Cigna Medical Coverage Policies – Musculoskeletal
Knee Surgery: Arthroscopic and Open Procedures

Effective July 1, 2025

Instructions for use

The following coverage policy applies to health benefit plans administered by Cigna. Coverage policies are intended to provide guidance in interpreting certain standard Cigna benefit plans and are used by medical directors and other health care professionals in making medical necessity and other coverage determinations. Please note the terms of a customer's particular benefit plan document may differ significantly from the standard benefit plans upon which these coverage policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a coverage policy.

In the event of a conflict, a customer's benefit plan document always supersedes the information in the coverage policy. In the absence of federal or state coverage mandates, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of:

1. The terms of the applicable benefit plan document in effect on the date of service
2. Any applicable laws and regulations
3. Any relevant collateral source materials including coverage policies
4. The specific facts of the particular situation

Coverage policies relate exclusively to the administration of health benefit plans. Coverage policies are not recommendations for treatment and should never be used as treatment guidelines.

This evidence-based medical coverage policy has been developed by eviCore, Inc. Some information in this coverage policy may not apply to all benefit plans administered by Cigna.

CMM-312: Knee Surgery - Arthroscopic and Open Procedures

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Definitions

- **Arthrofibrosis**: a condition of the appendicular skeletal system that has resulted from disease, injury, or surgery, and results in pain and restricted range of motion due to internal scarring of the joint with consequent stiffness.
- **Autologous Chondrocyte Implantation (ACI) or Autologous Chondrocyte Transplantation (ACT)**: a cell-based cartilage repair surgical technique that utilizes an individual's own cells in an effort to repair damage to articular cartilage with the goal of improving joint function and reducing pain. The procedure involves the collection and culture of articular cartilage cells (i.e., chondrocytes) that are then implanted into the cartilage defect with the intent that the cultured cells will contribute to the regeneration and repair of the articular surface.
  - **Hybrid Autologous Chondrocyte Implantation (ACI)**: ACI is combined with other surgical repair techniques of cartilage defects (e.g., osteochondral autograft transfer).
- **Kellgren-Lawrence Grading System**: a radiographic grading system for describing osteoarthritic changes to the tibial-femoral joint of the knee. When used, the radiographic findings on plain x-rays are typically reported within one of the following categories:
  - **Grade 0**: No radiographic features of osteoarthritis are present
  - **Grade I**: Doubtful narrowing of joint space and possible osteophytic lipping
  - **Grade II**: Definite osteophytes and possible narrowing of joint space
  - **Grade III**: Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis, and possible deformity of bone contour
  - **Grade IV**: Large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour
- **Kissing Lesion**: an articular cartilage defect on opposing joint surfaces of the knee and that are in contact between either the patella and distal femur or the distal femur and tibia (e.g., bipolar lesion).
- **Lateral Extra-Articular Tenodesis (LEAT)**: techniques that include a heterogeneous group of procedures beyond just reconstruction of the Anterolateral Ligament (ALL): modified Lemaire technique; Marcacci technique; Losee tenodesis; modified iliotibial band tenodesis; and MacIntosh-modified Coker-Arnold procedure.
- **MACI® Implant**: Until recently, Carticel® (Vericel Corporation, Cambridge, MA [formerly Genzyme Biosurgery]) was the only technology that received FDA approval for the culturing of chondrocytes. MACI® Implant (Matrix Induced Autologous Chondrocyte Implant) received approval from the U.S. Food and Drug Administration December 2016 as an autologous cellularized scaffold indicated for repair of single or multiple symptomatic, full-thickness cartilage defects of the knee with or without bone involvement in adults. MACI® Implant is utilized as part of an ACI procedure in which cartilage cells are removed during arthroscopy, and shipped to a laboratory, where the cells are cultured over a period of several weeks. The cells are seeded on a porcine collagen membrane, and once the culturing process is complete, the cells seeded on the membrane are returned to the surgeon for implantation during the procedure. The membrane is placed into the defect and over several months the cells create a matrix that is intended to cover the articular surface of the knee. The

safety and effectiveness of MACI® Implant in joints other than the knee has not been established.

- **Modified Outerbridge Classification**: a system that has been developed for judging articular cartilage injury to the knee. This system allows delineation of varying areas of chondral pathology, based on the qualitative appearance of the cartilage surface as viewed on MRI, and can assist in identifying those injuries that are suitable for repair techniques. The characterization of cartilage in this system is as follows:
  - **Grade I**: Softening with swelling
  - **Grade II**: Fragmentation and fissuring less than one square centimeter (1 cm^2)
  - **Grade III**: Fragmentation and fissuring greater than one square centimeter (1 cm^2)
  - **Grade IV**: Subchondral bone exposed
- **Mosaicplasty** (or osteochondral cylinder transplantation): a surgical technique that consists of harvesting cylindrical bone-cartilage grafts and transplanting them into focal chondral or osteochondral defects in the knee. After excision of the chondral lesion, an abrasion arthroplasty is performed to refresh the base of the defect. The grafting procedure involves collecting grafts from the posterior aspect of the distal femoral articular surfaces (medial condyle, lateral condyle, or trochlea) and implanting the grafts in a mosaic-like pattern that will contribute to regeneration and repair the articular surface. A recipient tunnel is created and sized with a drill bit slightly larger than the length of the graft. The harvested graft is placed in the tunnel by a press-fit method. All subsequent grafts are inserted in a similar pattern.
- **Non-Surgical Management** (with regard to the treatment of lower extremity joint pain)**:** any provider-directed non-surgical treatment that has been demonstrated in the scientific literature as efficacious and/or is considered reasonable care in the treatment of lower extremity joint pain. The types of treatment involved can include, but are not limited to, the following: ice; relative rest/activity modification; acupuncture; weight loss; supervised physiotherapy modalities and therapeutic exercises; prescription and non-prescription medications; assistive devices; and/or intra-articular injections.
- **Osteochondral Allograft Transplantation (OATS) Procedure**: a procedure that is similar to mosaicplasty, involving the use of a larger, single plug that usually fills an entire defect. It is often performed to graft chondral defects that are also associated with anterior cruciate ligament (ACL) tears. This method allows arthroscopic access to both the ACL and the chondral defect for the performance of a repair and the grafting procedure.
- **Outerbridge Classification**: a system that has been developed for judging articular cartilage injury to the knee. This system allows delineation of varying areas of chondral pathology, based on the qualitative appearance of the cartilage surface as viewed by direct visualization intraoperatively, and can assist in identifying those injuries that are suitable for repair techniques. The characterization of cartilage in this system is as follows:
  - **Grade I**: Softening with swelling
  - **Grade II**: Fragmentation and fissuring less than one square centimeter (1 cm^2)

- **Grade III**: Fragmentation and fissuring greater than one square centimeter (1 cm^2)
- **Grade IV**: Subchondral bone exposed

- **Subchondral Drilling or Microfracturing**: a surgical procedure that is performed after the calcified cartilage is debrided and the surgeon creates tiny fractures in the adjacent bones (using an awl). Blood and bone marrow (which contains stem cells) seep out of the fractures, creating a blood clot that releases cartilage-building cells. The microfractures are treated as an injury by the body, which is why the surgery results in new, replacement cartilage. Studies have shown that microfracturing techniques do not fill the chondral defect fully and the repair material that forms is fibrocartilage. Fibrocartilage is not as mechanically sound as the original hyaline cartilage; it is much denser and is not able to withstand the demands of everyday activities as well as hyaline cartilage. Therefore, fibrocartilage is at a higher risk of breaking down. The procedure is less effective in treating older individuals, overweight individuals, or in larger cartilage lesions. Furthermore, chances are high that after only one or two years, symptoms start to return as the fibrocartilage wears away, forcing the individual to reengage in articular cartilage repair.

General Guidelines

Application of Guideline

- The determination of medical necessity for the performance of knee surgery is always made on a case-by-case basis.
- Manipulation of a knee joint under general anesthesia is included in all arthroscopic knee procedures and is therefore considered incidental to the base procedure requiring medical necessity review.
- For advanced-imaging indications related to knee conditions refer to **MS-25: Knee**.
- For coverage indications for articular cartilage allograft materials, please reference **Cigna Medical Coverage Policy**: **0118 Bone, Cartilage and Ligament Graft Substitutes**
- For autologous chondrocyte implantation (ACI) and osteochondral allograft/autograft transplantation (OATS) performed performed for locations other than the knee (e.g., ankle, shoulder, elbow), please reference **Cigna Medical Coverage Policy: 0515 Miscellaneous Musculoskeletal Procedures**

Arthroscopic or Open Procedures for Fracture, Tumor, Infection, or Foreign Body

- Arthroscopic or open knee surgery may be considered **medically necessary** for individuals when surgery is being performed for fracture, tumor, infection, or foreign body that has led to or will likely lead to progressive destruction.

Diagnostic Arthroscopy

Diagnostic Arthroscopy Indications

Diagnostic arthroscopy is considered **medically necessary** as a stand-alone procedure when **ALL** of the following criteria have been met:

- Imaging shows **BOTH** of the following findings:
  - Absence of Kellgren-Lawrence Grade II or greater findings on plain radiographs
  - MRI or CT arthrogram is inconclusive for internal derangement/pathology
- Physical exam demonstrates **ANY** of the following findings:
  - Limited range of motion
  - Evidence of joint swelling/effusion
  - Joint line tenderness
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment for at least six (6) months duration
- Failure of provider-directed non-surgical management for at least three (3) months duration

Diagnostic Arthroscopy Non-Indications

Not Medically Necessary

- Diagnostic arthroscopy is considered **not medically necessary** for **ANY** other indication or condition.

Experimental, Investigational, or Unproven (EIU)

- Based on lack of scientific evidence of efficacy and safety, “In-office” diagnostic arthroscopy (e.g., Mi-Eye™, VisionScope®) is considered **experimental, investigational, or unproven (EIU)**

Arthroscopic Debridement (Chondroplasty) or Loose Body Removal

Arthroscopic Debridement (Chondroplasty) or Loose Body Removal Indications

Arthroscopic debridement (chondroplasty) or loose body removal are considered **medically necessary** when **ALL** of the following criteria have been met:

- Imaging shows **BOTH** of the following findings:
  - Absence of Kellgren-Lawrence Grade II or greater findings on plain radiographs
    - **Criteria exception**: The absence of Kellgren-Lawrence Grade II or greater findings is **not required** for loose body removal if there is the presence of an acutely locked knee on physical exam.
  - Presence of **EITHER** of the following findings:
    - MRI or CT arthrogram shows articular cartilage degeneration with **ANY** of the following additional findings:
      - Loose body within the joint

        - Unstable articular cartilage flaps
        - Meniscal tear that extends to the articular surface (not simply degenerative changes,[i.e., fraying]) in conjunction with articular cartilage degeneration within the same compartment
        - Impinging osteophytes that would be reasonably expected to result in mechanical symptoms and loss of knee function
    - Orthogonal radiograph shows a loose body within the tibiofemoral or patellofemoral joint space
- Symptoms include **BOTH** of the following:
  - Function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
  - Presence of **ANY** of the following mechanical symptoms:
    - Knee range of motion is "blocked" due to pain
    - Giving way, subjective weakness, or buckling
    - Painful locking, clicking, catching, or popping during weight-bearing activities
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management **is not required** for the presence of painful locking, clicking, catching, or popping during weight-bearing activities when these symptoms are attributed to an intra-articular loose body or foreign body.

Arthroscopic Debridement (Chondroplasty) or Loose Body Removal Non-Indications

- Arthroscopic debridement (chondroplasty) and loose body removal are considered **not medically necessary** for **ANY** other indication or condition.

Synovectomy

Synovectomy Indications

Synovectomy (limited [e.g., plica or shelf resection]; as a stand-alone procedure; or, as a major procedure with two (2) or more compartments [e.g., medial and lateral]) is considered **medically necessary** when **ALL** of the following criteria have been met:

- Imaging shows **BOTH** of the following findings:
  - MRI or CT arthrogram shows evidence of synovitis or plica
    - **Criteria exception**: Advanced imaging is **not required** for the **clinical diagnosis** of patellar clunk syndrome following knee replacement surgery
  - Absence of Kellgren-Lawrence Grade IV findings on plain radiographs
- Presence of **ANY** of the following conditions:
  - Plica syndrome
  - Inflammatory arthritis (i.e., rheumatoid arthritis, gout, pseudogout, psoriatic arthritis)
  - Pigmented villonodular synovitis (PVNS)
  - Synovial chondromatosis

- Lyme synovitis
- Hemophilia
- Hemochromatosis
- Non-specific synovitis (e.g., proliferative synovitis, post-operative synovitis as a sequela from a knee replacement, patellar clunk syndrome, cyclops lesion, etc.)
- Recurrent hemarthrosis (e.g., secondary to sickle cell anemia, bleeding diathesis, etc.)

➢ Physical exam demonstrates **ANY** of the following findings:
- Limited range of motion
- Evidence of joint swelling/effusion
- Joint line tenderness or plica tenderness

➢ Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment

➢ Failure of provider-directed non-surgical management for at least three (3) months duration

Synovectomy Non-Indications

➢ Synovectomy is considered **not medically necessary** for **ANY** other indication or condition.

Meniscectomy or Meniscal Repair

Meniscectomy or Meniscal Repair Indications

Meniscal Tear

Meniscectomy (partial or total) **or** meniscal repair is considered **medically necessary** when **ALL** of the following criteria have been met:

➢ Imaging shows **BOTH** of the following findings:
- MRI or CT arthrogram shows a meniscal tear that extends to the articular surface (not simply degenerative changes, [i.e., fraying]) **and** correlates with the individual's reported symptoms and physical exam findings
- Absence of Kellgren-Lawrence Grade II or greater findings on plain radiographs
  - **Criteria exception**: The absence of Kellgren-Lawrence Grade II or greater findings is **not required** if there is the presence of a meniscal tear **and** a locked knee on physical exam.

➢ Physical exam demonstrates at least **TWO** of the following findings:
- Limited range of motion
- Evidence of joint swelling/effusion
- Joint line tenderness
- Positive McMurray's test
- Positive Thessaly test
- Positive Apley's compression test

- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** if **EITHER** of the following conditions are present:
    - An acute traumatic anterior, posterior, medial, or lateral meniscal root tear/ avulsion confirmed on MRI
    - Meniscal tear with a locked knee on physical exam

Discoid Lateral Meniscus

Meniscectomy/saucerization for discoid lateral meniscus is considered **medically necessary** when **ALL** of the following criteria have been met:

- Imaging shows **BOTH** of the following findings:
  - MRI confirms the presence of a discoid lateral meniscus
  - Absence of Kellgren-Lawrence Grade II or greater findings on plain radiographs
- Physical exam demonstrates at least **TWO** of the following findings:
  - Limited range of motion
  - Evidence of joint swelling/effusion
  - Joint line tenderness
  - Positive McMurray's test
  - Positive Thessaly test
  - Positive Apley's compression test
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration

Meniscectomy or Meniscal Repair Non-Indications

- Meniscectomy (partial or total) or meniscal repair is considered **not medically necessary** for **ANY** other indication or condition.

Meniscal Allograft Transplantation

Meniscal Allograft Transplantation Indications

Meniscal allograft transplantation is considered **medically necessary** when **ALL** of the following criteria have been met:

- History of **ANY** of the following conditions affecting the meniscus:
  - Prior significant trauma resulting in an irreparable meniscal tear
  - Has undergone a meniscectomy where at least 50% of the meniscus has been removed

- Physical exam demonstrates **ANY** of the following findings:
  - Limited range of motion
  - Evidence of joint swelling/effusion
  - Joint line tenderness
- Body Mass Index (BMI) 35 or less
- Individual is age 49 years or younger
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands or employment
- Failure of provider-directed non-surgical management for at least three (3) months duration

Meniscal Allograft Transplantation Non-Indications

- Meniscal allograft transplantation is considered **not medically necessary** for **ANY** other indication, condition, or when **EITHER** of the following are present:
  - Standing radiographs show Kellgren-Lawrence Grade III or IV findings
  - MRI shows Modified Outerbridge Classification Grade III or IV articular cartilage degeneration in the affected compartment

Anterior Cruciate Ligament (ACL) Reconstruction and Repair

Anterior Cruciate Ligament (ACL) Reconstruction Indications

Anterior cruciate ligament (ACL) **reconstruction** (with allograft or autograft) is considered **medically necessary** when **ALL** of the following criteria have been met:

- MRI, CT arthrogram, or arthroscopy shows a tear/disruption or significant laxity of the anterior cruciate ligament (ACL)
- Physical exam demonstrates **ANY** of the following findings:
  - Positive Lachman's test
  - Positive anterior drawer test
  - Positive pivot shift test
- Symptoms include **BOTH** of the following:
  - Function-limiting knee pain and/or loss of knee function which interferes with **ANY** of the following:
    - Ability to carry out age-appropriate activities of daily living
    - Demands of employment
    - Need to return to activities that require cutting, pivoting, and/or agility in which ACL insufficiency may predispose to further instability episodes that may result in new articular or meniscal cartilage injuries
  - Individual reports knee instability which is noted as giving way, subjective weakness, or buckling
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** if there is an acute injury setting **and** joint instability has been documented with **ANY** of the following additional conditions:

- Need to return to activities that require cutting, pivoting, and/or agility in which ACL insufficiency may predispose to further instability episodes that may result in new articular or meniscal cartilage injuries
- A confirmed ACL tear **and** a repairable meniscus tear
- Concomitant ligament injuries (i.e., multi-ligamentous knee injury) that require reconstruction to provide stability

Anterior Cruciate Ligament (ACL) Reconstruction and Repair Non-Indications

Not Medically Necessary

- Anterior cruciate ligament (ACL) reconstruction is considered **not medically necessary** for **ANY** other indication or condition.

Experimental, Investigational, or Unproven

- Anterior cruciate ligament (ACL) repair is considered **experimental, investigational, or unproven (EIU)**.

Anterolateral Ligament (ALL) Reconstruction/Lateral Extra-Articular Tenodesis (LEAT)

Anterolateral Ligament (ALL) Reconstruction/Lateral Extra-Articular Tenodesis (LEAT) Indications

Anterolateral ligament (ALL) reconstruction **or** lateral extra-articular tenodesis (LEAT) is considered **medically necessary** when **ALL** of the following criteria have been met:

- Anterolateral ligament (ALL) reconstruction **or** lateral extra-articular tenodesis (LEAT) is **required to augment** the anterior cruciate ligament (ACL) reconstruction
- MRI, CT arthrogram, or arthroscopy shows a tear/disruption or significant laxity of the anterior cruciate ligament (ACL)
- Physical exam demonstrates **ANY** of the following findings:
  - Positive Lachman's test
  - Positive anterior drawer test
  - Positive pivot shift test
- Symptoms include **BOTH** of the following:
  - Function-limiting knee pain and/or loss of knee function which interferes with **ANY** of the following:
    - Ability to carry out age-appropriate activities of daily living
    - Demands of employment
    - Need to return to activities that require cutting, pivoting, and/or agility in which ACL insufficiency may predispose to further instability episodes that may result in new articular or meniscal cartilage injuries
  - Individual reports knee instability which is noted as giving way, subjective weakness, or buckling
- Failure of provider-directed non-surgical management for at least three (3) months duration

- **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** if there is an acute injury setting **and** joint instability has been documented with **ANY** of the following additional conditions:
  - Need to return to activities that require cutting, pivoting, and/or agility in which ACL insufficiency may predispose to further instability episodes that may result in new articular or meniscal cartilage injuries
  - A confirmed ACL tear and a repairable meniscus tear
  - Concomitant ligament injuries (i.e., multi-ligamentous knee injury) that require reconstruction to provide stability

Anterolateral Ligament (ALL) Reconstruction/Lateral Extra-Articular Tenodesis (LEAT) Non-Indications

Not Medically Necessary

- Anterolateral Ligament (ALL) reconstruction is considered **not medically necessary** for **ANY** other indication or condition.
- Lateral extra-articular tenodesis (LEAT) is considered **not medically necessary** for **ANY** other indication or condition.

Posterior Cruciate Ligament (PCL) Reconstruction

Posterior Cruciate Ligament (PCL) Reconstruction Indications

Posterior cruciate ligament (PCL) reconstruction (with allograft or autograft) is considered **medically necessary** when **ALL** of the following criteria have been met:

- MRI, CT arthrogram, or arthroscopy shows a tear/disruption or significant laxity of the posterior cruciate ligament (PCL)
- Presence of **ANY** of the following findings:
  - Stress radiographs show eight (8) mm or more of increased posterior translation
  - Physical exam demonstrates **ANY** of the following findings:
    - Positive posterior drawer sign
    - Positive posterior sag sign or tibial drop back test
    - Positive quadriceps active test
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out the age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months provider-directed non-surgical management is **not required** if there is an acute injury setting **and** joint instability has been documented with **EITHER** of the following additional conditions:
    - Need to return to activities that require cutting, pivoting, and/or agility in which PCL insufficiency may predispose to further instability episodes that may result in new articular or meniscal cartilage injuries
    - Concomitant ligament injuries (i.e., multi-ligamentous knee injury) that require reconstruction to provide stability

Posterior Cruciate Ligament (PCL) Reconstruction Non-Indications

- Posterior cruciate ligament (PCL) reconstruction is considered **not medically necessary** for **ANY** other indication or condition.

Medial/Lateral Collateral Ligament (MCL/LCL) Repair/Reconstruction

Medial/Lateral Collateral Ligament (MCL/LCL) Repair/Reconstruction Indications

Medial/lateral collateral ligament (MCL/LCL) repair/reconstruction (with allograft or autograft) is considered **medically necessary** when **ALL** of the following criteria have been met:

- MRI or CT arthrogram shows a tear/disruption of the medial or lateral collateral ligament (MCL/LCL)
- Physical exam demonstrates **EITHER** of the following findings:
  - Positive valgus stress test (medial)
  - Positive varus stress test (lateral)
- Symptoms include **BOTH** of the following:
  - Function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
  - Individual reports knee instability which is noted as giving way, subjective weakness, or buckling
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** for LCL repair/reconstruction if there is an acute injury setting involving the lateral collateral ligament (LCL) (including the posterolateral corner) with documentation of **BOTH** of the following additional conditions:
    - Total disruption of the lateral collateral ligament (LCL) is documented on MRI or CT arthrogram
    - Joint instability has been documented on physical exam

Medial/Lateral Collateral Ligament (MCL/LCL) Repair/Reconstruction Non-Indications

Not Medically Necessary

- Medial collateral ligament (MCL) repair/reconstruction (including an isolated MCL repair) is considered **not medically necessary** for **ANY** other indication or condition is considered **not medically necessary** in an acute injury setting.
- Medial/lateral collateral ligament (MCL/LCL) repair/reconstruction is considered **not medically necessary** for **ANY** other indication or condition.

Autologous Chondrocyte Implantation (ACI) or Autologous Chondrocyte Transplantation (ACT)

Autologous Chondrocyte Implantation (ACI) or Autologous Chondrocyte Transplantation (ACT) Indications

Autologous chondrocyte implantation (ACI) or autologous chondrocyte transplantation (ACT) (using the MACI® implant) is considered **medically necessary** when **ALL** of the following criteria have been met:

- Body Mass Index (BMI) 35 or less
- Individual is age 15-55 years
- Absence of inflammatory arthritis or other systemic disease affecting the joints
- Presence of **ALL** of the following arthroscopic or imaging findings:
  - Kellgren-Lawrence Grade II or less on radiographs
  - Normal articular cartilage at the lesion border (contained lesion)
  - A full-thickness distal femoral articular surface (i.e., medial condyle, lateral condyle, or trochlea) and/or patellar chondral defect of 1-10cm^2 in size that has been identified with **ANY** of the following:
    - CT arthrogram
    - MRI **and** the Modified Outerbridge Classification is Grade III or IV
    - Arthroscopy **and** the Outerbridge Classification is Grade III or IV
- Absence of **BOTH** of the following findings:
  - Absence of an osteochondritis dissecans (OCD) lesion that requires bone grafting
  - Absence of a Modified Outerbridge Classification Grade III or IV corresponding 'kissing lesion' defect on the distal femur (trochlea, condyles), patella, or tibia **is required** when performed for femoral and patellar chondral lesions.
- Physical exam demonstrates **BOTH** of the following findings:
  - A stable knee with intact or reconstructed ligaments (ACL or PCL) and menisci
    - **Note**: A concurrent ligament stabilization or meniscal procedure at the time of ACI would be acceptable.
  - Normal tibial-femoral and/or patella-femoral alignment
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration

Autologous Chondrocyte Implantation (ACI) or Autologous Chondrocyte Transplantation (ACT) Non-Indications

Not Medically Necessary

- Autologous chondrocyte implantation is considered **not medically necessary** for **ANY** other indication, condition, or when **ANY** of the following are present:

- Any knee joint surgery within six (6) months before screening (excluding surgery to procure a biopsy or a concomitant procedure to prepare the knee for a MACI® implant)
- Total meniscectomy, meniscal allograft, or bucket-handle tear or displaced tear requiring >50% removal of the meniscus in the target knee
- Septic arthritis within one (1) year before screening
- Known history of hypersensitivity to gentamicin, other aminoglycosides, or products of porcine or bovine origin
- Uncorrected congenital blood coagulation disorders
- Cruciate ligament instability

➢ Hybrid autologous chondrocyte implantation performed with osteochondral autograft transfer system (Hybrid ACI/OATS) technique for the treatment of an osteochondral defect is considered **not medically necessary**.

Osteochondral Allograft/Autograft Transplantation Systems (OATS)/ Mosaicplasty

Osteochondral Allograft/Autograft Transplantation Systems (OATS)/Mosaicplasty Indications

Osteochondral allograft/autograft transplantation (OATS)/mosaicplasty is considered **medically necessary** when **ALL** of the following criteria have been met:

➢ Body Mass Index (BMI) of less than 35
➢ Individual is age 49 years or younger
➢ Absence of inflammatory arthritis or other systemic disease affecting the joints
➢ Presence of **ALL** of the following imaging and/or arthroscopic findings:
- Kellgren-Lawrence Grade II or less on radiographs
- Normal articular cartilage at the lesion border (contained lesion)
- A full-thickness distal femoral articular surface (i.e., medial condyle, lateral condyle, or trochlea) and/or patellar chondral defect that has been identified with **ANY** of the following:
  - CT arthrogram
  - MRI **and** the Modified Outerbridge Classification is Grade III or IV
  - Arthroscopy **and** the Outerbridge Classification is Grade III or IV
- Additional Imaging findings required **based on procedure type**:
  - Osteochondral autograft transplants and mosaicplasty:
    - Small (i.e., ≤ 2.5 cm^2 total) chondral defects with sharp, definite borders surrounded by normal-appearing hyaline cartilage
  - Osteochondral allograft transplants:
    - Larger (i.e., ≤ 10.0 cm^2 total) chondral defects with sharp definite borders surrounded by normal appearing hyaline cartilage

➢ Absence of a Modified Outerbridge Classification Grade III or IV corresponding 'kissing lesion' defect of the distal femur (trochlea, condyles), patella, or tibia **is required** when performed for femoral and patellar chondral lesions.
➢ Physical exam demonstrates **BOTH** of the following findings:

- A stable knee with intact or reconstructed ligaments (ACL or PCL) and menisci.
  - **Note**: A concurrent ligament stabilization or meniscal procedure at the time of OATS would be acceptable.
- Normal tibial-femoral and/or patella-femoral alignment

- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration

Osteochondral Allograft/Autograft Transplantation Systems (OATS)/ Mosaicplasty Non-Indications

Not Medically Necessary

- Osteochondral allograft/autograft transplantation (OATS)/mosaicplasty of the distal femoral articular or patellar surface is considered **not medically necessary** for **ANY** other indication or condition.
- Hybrid autologous chondrocyte implantation performed with osteochondral autograft transfer system (Hybrid ACI/OATS) technique for the treatment of an osteochondral defect is considered **not medically necessary**.

Abrasion Arthroplasty/Subchondral Drilling/Microfracturing

Abrasion Arthroplasty/Subchondral Drilling/Microfracturing Indications

Abrasion arthroplasty, subchondral drilling, or microfracturing is considered **medically necessary** when **ALL** of the following criteria have been met:

- A full-thickness distal femoral articular surface (i.e., medial condyle, lateral condyle, or trochlea) and/or patellar chondral defect of ≤ 2.5 cm^2 in size on the weight-bearing surface that has been identified with **ANY** of the following:
  - CT arthrogram
  - MRI **and** the Modified Outerbridge Classification is Grade III or IV
  - Arthroscopy **and** the Outerbridge Classification is Grade III or IV
- Physical exam demonstrates **BOTH** of the following findings:
  - A stable knee with intact or reconstructed ligaments (ACL or PCL) and menisci
    - **Note**: A concurrent ligament stabilization or meniscal procedure at the time of abrasion arthroplasty would be acceptable.
  - Normal tibial-femoral and/or patella-femoral alignment
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration

Abrasion Arthroplasty/Subchondral Drilling/Microfracturing Non-Indications

- Abrasion arthroplasty, subchondral drilling, or microfracturing is considered **not medically necessary** for **ANY** other indication or condition.

Procedures for Patellofemoral Conditions

Procedures for anterior knee pain (with or without recurrent patellar instability) include both bony and/or soft tissue surgical procedures.

- Bony surgical procedures can include, but are not limited to, the following: tibial tubercle osteotomy/tubercleplasty (e.g., Fulkerson, Maquet) and trochleoplasty.
- Soft tissue surgical procedures can include, but are not limited to, the following: medial patellofemoral ligament (MPFL) reconstruction/repair; extensor realignment and/or muscle advancement or release (e.g., Campbell, Goldthwaite type procedure); and, lateral retinacular release.

Procedures for Patellofemoral Conditions Indications

Medial Patellofemoral Ligament (MPFL) Reconstruction/Repair

Medial patellofemoral ligament (MPFL) reconstruction/repair for anterior knee pain (with or without recurrent patellar instability) is considered **medically necessary** when **ALL** of the following criteria have been met:

- MPFL tear is identified/confirmed by **ANY** of the following:
  - Identified on MRI, CT, or Ultrasound (US)
  - Identified by arthroscopy
  - Physical exam demonstrates **EITHER** of the following findings:
    - MPFL palpation test findings (with the knee in full extension and the patella medially subluxated) noting tenderness to palpation of the origin of the MPFL
    - Patella glide test findings >75% lateral subluxation of the patella width at 30 degrees of knee flexion
- Physical exam demonstrates **ANY** of the following findings:
  - Positive J sign
  - Positive moving patellar apprehension test
  - Lateral patellar translation >½ (one-half) of the patellar width
  - Tenderness of the medial or lateral facets
  - Patellar grind test (Clarke's sign)

- Symptoms include **ANY** of the following:
  - Function-limiting anterior knee pain (e.g., loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment)
  - Recurrent patellar instability which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
    - **Criteria exception**: An acute patellofemoral dislocation with a loose chondral or osteochondral fragment is **not required** to have reoccurring patellar instability.
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** for an acute patellofemoral dislocation with a loose chondral or osteochondral fragment.

Trochleoplasty

Trochleoplasty for anterior knee pain (with or without recurrent patellar instability) is considered **medically necessary** when **ALL** of the following criteria have been met:

- Imaging shows **BOTH** of the following findings:
  - Absence of severe patellofemoral arthritis
  - Trochlear dysplasia with **ANY** of the following findings:
    - Supratrochlear spur
    - Lateral trochlear inclination (LTI) >11 degrees
    - Crossing sign
    - Double-contour sign
- Physical exam demonstrates **ANY** of the following findings:
  - Positive J sign
  - Positive moving patellar apprehension test
  - Lateral patellar translation >½ (one-half) of the patellar width
  - Tenderness of the medial or lateral facets
  - Patellar grind test (Clarke's sign)
- Symptoms include **ANY** of the following:
  - Function-limiting anterior knee pain (e.g., loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment)
  - Recurrent patellar instability which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
    - **Criteria exception**: An acute patellofemoral dislocation with a loose chondral or osteochondral fragment is **not required** to have reoccurring patellar instability.
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** for an acute patellofemoral dislocation with a loose chondral or osteochondral fragment .

Procedures Other Than Medial Patellofemoral Ligament (MPFL) Reconstruction or Trochleoplasty

Procedures other than medial patellofemoral ligament (MPFL) reconstruction/repair or trochleoplasty performed for anterior knee pain (with or without recurrent patellar instability) is considered **medically necessary** when **ALL** of the following criteria have been met:

- Imaging shows **ANY** of the following findings:
  - Radiographic evidence of patellar tilt >20 degrees
  - Patella Alta (e.g., Insall-Salvati, Blackburne-Peel, Caton-Deschamps ratios)
  - Sulcus angle >145 degrees
  - Increased tibial tubercle-posterior cruciate distance of >24 mm
  - Increased TT-TG (tibial tubercle-trochlear groove) distance of >20 mm
  - Concordant osteochondral defect of the patellofemoral joint (MRI, CT, or previous arthroscopic procedure)
  - Acute patellar dislocation with associated intra-articular fracture
- Physical exam demonstrates **ANY** of the following findings:
  - Positive J sign
  - Positive moving patellar apprehension test
  - Lateral patellar translation >½ (one-half) of the patellar width
  - Tenderness of the medial or lateral facets
  - Patellar grind test (Clarke's sign)
- Symptoms include **ANY** of the following:
  - Function-limiting **anterior** knee pain (e.g., loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment)
  - Recurrent patellar instability which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
    - **Criteria exception**: An acute patellofemoral dislocation with a loose chondral or osteochondral fragment is **not required** to have reoccurring patellar instability.
- Failure of provider-directed non-surgical management for at least three (3) months duration
  - **Criteria exception**: Three (3) months of provider-directed non-surgical management is **not required** for an acute patellofemoral dislocation with a loose chondral or osteochondral fragment.

Procedures for Patellofemoral Conditions Non-Indications

- Procedures for patellofemoral conditions are considered **not medically necessary** for **ANY** other indication or condition.

High Tibial Osteotomy

High Tibial Osteotomy Indications

High tibial osteotomy is considered **medically necessary** when **ALL** of the following criteria have been met:

- Individual is age 60 years or less
- Imaging shows unicompartmental osteoarthritis involving less than 1/3 of the femoral condylar surface
- Physical exam demonstrates **ALL** of the following findings:
  - Less than 15 degrees of fixed varus deformity
  - Affected knee is capable of at least 90 degrees of flexion
  - Joint stability in full extension
  - Intact anterior cruciate ligament (ACL)
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least three (3) months duration

High Tibial Osteotomy Non-Indications

- High tibial osteotomy is considered **not medically necessary** for **ANY** other indication, condition, or when **ANY** of the following are present:
  - Inflammatory arthropathy (i.e., rheumatoid arthritis)
  - Chondrocalcinosis
  - Anterior cruciate ligament (ACL) tear
  - Osteochondral defect more than five (5) mm in depth

Lysis of Adhesions

Lysis of Adhesions Indications

Lysis of adhesions is considered **medically necessary** for arthrofibrosis when **ALL** of the following criteria have been met:

- Physical exam demonstrates less than 90° of knee flexion by two (2) months after knee surgery **or** trauma
- Symptoms include function-limiting knee pain and/or loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- Failure of provider-directed non-surgical management for at least two (2) months duration, including **BOTH** of the following:
  - Anti-inflammatory medication and/or cortisone injection (unless contraindicated)
  - Physical therapy (i.e., active exercise and manual therapy designed to increase joint mobility and range of motion)

Lysis of Adhesions Non-Indications

- Lysis of adhesions is considered **not medically necessary** for **ANY** other indication or condition.

Procedures Not Addressed Elsewhere

Procedures Not Addressed Elsewhere Non-Indications

- Based on lack of scientific evidence of efficacy and safety, the following are considered **experimental, investigational, or unproven (EIU)**:
  - Knee subchondroplasty
  - Focal resurfacing of a single knee joint defect (e.g., Arthrosurface® femoral condyle implant, HemiCAP®, UniCAP®)

Codes (CMM-312)

The inclusion of any code in this table does not imply that the code is under management or requires prior authorization. Refer to the applicable health plan for management details. Prior authorization of a code listed in this table is not a guarantee of payment. The Certificate of Coverage or Evidence of Coverage policy outlines the terms and conditions of the member's health insurance policy.

Code	Code Description/Definition
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
27340	Excision, prepatellar bursa
27347	Excision of lesion of meniscus or capsule (e.g., cyst, ganglion), knee
27355	Excision or curettage of bone cyst or benign tumor of femur;
27356	Excision or curettage of bone cyst or benign tumor of femur; with allograft
27357	Excision or curettage of bone cyst or benign tumor of femur; with autograft (includes obtaining graft)
27358	Excision or curettage of bone cyst or benign tumor of femur; with internal fixation (List in addition to code for primary procedure)
27360	Partial excision (craterization, saucerization, or diaphysectomy) bone, femur, proximal tibia and/or fibula (e.g., osteomyelitis or bone abscess)
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
27412	Autologous chondrocyte implantation, knee
27415	Osteochondral allograft, knee, open
27416	Osteochondral autograft(s), knee, open (e.g., mosaicplasty) (includes harvesting of autograft[s])
27418	Anterior tibial tubercleplasty (e.g., Maquet type procedure)
27420	Reconstruction of dislocating patella; (e.g., Hauser type procedure)
27422	Reconstruction of dislocating patella; with extensor realignment and/or muscle advancement or release (e.g., 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
27442	Arthroplasty, femoral condyles or tibial plateau(s), knee;
29850	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; without internal or external fixation (includes arthroscopy)
29851	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; with internal or external fixation (includes arthroscopy)
29855	Arthroscopically aided treatment of tibial fracture, proximal (plateau); unicondylar, includes internal fixation, when performed (includes arthroscopy)
29856	Arthroscopically aided treatment of tibial fracture, proximal (plateau); bicondylar, includes internal fixation, when performed (includes arthroscopy)
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (e.g., mosaicplasty) (includes harvesting of the autograft[s])
29867	Arthroscopy, knee, surgical; osteochondral allograft (e.g., mosaicplasty)

Code	Code Description/Definition
29868	Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
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 (e.g., osteochondritis dissecans fragmentation, chondral fragmentation)
29875	Arthroscopy, knee, surgical; synovectomy, limited (e.g., plica or shelf resection) (separate procedure)
29876	Arthroscopy, knee, surgical; synovectomy, major, two or more compartments (e.g., 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
J7330	Autologous cultured chondrocytes, implant

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