are met:
    - Limited range of motion or crepitus of the glenohumeral joint on physical examination
    - Pain and loss of function that interferes with daily activities
    - Imaging evidence of destructive degenerative joint disease as evidenced by marked joint space narrowing **AND ONE** or more of the following:
        - Irregular joint surfaces
        - Glenoid sclerosis
        - Osteophyte changes
        - Flattened glenoid
        - Cystic changes in the humeral head
    - Persistent symptoms despite 12 weeks of conservative management (unless radiographs show Kellgren-Lawrence grade 4 or diffuse modified Outerbridge grade III-IV changes)

Hemiarthroplasty

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

- Proximal humerus fracture not amenable to internal fixation (e.g., severe comminution, poor bone quality, multipart, displacement) or failed prior fixation
- Joint reconstruction for tumors involving the shoulder girdle or surrounding soft tissues 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
    - Glenoid bone stock inadequate to support a glenoid prosthesis
    - Advanced joint disease due to rotator cuff tear arthropathy*
    - Glenohumeral osteoarthritis with irreparable rotator cuff tear*

    **except for Exclusions listed below*

Reverse Shoulder Arthroplasty

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

- Joint reconstruction for tumors involving the shoulder girdle or surrounding soft tissues Proximal humerus fracture not amenable to internal fixation (e.g., severe comminution, poor bone quality, multipart, displacement) or failed prior fixation
- Glenoid bone stock/anatomy inadequate to support an anatomic glenoid prosthesis
- Failed shoulder arthroplasty with deficient rotator cuff
- Imaging evidence of glenohumeral osteoarthritis with irreparable or deficient rotator cuff, pain and loss of function, and persistent symptoms despite 12 weeks of conservative management (unless imaging shows Kellgren-Lawrence grade 4 or diffuse modified Outerbridge grade IV)
- Rotator cuff arthropathy, defined as having a long-standing, massive tear in the rotator cuff tendons and superior migration of the humeral head with glenohumeral osteoarthritis

Revision or Conversion of a Prior Shoulder Arthroplasty

Revision or conversion of a prior shoulder arthroplasty is considered medically necessary when **ALL** the following criteria are met:

- Pain and functional limitation attributable to the arthroplasty
- Documented recent evaluation for prosthetic joint infection (**ALL** the following):
    - Recent preoperative investigation using serologic testing (ESR, CRP, and/or IL-6)
    - **IF** there are abnormal laboratory findings on serologic testing, at least **ONE** of the following:
        - Synovial fluid testing, such as leukocyte count and neutrophil percentage, aerobic and anaerobic bacterial cultures, leukocyte esterase, alpha defensin testing (Synovasure®), synovial fluid CRP, synovial fluid PCR for bacteria
        - Intraoperative plan for histopathology and/or aerobic and anaerobic tissue cultures using implant sonication for cultures or PCR
- **ANY** of the following conditions are present:
    - Reconstruction after periprosthetic joint infection with lab and clinical confirmation of infection resolution
    - Implant loosening confirmed by imaging
    - Substantial osteolysis of the humeral head or glenoid
    - Progressive soft tissue or bone reaction including bearing surface wear or symptomatic synovitis

- Component instability (e.g., clinical instability, component malalignment, displacement of the glenoid or humeral component)
- Component failure or recall
- Periprosthetic fracture or irreducible dislocation
- Superior migration of the humeral head or rotator cuff deficiency
- Persistent symptoms despite 12 weeks of conservative management in the absence of any of the conditions listed above

Contraindications

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

- Active infection of the joint being replaced
- Active systemic bacteremia
- Active skin infection or open wound at or near the surgical site
- Rapidly progressive neurologic disease
- Intra-articular injection or shoulder arthroscopy within 12 weeks of the planned arthroplasty procedure

Exclusions

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

- Shoulder arthroplasty under conditions which would result in excessive stress on the implant including, but not limited to, Charcot joint and paralytic conditions of the shoulder
- The use of focal resurfacing implants (e.g., Arthrosurface HemiCAP®)
- The use of shoulder implants involving the greater tuberosity (e.g., Copeland™ Extended Articulating Surface [EAS]™ Humeral Resurfacing Head, Global CAP™ CTA Resurfacing Humeral Head)

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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. This guideline does not address endoscopic procedures that are done outside the shoulder joint capsule or the adjacent subacromial space.

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 most 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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform ADLs and/or IADLs.

Shoulder Arthroscopy

Diagnostic arthroscopy

Diagnostic arthroscopy of the shoulder joint is considered medically necessary for synovial biopsy when **ALL** the following criteria are met:

- 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
- Persistent symptoms despite 12 weeks of conservative management. (For patients with severe ADL limitations, abbreviated treatment requirements may be acceptable)

Exclusions

Diagnostic arthroscopy for Kellgren-Lawrence grade 4 osteoarthritis is considered **not medically necessary**.

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 **ALL** the following criteria are met:

- Shoulder pain and/or grinding, catching, locking, or popping
- Radiographic evidence of a loose intra-articular foreign body/implant, fracture fragment, or other distinct structure*

**When other shoulder arthroscopy codes are authorized, loose body must be larger than the size of an arthroscopy cannula (5mm) or require incision extension for removal.*

Exclusion

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

Rotator Cuff Repair

Rotator cuff repair is defined as suturing a torn rotator cuff tendon to bone.

For primary rotator cuff repair, adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products 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** 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 partial or full thickness tear)
- Shoulder pain ≥ 3 on the VAS scale which interferes with age-appropriate activities of daily living (ADLs)
- Physical exam consistent with symptomatic rotator cuff tear (e.g., drop arm test, painful arc, full/empty can test, weakness of internal/external rotation or abduction)
- Recent advanced imaging demonstrating an acute full thickness or high-grade partial thickness tear

Chronic partial or full thickness tear

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

- Atraumatic shoulder pain for at least 3 months

- Shoulder pain ≥ 3 on the VAS scale which interferes with age-appropriate activities of daily living (ADLs)
- Physical exam consistent with symptomatic rotator cuff tear (e.g., drop arm test, painful arc, full/empty can test, weakness of internal/external rotation or abduction)
- Recent advanced imaging demonstrating a partial or full thickness tear
- Persistent symptoms despite 12 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 or open wound at or near the surgical site
- Rapidly progressive neurological disease

Revision Rotator Cuff Repair

Tobacco cessation requirement: adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products 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** the following criteria are met:

- Documentation of nicotine-free status for at least 6 weeks prior to surgery
- Shoulder pain ≥ 3 on the VAS scale which interferes with age-appropriate activities of daily living (ADLs)
- Physical exam consistent with symptomatic rotator cuff tear (e.g., drop arm test, painful arc, full/empty can test, weakness of internal/external rotation or abduction)
- Recent advanced imaging demonstrating a full thickness re-tear
- Persistent symptoms despite 12 weeks of conservative management

Contraindications

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

- Rotator cuff arthropathy, defined as having a long-standing, massive tear in the rotator cuff tendons and superior migration of the humeral head with glenohumeral osteoarthritis
- Recent history of a revision rotator cuff repair
- Active infection of the joint
- Active systemic bacteremia
- Active skin infection or open wound at or near the surgical site
- Rapidly progressive neurological disease
- Patient is wheelchair-bound and/or assistive-device dependent

Exclusions

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

- Rotator cuff repair when there is deltoid or rotator cuff paralysis
- The use of xenografts or biologic scaffold for augmentation or bridging reconstruction for treatment of rotator cuff tears
- The use of platelet-rich plasma or other biologics for treatment of rotator cuff tears
- The use of a subacromial balloon spacer

Labral Repair

Labral tear associated with Superior Labrum Anterior-Posterior (SLAP) tear

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

- Shoulder pain ≥ 3 on the VAS scale which interferes with age-appropriate activities of daily living (ADLs)
- Symptoms aggravated by heavy lifting, pushing, and overhead motion
- Physical exam consistent with symptomatic SLAP tear (e.g., 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)
- Recent advanced imaging demonstrates a superior labral (SLAP) tear consistent with subjective and objective findings
- Persistent symptoms despite 12 weeks of conservative management

Labral tear or capsular redundancy associated with shoulder instability or laxity

Capsulorrhaphy (including labral repair) is considered medically necessary when **ALL** the following criteria are met:

- History of a shoulder dislocation or recurrent subluxation
- Shoulder pain and/or instability which interferes with age-appropriate activities of daily living (ADLs)
- Physical exam consistent with symptomatic glenohumeral instability (e.g., apprehension, relocation, sulcus sign, load and shift)
- Recent advanced imaging demonstrating findings consistent with glenohumeral instability (e.g., Hill-Sachs lesion, labral tear other than superior labral tear, capsular tear, capsular redundancy with clinical multidirectional instability)
- Persistent symptoms despite 12 weeks of conservative management (unless history of traumatic dislocation and multiple dislocations)*

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

Other Arthroscopic and Open Procedures

Acromioclavicular arthritis

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

- Pain at the acromioclavicular (AC) joint aggravated by shoulder motion
- Physical exam consistent with symptomatic acromioclavicular joint (e.g., Positive cross-arm adduction test **AND** Tenderness over the acromioclavicular joint)
- Recent imaging demonstrating acromioclavicular joint arthritis (**ONE** of the following)

    - Moderate to severe acromioclavicular joint arthritis, distal clavicle edema, or osteolysis of the distal clavicle on MRI
    - Moderate to severe acromioclavicular joint arthritis or osteolysis of the distal clavicle on x-ray
- Persistent symptoms despite 12 weeks of conservative management

Adhesive capsulitis

Arthroscopically assisted lysis of adhesions/capsular release and/or manipulation under anesthesia (MUA) are considered medically necessary for post-traumatic, post-surgical, or idiopathic stiffness of the shoulder when **ALL** the following criteria are met:

- Shoulder pain ≥ 3 on the VAS scale which interferes with age-appropriate activities of daily living
- Reduced passive range of motion of the affected shoulder that either is 50% less than a normal shoulder **OR** significantly impacts daily activities or function
- Persistent symptoms despite 12 weeks of conservative management

Subacromial impingement syndrome

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

- Symptomatic os acromiale with associated exam findings
- 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

Partial or complete synovectomy is considered medically necessary for **ANY** of the following conditions:

- Diffuse synovial proliferative diseases involving the joint (e.g., inflammatory arthritides such as rheumatoid arthritis or psoriatic arthritis, crystalline arthropathy such as gout or pseudogout, pigmented villonodular synovitis, septic arthritis, synovial hemangioma, synovial chondromatosis or osteochondromatosis, hemophilia)

Exclusion

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

Debridement

Debridement of discrete structures/regions of the shoulder not covered by other repair/reconstruction procedures (e.g., glenohumeral bone/cartilage, biceps tendon, rotator cuff, subacromial space [including bursa/spurs/soft tissue], and labrum [all parts]) is considered medically necessary when **ALL** the following criteria are met:

- Persistent symptoms despite 12 weeks of conservative management
- Recent advanced imaging demonstrating surgical pathology
- Limited debridement involves 1 or 2 discrete structures/regions
- Extensive debridement involves 3 or more discrete structures/regions

Tendinopathy of the long head of the biceps

Biceps tenodesis or tenotomy is considered medically necessary for shoulder pain when **ALL** 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
- Physical exam consistent with symptomatic long head of biceps pathology
- Persistent symptoms despite 12 weeks of conservative management
- Recent advanced imaging demonstrating biceps pathology*

  *Note: If pathology of the biceps tendon is found during surgery, the surgeon may submit a request for authorization post-service. The necessity for the procedure should be well documented in the operative report and submitted in a timely manner for appropriate review and coverage.

OR ANY of the following criteria are met:

- Symptomatic acute proximal complete biceps tendon tear
- Criteria for SLAP tear are met

Exclusions

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

- The use of a subacromial balloon spacer

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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
C9781	Arthroscopy, shoulder, surgical; with implantation of subacromial spacer (e.g., balloon), includes debridement (e.g., limited or extensive), subacromial decompression, acromioplasty, and biceps tenodesis when performed

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.

This guideline does not address pelvic osteotomies that are done for hip reconstructive procedures.

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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform 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 and nicotine products 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 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 to discuss these modifiable comorbidities with the patient is strongly recommended and should be documented.

Total Hip Arthroplasty

Total hip arthroplasty or conversion of a previous intra-articular or implant hip surgery to a total hip arthroplasty is considered medically necessary for **ANY** of the following indications:

- Joint reconstruction for tumors involving the hip or surrounding soft tissues
- Hip fracture not amenable to internal fixation or failed prior fixation
- Avascular necrosis (osteonecrosis) with severe pain unresponsive to conservative management
- Symptomatic hip arthrodesis
- Joint damage or destruction due to osteoarthritis, inflammatory disease, or other chronic condition when **ALL** the following criteria have been met:
    - Functional limitation secondary to hip pathology which interferes with the ability to perform age-appropriate daily activities (unless radiographs show Kellgren-Lawrence grade 4, diffuse modified Outerbridge grade IV, or Tönnis grade 3)
    - Imaging evidence of significant joint destruction and cartilage loss, defined as Kellgren-Lawrence grade 3–4, diffuse modified Outerbridge grade III–IV, or Tönnis grade 2–3
    - Physical exam consistent with symptomatic hip arthritis (e.g., pain with passive motion of the hip, antalgic gait, limited motion) unless radiographs show Kellgren-Lawrence grade 4, diffuse modified Outerbridge grade IV, or Tönnis grade 3
    - Persistent symptoms despite 12 weeks of conservative management (unless radiographs show Kellgren-Lawrence grade 4, diffuse modified Outerbridge grade IV, or Tönnis grade 3)

Partial Hip Arthroplasty

Partial hip arthroplasty (e.g., unipolar, bipolar, hemiarthroplasty) is considered medically necessary for **ANY** of the following indications:

- Femoral neck fracture not amenable to internal fixation or failed prior fixation
- Avascular necrosis (osteonecrosis) of the femoral head without acetabular involvement, with severe pain unresponsive to conservative management
- Joint damage or destruction due to osteoarthritis, inflammatory disease, or other chronic condition when **ALL** the following criteria have been met:
    - Functional limitation secondary to hip pathology which interferes with the ability to perform age-appropriate daily activities (unless radiographs show Kellgren-Lawrence grade 4, diffuse modified Outerbridge grade IV, or Tönnis grade 3)
    - Imaging evidence of significant joint destruction and cartilage loss, defined as Kellgren-Lawrence grade 3–4, diffuse modified Outerbridge grade III–IV, or Tönnis grade 2–3

- Physical exam consistent with symptomatic hip arthritis (e.g., pain with passive motion of the hip, antalgic gait, limited motion) unless radiographs show Kellgren-Lawrence grade 4, diffuse modified Outerbridge grade IV, or Tönnis grade 3
- Persistent symptoms despite 12 weeks of conservative management (unless radiographs show Kellgren-Lawrence grade 4, diffuse modified Outerbridge grade IV, or Tönnis grade 3)

Hip Resurfacing

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

- Active, fit individual
- Normal proximal femoral bone geometry and bone quality
- **EITHER** of the following conditions are met:
  - **IF** being done for avascular necrosis of the femoral head, must involve less than 50% of the femoral head
  - Otherwise eligible for a conventional total hip arthroplasty

Contraindications

Hip resurfacing is 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 or Conversion of a Prior Hip Arthroplasty

Revision or conversion of a prior hip arthroplasty is considered medically necessary when ALL the following criteria are met:

- Pain and functional limitation attributable to the arthroplasty
- Documented recent evaluation for prosthetic joint infection:
  - Recent preoperative investigation using serologic testing (ESR, CRP, and/or IL-6) and
  - **IF** there are abnormal laboratory findings on serologic testing, at least **ONE** of the following:
    - Synovial fluid testing, such as leukocyte count and neutrophil percentage, aerobic and anaerobic bacterial cultures, leukocyte esterase, alpha defensin testing (Synovasure®), synovial fluid CRP, synovial fluid PCR for bacteria
    - Intraoperative plan for histopathology and/or aerobic and anaerobic tissue cultures using implant sonication for cultures or PCR
- **ANY** of the following conditions are present:
  - Reconstruction after periprosthetic joint infection with lab and clinical confirmation of infection resolution

- Implant loosening confirmed by imaging
- Substantial osteolysis of the femur or acetabulum
- Progressive soft tissue or bone reaction including bearing surface wear or symptomatic synovitis
- Component instability (e.g., clinical instability, component malalignment, displacement of the acetabular or femoral component)
- Component failure or recall
- Periprosthetic fracture or irreducible dislocation
- Metal-on-metal implant with labs demonstrating **EITHER** of the following:
  - An elevated synovial cobalt level
  - An elevated serum cobalt/chromium level
- Persistent symptoms (e.g., pain, antalgic or Trendelenburg gait, leg length inequality, audible noise) despite 12 weeks of conservative management in the absence of any of the conditions listed above

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

Acetabuloplasty is considered medically necessary when **ANY** of the following are 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 (e.g., shelf acetabuloplasty)

*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 **ANY** of the following are 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
- Chronic painful hip dislocation

Contraindications

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

- Active infection of the joint being replaced
- Active systemic infection
- Active skin infection or open wound at or near the surgical site
- Rapidly progressive neurological disease

- Neuropathic joint
- Intra-articular injection or hip arthroscopy within 12 weeks of the planned arthroplasty procedure

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**.

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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. Endoscopic procedures that are extra-articular are not addressed by these guidelines.

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 address 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 most 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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform 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	
0° 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 when **ALL** the following criteria are met:

- 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
- Persistent symptoms despite 12 weeks of conservative management. (For patients with severe ADL limitations, abbreviated treatment requirements may be acceptable)

Exclusions

Diagnostic arthroscopy for Kellgren-Lawrence grade 4 osteoarthritis is considered **not medically necessary**.

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

Non-intraarticular hip procedures are considered **not medically necessary**.

Synovectomy

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

- Diffuse synovial proliferative diseases involving the joint (e.g., inflammatory arthritides such as rheumatoid arthritis or psoriatic arthritis, crystalline arthropathy such as gout or pseudogout, pigmented villonodular synovitis, septic arthritis, synovial hemangioma, synovial chondromatosis/osteochondromatosis, hemophilia)

Exclusion

A separate request for 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 **ALL** the following criteria are met:

- Hip pain and/or grinding, catching, locking, or popping
- Radiographic evidence of a loose intra-articular foreign body/implant, fracture fragment, or other distinct structure*

**When other hip arthroscopy codes are authorized, loose body must be larger than the size of an arthroscopy cannula (5mm) or require incision extension for removal.*

Exclusion

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

Arthroscopic treatment of femoroacetabular impingement syndrome (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.

Acetabuloplasty is considered medically necessary when **ALL** 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 and is not explained by another diagnosis
- Physical exam consistent with FAIS (e.g., positive impingement sign on clinical examination, defined as pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur **OR** with extension and external rotation)

- Recent imaging (radiographs, MRI, or 3D computed tomography) demonstrating pincer impingement as evidenced by **ANY** 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
- No evidence of advanced osteoarthritis, defined as Tönnis grade ≥ 2, or joint space < 2 mm
- No evidence of severe (diffuse modified Outerbridge grade IV) chondral damage
- Persistent symptoms despite 12 weeks of conservative management, including avoidance of hip stretching or any activity that elicits or aggravates symptoms

Femoroplasty is considered medically necessary when **ALL** 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 and is not explained by another diagnosis
- Physical exam consistent with FAIS (e.g., positive impingement sign on clinical examination, defined as pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur **OR** with extension and external rotation)
- Recent imaging (radiographs, MRI, or 3D computed tomography) demonstrating cam impingement as evidenced by **ANY** of the following:
    - Pistol-grip deformity
    - Reduced femoral head-neck offset with an alpha angle ≥ 55 degrees
- No evidence of advanced osteoarthritis, defined as Tönnis grade ≥ 2, or joint space < 2 mm
- No evidence of severe (diffuse modified Outerbridge grade IV) chondral damage
- Persistent symptoms despite 12 weeks* of conservative management, including avoidance of hip stretching or any activity that elicits or aggravates symptoms

  **Less than the full duration of conservative management is permitted for an alpha angle greater than 65 degrees*

Labral tear

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.

Hip arthroscopy is considered medically necessary for treatment of labral tear when **ALL** 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
- Physical exam consistent with labral tear (e.g., positive impingement sign on clinical examination, defined as pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur **OR** with extension and external rotation)
- Recent advanced imaging demonstrating a labral tear
- Persistent symptoms despite 12 weeks of conservative management, including avoidance of hip stretching or any activity that elicits or aggravates symptoms
- No evidence of advanced osteoarthritis, defined as Tönnis grade ≥ 2, or joint space < 2 mm
- No evidence of severe (modified Outerbridge grade IV) chondral damage

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 for treatment of hip osteoarthritis (Kellgren-Lawrence grade ≥ 2, diffuse modified Outerbridge ≥ III, or Tönnis grade ≥ 2)
- **For treatment of FAIS/Labral repair**
  - Use of capsular plication as the sole treatment of FAIS
  - Evidence of advanced osteoarthritis, defined as Tönnis grade ≥ 2, Kellgren-Lawrence ≥ grade 3, or joint space narrowing ≤ 2 mm
  - Evidence of severe (diffuse modified 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

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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) when performed as **elective, non-emergent** procedures. This guideline does not address knee arthroplasty when performed 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, diagnostic arthroscopy, and knee arthrotomy with associated removal of debris.

Removal of a knee prosthesis is defined as an explantation of an existing knee arthroplasty without conversion to a permanent replacement arthroplasty.

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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform 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 and nicotine products 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 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 to discuss these modifiable comorbidities with the patient is strongly recommended and should be documented.

Total Knee Arthroplasty

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

- Joint reconstruction for tumors involving the knee or surrounding soft tissues
- Unicompartmental, bicompartmental, tricompartmental, or isolated patellofemoral joint damage or destruction due to osteoarthritis, post-traumatic arthritis, inflammatory disease, avascular necrosis (osteonecrosis), or other chronic conditions when **ALL** the following criteria are met:
    - Imaging evidence of significant joint destruction and cartilage loss, defined as Kellgren-Lawrence grade 3–4 or diffuse modified Outerbridge grade III–IV
    - Persistent symptoms despite 12 weeks of conservative management (unless radiographs show Kellgren-Lawrence grade 4 or diffuse modified Outerbridge grade IV)
    - Functional limitation secondary to knee pathology which interferes with the ability to perform age-appropriate daily activities (unless radiographs show Kellgren-Lawrence grade 4)

*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 the following criteria are met:

- Imaging evidence of significant joint destruction and cartilage loss, defined as Kellgren-Lawrence grade 3–4, or diffuse modified Outerbridge grade III–IV, isolated to the medial or lateral knee compartment with no degenerative changes in the opposite compartment
- Intact anterior cruciate ligament by imaging and/or documentation of stable knee examination (UKA may be done with concurrent ACL reconstruction if all other criteria are met)
- Flexion contracture less than 15 degrees
- Flexion greater than 110 degrees
- Less than 10 degrees of fixed varus deformity for medial UKA
- Less than 15 degrees of fixed valgus deformity for lateral UKA
- Persistent symptoms despite 12 weeks conservative management (unless radiographs show Kellgren-Lawrence grade 4 or diffuse modified Outerbridge grade IV in the compartment being replaced)

Contraindications

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

- Inflammatory arthritis
- Moderate-to-severe degenerative changes of the lateral facet of the patella when considering medial compartment replacement (Kellgren-Lawrence grade 3 or 4)
- Previous meniscectomy in the other compartment with any evidence of osteoarthritis in that compartment

*See **Contraindications**.*

Patellofemoral Arthroplasty

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

- Functional limitation secondary to knee pathology which interferes with the ability to perform age-appropriate daily activities (unless radiographs show Kellgren-Lawrence grade 4)
- Persistent symptoms despite 12 weeks of conservative management (unless radiographs show Kellgren-Lawrence grade 4 or diffuse modified Outerbridge grade IV in the patellofemoral compartment)
- Flexion contracture less than 10 degrees
- Valgus deformity less than 8 degrees or varus deformity less than 5 degrees
- **ONE** of the following disease states:
    - Advanced symptomatic primary or secondary isolated patellofemoral osteoarthritis (PFOA) with significant joint destruction and cartilage loss, defined as Kellgren-Lawrence grade 3–4, or diffuse modified Outerbridge grade III–IV
    - Failed extensor mechanism unloading procedures (e.g., lateral retinacular release, reconstruction of the medal patellar femoral ligament, quadricepsplasty, bony procedures for realignment involving the tibial tuberosity) with evidence of advanced patellofemoral osteoarthritis
    - Symptomatic patellofemoral cartilage defects greater than 4 cm^2 after a failed cartilage repair procedure, such as autologous chondrocyte implantation (ACI)

Contraindications

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

- Tibiofemoral osteoarthritis
- Inflammatory arthritis
- Patellofemoral malalignment
- Knee instability (ligament injuries)
- Previous meniscectomy with any evidence of osteoarthritis in the tibiofemoral compartments

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

Hinged Knee Arthroplasty

Hinged knee arthroplasty is considered medically necessary when ANY of the following criteria are met:

- Global ligament instability
- Severe bone loss or deformity
- Absence or deficit of muscular control

- Joint reconstruction for tumors involving the knee or surrounding soft tissues
- Congenital dislocation of knee
- Severe instability after surgical exposure

*See **Contraindications**.*

Revision or Conversion of a Prior Knee Arthroplasty

Revision or conversion of a prior knee arthroplasty is considered medically necessary when ALL the following criteria are met:

- Pain and functional limitation attributable to the arthroplasty
- Documented recent evaluation for prosthetic joint infection:
    - Recent preoperative investigation using serologic testing (ESR, CRP, and/or IL-6) and
    - **IF** there are abnormal laboratory findings on serologic testing, at least **ONE** of the following:
        - Synovial fluid testing, such as leukocyte count and neutrophil percentage, aerobic and anaerobic bacterial cultures, leukocyte esterase, alpha defensin testing (Synovasure®), synovial fluid CRP, synovial fluid PCR for bacteria
        - Intraoperative plan for histopathology and/or aerobic and anaerobic tissue cultures using implant sonication for cultures or PCR
- **ANY** of the following conditions are present:
    - Reconstruction after periprosthetic joint infection with lab and clinical confirmation of infection resolution
    - Implant loosening confirmed by imaging
    - 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 (e.g., clinical instability, component malalignment, displacement of the femoral, tibial, or patella component)
    - Component failure or recall
    - Periprosthetic fracture or irreducible dislocation
    - Persistent symptoms (e.g., pain, antalgic gait, knee stiffness attributable to the implants) despite 12 weeks of conservative management in the absence of any of the conditions listed above

Contraindications

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

- Active infection of the joint being replaced
- Active systemic infection
- Active skin infection or open wound at or near the surgical site
- Rapidly progressive neurologic disease
- Extensor mechanism deficiency not amenable to surgical correction
- Neuropathic joint
- Intra-articular injection or knee arthroscopy within 12 weeks of the planned arthroplasty procedure

**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
- The use of an implantable shock absorber (e.g., MISHA™ Knee System)

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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, methyl methacrylate with or without insertion of spacer, knee
C8003	Implantation of medial knee extraarticular implantable shock absorber spanning the knee joint from distal femur to proximal tibia, open, includes measurements, positioning and adjustments, with imaging guidance (e.g., fluoroscopy)

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 (osteochondral allograft, osteochondral autograft, or autologous chondrocyte implantation)*

**See Osteochondral Grafts*

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. It includes debridement of cartilage in the same compartment.

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, manipulation under anesthesia, and soft tissue/synovial resection for visualization.

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 most 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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform 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) when **ALL** the following criteria are met:

- 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
- Persistent symptoms despite 12 weeks of conservative management. (For patients with severe ADL limitations, abbreviated treatment requirements may be acceptable)

Exclusion

Diagnostic arthroscopy for Kellgren-Lawrence grade 4 osteoarthritis is considered **not medically necessary**.

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 **ALL** the following criteria are met:

- Knee pain and/or grinding, catching, locking, or popping
- Radiographic evidence of a loose intra-articular foreign body/implant, fracture fragment, or other distinct structure*

**When other knee arthroscopy codes are authorized, loose body must be larger than the size of an arthroscopy cannula (5mm) or require incision extension for removal.*

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** the following criteria are met:

- Knee injury within last 3 months with new onset knee pain (For traumatic injuries that occurred more than 3 months ago, see chronic meniscal tear)

- 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
- Recent advanced imaging demonstrating 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)
- Physical exam* consistent with meniscus pathology (e.g., joint line tenderness, positive McMurray test, positive Apley test, joint effusion, 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.*

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 meniscal tear

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

- Persistent symptoms despite 12 weeks of conservative management **OR** frequent mechanical symptoms (catching, locking, or instability)
- Recent advanced imaging demonstrating a meniscal tear consistent with the clinical presentation
- Physical exam consistent with meniscus pathology (e.g., joint line tenderness, positive McMurray test, positive Apley test, joint effusion, reduced range of motion)
- Imaging findings demonstrate no more than moderate tibiofemoral osteoarthritis as evidenced by imaging showing **ANY** of the following:
  - Joint space preservation ≥ 50% (mild to moderate)
  - Kellgren-Lawrence grade ≤ 2
  - Modified Outerbridge grade ≤ III 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 4 or diffuse modified Outerbridge grade IV changes

Chondroplasty/debridement of articular cartilage

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

- Recent advanced imaging demonstrating focal cartilage lesion or unstable chondral flap
- Radiographic imaging consistent with Kellgren-Lawrence grade ≤ 2
- Persistent symptoms despite 12 weeks of conservative management **OR** frequent mechanical symptoms (catching, locking, or instability)

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** the following criteria are met:

- Radiographic imaging consistent with Kellgren-Lawrence grade ≤ 2
- 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 (modified Outerbridge grade II or less)
- Recent advanced imaging demonstrating a focal, full thickness (modified Outerbridge grade III or IV) isolated unipolar defect of the weight-bearing surface of the medial or lateral femoral condyles or trochlea or patella between 1 cm^2 and 2.5 cm^2
- Stable knee joint, with functionally intact menisci and ligaments, with normal alignment
- Persistent symptoms despite 12 weeks of conservative management **OR** frequent mechanical symptoms (catching, locking, or instability)

Note: 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 **ANY** of the following indications:

- Rheumatoid arthritis with failure of medical management (disease-modifying antirheumatic drugs [DMARDs])
- Septic joint or osteomyelitis
- Septic prosthetic joint
- Postoperative arthrofibrosis with limited range of motion and persistent symptoms despite 12 weeks of conservative management

Exclusion

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

Arthrofibrosis

Arthroscopically assisted lysis of adhesions and/or manipulation under anesthesia (MUA) are considered medically necessary for post-traumatic, post-surgical, or idiopathic stiffness of the knee when **ALL** the following criteria are met:

- Physical exam demonstrates limited range of motion (ROM) of the knee, defined as **ANY** of the following:
    - extension loss greater than 10 degrees
    - inability to flex more than 110 degrees
    - loss of motion significantly impacts daily function
- Persistent loss of range of motion (ROM) of the knee despite 12 weeks of conservative management (For patient showing severe limitation in knee ROM after a recent arthroplasty, earlier treatment may be considered)

Exclusion

Lysis of adhesions and/or MUA for isolated primary diagnosis of advanced osteoarthritis of the knee is considered **not medically necessary**.

Anterior cruciate ligament reconstruction

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

- Absence of advanced knee arthritis (Kellgren-Lawrence grade 4)
- Diagnosis of ACL tear established by **EITHER** of the following:
    - Physical exam consistent with ACL tear (e.g., positive anterior drawer sign, pivot shift test, or Lachman test)
    - Recent advanced imaging demonstrating an ACL tear
- **EITHER** of the following scenarios apply:
    - 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)
    - Persistent symptoms despite 2 weeks of conservative treatment

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 with intent for physeal-sparing ACL reconstruction
- A revision ACL reconstruction is planned
- Positive pivot shift or other evidence of rotational instability on exam
- Ligamentous laxity as confirmed by Beighton score greater than 5

Posterior cruciate ligament repair or reconstruction

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

- Absence of advanced knee arthritis (Kellgren-Lawrence grade 4)
- Diagnosis of PCL tear established by **EITHER** of the following:
    - Physical exam consistent with PCL tear (e.g., positive posterior drawer sign, reverse pivot shift test, or posterior sag sign)
    - Recent advanced imaging demonstrating a PCL tear
- Associated ligamentous injuries necessitating treatment (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) **OR** persistent symptomatic instability despite 12 weeks of conservative management

Posterolateral corner injury

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

- Recent advanced imaging demonstrating injury to the posterolateral structures
- Physical exam consistent with instability due to the posterolateral corner injury

- Associated ligamentous injuries necessitating treatment **OR** persistent symptomatic instability despite 12 weeks of conservative management

Collateral or extra-articular ligament injury

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

- Diagnosis of ligament injury by **EITHER** of the following:
  - Recent advanced imaging demonstrating a complete tear
  - Physical exam consistent with instability due to the collateral ligament injury
- Associated ligamentous injuries necessitating treatment **OR** persistent symptomatic instability despite 12 weeks of conservative management

Patellar compression syndrome (lateral patellofemoral impingement)

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

- Positive lateral patellar tilt established on imaging (axial view)
- Persistent symptoms despite 6 months of conservative management
- Radiographic imaging consistent with Kellgren-Lawrence grade ≤ 2 patellofemoral osteoarthritis
- **ANY** of the following:
  - Pain with compression of patella and lateral facet tenderness
  - Inability to evert the lateral edge of the patella
  - 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 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** the following criteria are met:

- Knee flexion less than 90 degrees
- Persistent symptoms despite 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** the following criteria are met:

- Recurrent patellofemoral instability associated with pain that limits function **OR** persistent symptoms despite 12 weeks of conservative management
- Radiographic imaging consistent with Kellgren-Lawrence grade ≤ 2 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** the following criteria are met:
  - Recurrent patellofemoral instability associated with pain that limits function **OR** persistent symptoms despite 12 weeks of conservative management
  - Radiographic imaging consistent with Kellgren-Lawrence grade ≤ 2 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)

Excision of popliteal cyst

Excision of a popliteal cyst is considered medically necessary when **ALL** the following criteria are met:

- Posterior knee pain ≥ 3 on the VAS scale of at least 12 weeks' duration
- Imaging confirms presence of a popliteal cyst

Plica resection

Plica resection is considered medically necessary when **ALL** the following criteria are met:

- Exclusion of other causes of anteromedial knee pain
- Persistent symptoms despite 12 weeks of conservative management
- **TWO (2) of the following five criteria are present**:
  - 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

Synovectomy (Limited)

Limited synovectomy is considered medically necessary when **ALL** the following criteria are met:

- Recent advanced imaging demonstrating a primary localized synovial proliferative process (e.g., Hoffa's fat pad syndrome, post procedure focal synovial hypertrophy [cyclops lesion])
- Physical exam findings and/or symptoms consistent with the synovial proliferative process (e.g., patellar clunk)
- Persistent symptoms despite 12 weeks of conservative management

Synovectomy (Major)

Major (complete) synovectomy is considered medically necessary for **ANY** of the following conditions:

- Diffuse synovial proliferative diseases involving the joint (e.g., inflammatory arthritides such as rheumatoid arthritis or psoriatic arthritis, crystalline arthropathy such as gout or pseudogout, pigmented villonodular synovitis, septic arthritis, synovial hemangioma, synovial chondromatosis/osteochondromatosis, hemophilia)

Exclusion

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

Repair of osteochondral defect

*See **Osteochondral Grafts** guideline.*

Repair of subchondral bone defects (subchondroplasty)

The use of engineered calcium phosphate mineral or similar compounds (e.g., AccuFill® Bone Substitute Material) to fill subchondral bone defects or bone marrow lesions (BML) is considered **not medically necessary**.

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 (occurring with an open epiphyseal plate) or adult OCD (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.

Osteochondritis dissecans

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

- Persistent symptoms despite 12 weeks 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)

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following (*see sections above for specific exclusions*):

- The use of an implantable shock absorber (e.g., MISHA™ Knee System)

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Codes

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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
29892	Arthroscopically aided repair of large osteochondritis dissecans lesion, talar dome fracture, or tibial plafond fracture, with or without internal fixation (includes arthroscopy)
0707T	Injection(s), bone-substitute material (eg, calcium phosphate) into subchondral bone defect (ie, bone marrow lesion, bone bruise, stress injury, microtrabecular fracture), including imaging guidance and arthroscopic assistance for joint visualization
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 and Scope

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 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. The procedure is an option for 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.

This guideline addresses meniscal allograft transplantation of the knee when performed as an **elective, non-emergent** procedure and not as part of the care of an acute or traumatic event.

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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform ADLs and/or IADLs.

Meniscal Allograft Transplantation of the Knee

Meniscal allograft transplantation of the knee is considered medically necessary, when **ALL** the following criteria are met:

- Age 55 or younger and skeletally mature
- Significant partial (more than 50%) or complete loss of the meniscus, as documented by previous operative reports, MRI, or diagnostic arthroscopy
- Persistent symptoms despite 12 weeks of 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 (modified Outerbridge grade II or less)

Note: Corrective procedures (e.g., ligament or tendon repair, osteotomy for realignment, osteochondral treatment) may be performed in combination with, or prior to, transplantation.

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

References

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Codes

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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 chondrocyte 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 implantation (ACI)
- Minced cartilage repair
- Osteochondral allograft (OCA)
- Osteochondral autograft transfer (OATS/mosaicplasty)
- Resorbable synthetic bone filler materials
- Microfracture

This guideline does not address osteochondral grafts specific for the spine.

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. The duration of conservative management and/or symptoms should generally be for at least 12 weeks for chronic conditions. Shorter duration of conservative management may be appropriate for severe impacts on activities of daily living (ADLs).

- **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** 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** 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 in intensity (on a 0–10 scale) and associated with inability to perform ADLs and/or IADLs.

Patient Selection Requirements

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

- Skeletal maturity as documented by closure of growth plates or lesion location not in proximity to the growth plate
- Disabling localized knee or ankle pain for at least 3 months, which persists despite 12 weeks of conservative management, 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 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 inflammatory or degenerative changes
- Knee or ankle joint is stable with functionally intact menisci (knee) and ligaments
- 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.

Large Allograft Reconstructions

Segmental bone defects

Large osteochondral or segmental allografts are considered **medically necessary** when there is a large segmental defect of bone or bone and articular surface due to tumor, treated infection, or trauma that cannot be reconstructed using smaller osteochondral plugs or grafts.

Osteochondral Allograft Transplantation

Cartilaginous defects of the knee

Osteochondral allograft transplantation to treat cartilaginous defects of the knee is considered medically necessary when **ALL** 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
- Presence of a focal, full thickness, (modified Outerbridge grade III or IV) isolated unipolar defect of the weight-bearing surface of the medial or lateral femoral condyles or trochlear region (trochlear groove of the femur) or patella

Osteochondral Autograft Transplantation

Cartilaginous defects of the knee

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

- Size of the cartilage defect is between 1.0 cm^2 and 2.5 cm^2 in total area, as documented by MRI or arthroscopy
- Presence of a focal, full thickness, (modified Outerbridge grade III or IV) isolated unipolar defect of the knee involving the weight bearing surface of the medial or lateral femoral condyles or trochlear region (trochlear groove of the femur) or patella

Open treatment of cartilaginous defects of the talus

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

- Large (area > 1.0 cm^2) or cystic (volume > 3.0 cm^3) osteochondral lesions of the talus without prior treatment
- Revision surgery after failed marrow stimulation for osteochondral lesions of the talus

Arthroscopically Assisted Repair

Osteochondritis dissecans of the talus or osteochondral fractures/lesions of the tibiotalar joint

Arthroscopically assisted repair of osteochondritis dissecans of the talus or osteochondral fractures/lesions of the tibiotalar joint is considered medically necessary when **ALL** the following criteria are met:

- Disabling ankle pain for at least 12 weeks **OR** an acute injury/fracture necessitating reduction and/or fixation
- Recent imaging demonstrating an osteochondritis dissecans of the talus or a tibiotalar fracture/defect amenable to operative repair and/or fixation.

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** 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)
- Presence of a focal, full thickness, (modified Outerbridge 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 in depth, which has failed prior conservative treatment. OCD lesions associated with a bony lesion >10 mm in depth must also undergo corrective bone grafting).*
- Documented minimal to absent degenerative changes in the surrounding articular cartilage (modified 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)
- No known allergy to gentamicin or other aminoglycosides
- No known sensitivity to porcine or bovine cultures

- No 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)

Contraindications

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

- Severe osteoarthritis of the knee (Kellgren-Lawrence grade 3 or 4)
- Inflammatory arthritis, inflammatory joint disease, or uncorrected congenital blood coagulation disorders
- 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 particulated juvenile articular cartilage (e.g., DeNovo® NT Graft)
- 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
- Allografts preserved by nonstandard tissue bank methods (e.g., Missouri Osteochondral Preservation System [MOPS®])
- 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)
- The use of engineered calcium phosphate mineral or similar compounds (e.g., AccuFill® Bone Substitute Material) to fill subchondral bone defects or bone marrow lesions (BML)

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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)
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)
0707T	Injection(s), bone-substitute material (eg, calcium phosphate) into subchondral bone defect (ie, bone marrow lesion, bone bruise, stress injury, microtrabecular fracture), including imaging guidance and arthroscopic assistance for joint visualization

ICD-10 Diagnosis

Refer to the ICD-10 CM manual

Bone Growth Stimulation of the Appendicular Skeleton: Ultrasound, Noninvasive, Invasive and Semi-Invasive

Scope

This guideline addresses the use of ultrasound and electrical bone growth stimulation (BGS) devices for the treatment of orthopedic conditions of the appendicular skeleton. This guideline does not address electrical bone growth stimulation of the spine.

Clinical Indications

Ultrasound Bone Growth Stimulation (Low-Intensity Pulsed Ultrasound)

Examples of low-intensity pulsed ultrasound system (LIPUS) devices include AccelStim™, Manafuse™, and Exogen 2000®.

Noninvasive, low-intensity pulsed ultrasound treatment is considered medically necessary for the treatment of **ANY** of the following indications:

- Nonunion of a fracture secondary to trauma or surgery of any long bone (clavicle, humerus, radius, ulna, femur, tibia, fibula, metacarpal or metatarsal bone) or carpal /tarsal bone of the appendicular skeleton when **ALL** the following criteria are met:
    - At least 3 months have passed since the date of the fracture or initial/index surgery
    - No progressive signs of healing have occurred on at least two (2) serial radiographs in the preceding three (3)-month period
    - The fracture gap is less than 1 centimeter
    - The device is FDA approved for use on the involved bone
- Fresh, closed, posteriorly displaced distal radius fractures
- Fresh, closed or Grade I open tibial diaphysis fractures in skeletally mature adult individuals when these fractures are orthopedically managed by closed reduction and cast immobilization
- Closed fracture sites at high risk for nonunion due to location **AND ANY** of the following:
    - Poor vascular supply, such as:
        - Fractures of the carpal navicular bone (scaphoid fracture)
        - 5th metatarsal bone fractures (Jones fracture)
    - Fractures associated with at least **ONE** of the following:
        - Extensive soft tissue
        - Vascular damage
- Closed fractures at high risk for nonunion from compromised healing due to **ANY** of the following comorbidities/risk factors:
    - Diabetes
    - Renal disease
    - Other metabolic diseases
    - History of tobacco use

- History of alcoholism
- Obesity, generally defined as Body Mass Index (BMI) greater than or equal to 30, or more than 50% over ideal body weight (IBW) for severe obesity
- Nutritional deficiency
- Severe anemia
- Steroid therapy

Concurrent use of noninvasive ultrasound and electrical bone growth stimulation devices is considered **not medically necessary**.

Noninvasive Electrical Bone Growth Stimulation

Example devices include PhysioStim™, EBI® Bone Healing System, CMF OrthoLogic 1000 (OL1000™) Bone Growth Stimulator, and OrthoPak® Noninvasive Bone Growth Stimulator System.

Noninvasive electrical bone growth stimulation is considered medically necessary when **ALL** the following criteria are met:

- Treatment is for **ANY** of the following conditions:
  - Nonunion of a fracture secondary to trauma or surgery of any long bone (clavicle, humerus, radius, ulna, femur, tibia, fibula, metacarpal or metatarsal bone) or carpal/tarsal bone of the appendicular skeleton
  - Congenital pseudarthroses of any bone of the appendicular skeleton
  - Failed arthrodesis of the ankle or knee
- At least 3 months have passed since the date of the fracture or initial/index surgery
- No progressive signs of healing have occurred on at least two (2) serial radiographs in the preceding three (3)-month period
- The fracture gap is less than 1 centimeter
- The device is FDA approved for use on the involved bone

Invasive and Semi-Invasive Electrical Bone Growth Stimulators

Example devices include EBI® OsteoGen® Implantable Bone Growth Stimulator and OsteoGen® D40 Implantable Bone Growth Stimulator.

Invasive (implantable) and semi-invasive electrical bone growth stimulators are considered **not medically necessary** for all indications in the appendicular skeleton.

Exclusions

Noninvasive electrical and ultrasonic bone growth stimulation of any bone of the appendicular skeleton is considered **not medically necessary** when the above criteria are not met including, but not limited to, treatment of **ANY** of the following:

- As an adjunct to (i.e., at the time of or immediately after) distraction osteogenesis procedures for any indication (e.g., limb lengthening, nonunion, or tibial defects)
- Delayed/incomplete union fractures
- Fresh fractures (except indications under Ultrasound BGS)

- Pathological fractures due to bone pathology or tumor/malignancy
- Stress fractures
- Immediate postsurgical treatment after appendicular skeletal surgery
- Nonunion with associated draining osteomyelitis or presence of synovial pseudarthroses
- Concurrent use of noninvasive electrical and ultrasound bone growth stimulation devices
- Congenital pseudarthroses (exclusion applies to ultrasonic only)

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	04/15/2026	11/15/2026	Independent Multispecialty Physician Panel (IMPP) review. Clarifications to the General Clinical Guideline address active infection as a contraindication for surgery, post-service reviews, and repeated requests during an active authorization period. Standardized required duration of conservative management to 12 weeks across all procedures, with an allowance for shorter duration for severe ADL impacts. Shoulder/Hip/Knee Arthroplasty – require 12 weeks from arthroscopy procedure prior to arthroplasty to minimize risk of infection. Shoulder/Hip/Knee Arthroscopy – added exclusion for Kellgren-Lawrence grade 4 osteoarthritis. Shoulder Arthroplasty (Total/Partial/ Revision Shoulder Replacement) – added scenario for hemiarthroplasty with failed prior fixation; clarified that joint reconstruction can apply to benign or malignant tumors. Shoulder/Knee Arthroscopy – expanded allowance for removal of loose body for shoulder/knee pain in the absence of associated symptoms. Rotator cuff repair – specified that shoulder pain must interfere with age-appropriate ADLs. Chondroplasty/ debridement – extended conservative management requirement from 6 to 12 weeks for patients without frequent mechanical symptoms. Osteochondral Grafts – for cartilaginous defects of the knee, added patella to align with Osteochondral Allograft, MACI; added exclusion for the use of engineered calcium phosphate mineral or similar compounds. New criteria to address the use of electrical and ultrasound bone growth stimulation devices for treatment of orthopedic conditions of the appendicular skeleton. Added references. Added CPT codes 20974, 20979; HCPCS codes E0747, E0748, E0749, E0760.
Revised	04/21/2025	11/15/2025	IMPP review. Revised Clinical Appropriateness Framework to address unlisted procedures and post-service authorization. Reverse Shoulder Arthroplasty – revised range of motion criterion to be more expansive. Revision or Replacement of a Shoulder Prosthesis – added criteria related to periprosthetic joint infection. Shoulder Arthroscopy and Open Procedures: Rotator cuff repair (full thickness, partial thickness, revision) and Labrum repair – lowered VAS pain rating threshold from 4 to 3; reworded criterion about physical exam tests to be less prescriptive; Adhesive capsulitis – lowered VAS pain rating threshold from 4 to 3; Acromioclavicular arthritis – reworded criterion about physical exam tests to be less prescriptive; Tendinopathy of the long head of the biceps – added criteria for SLAP tear. Revision Total Hip Arthroplasty – added criteria related to periprosthetic joint infection. Resection Arthroplasty of the Hip – added chronic hip dislocation. Patellofemoral Arthroplasty – clarified contraindications to specify ligament injuries and prior meniscectomy. Revision Knee Arthroplasty – added criteria related to periprosthetic joint infection. Knee Arthroscopy: Meniscal repair or meniscectomy – reworded criterion about physical exam tests to be less prescriptive; Posterior cruciate ligament repair or reconstruction – added criterion for persistent instability despite conservative treatment; Excision of popliteal cyst – lowered VAS pain rating threshold from 4 to 3; extended duration of pain from 8 weeks to 12 weeks. Minor clarifications in multiple sections.
Updated codes 01/01/2025	n/a	Unchanged	Added HCPCS code C8003.

Status	Review Date	Effective Date	Action
Revised	07/16/2024, 04/15/2024	11/17/2024	IMPP review. Reverse shoulder arthroplasty – added requirement of impaired function for 6 months; removed requirement for conservative management when osteoarthritis is severe. Removal of loose body (shoulder and hip arthroscopy) – removed requirement for specific findings on exam. Rotator cuff repair and revision – added exclusion for subacromial balloon spacer. Labrum repair – removed Bankart lesion to allow for any labral tear on MRI. Chronic shoulder instability or laxity – allow any evidence of instability on exam. Biceps tendinopathy – removed specific exam findings related to long head of biceps pathology. Primary total hip arthroplasty – removed requirements for conservative management and 3-month duration of symptoms when osteoarthritis is severe. Primary partial hip arthroplasty – combined criteria with partial hip resurfacing. Knee arthroplasty – excluded use of implantable shock absorber. Knee arthroscopy ACL reconstruction – removed scenario of physically demanding occupation/ activities. Excision of popliteal cyst – added imaging requirement. Excluded use of engineered calcium phosphate mineral in the repair of subchondral bone defects (subchondroplasty). Osteochondritis dissecans - moved criteria/codes to knee arthroscopy, changed to either failed conservative management or unstable lesion. Osteochondral grafts – included patients with open growth plates if not in proximity to plate, excluded use of particulated juvenile articular cartilage, allograft transplantation – allowed patellar defect. Added references. Added CPT code 0707T.
Updated codes 10/20/2024	n/a	Unchanged	Added HCPCS code C9781.
Revised	04/12/2023	11/05/2023	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 to the General Clinical Guideline per new Medicare regulations.
Revised	11/11/2021	09/11/2022	IMPP review. For total shoulder arthroplasty, added fracture indication and exception for Kellgren-Lawrence 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.

Status	Review Date	Effective Date	Action
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. 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 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; 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.

Status	Review Date	Effective Date	Action
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.