

Medical Policy

Arthroscopic Knee Surgery	
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APPLICABLE PRODUCT AND MARKET	<i>Individual Family Plan: All Plans</i> <i>Small Group: All Plans</i> <i>Medicare Advantage: All Plans</i>

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PURPOSE

The purpose of this policy is to establish the clinical review criteria that support the determination of medical necessity for arthroscopic knee surgery.

POLICY/CRITERIA

Arthroscopic knee surgery

Arthroscopic knee surgery may be considered medically necessary when the following criteria are met:

1. All imaging must be performed and read by an independent radiologist. If discrepancies arise in the interpretation of the imaging, the radiologist report will supersede.
2. Evaluation or treatment for intra-articular joint pathology when **ALL** of the following criteria

Medical Policy

are met:

- a. **ONE** or more of the following:
 - i. Knee pain associated with mechanical symptoms, including locking, catching, and giving-way.
 - ii. Knee pain associated with loose or foreign bodies confirmed by imaging.
 - iii. Knee pain associated with plica confirmed by imaging.
 - iv. Symptomatic hemangioma.
 - v. Chronic knee pain, effusion, or instability when MRI, X-rays, diagnostic arthrocentesis, and other investigations are inconclusive.
 - b. Failure of at least 3 months of conservative treatment including **ALL** of the following:
 - i. Physical therapy and/or a structured home exercise program.
 - ii. Prescription strength medication for pain/inflammation relief (for example, analgesics and/or NSAIDS)
 - iii. Activity Modification.
 - c. Patient does **NOT** have one of the following:
 - i. Moderate or severe osteoarthritis (Kellgren-Lawrence* Grade 2-4) or degenerative meniscal tear with osteoarthritis.
 - ii. Significant comorbidities.
 - iii. Osteoarthritis pain only
3. Imaging-confirmed osteochondral defect when **ONE** of the following criteria are met:
- a. Displaced lesion, with or without loose body.
 - b. Nondisplaced lesion in skeletally immature individuals (growth plates open) after a failure of at least 12 weeks conservative treatment (immobilization, physical therapy, activity modification).
 - c. Nondisplaced lesion in skeletally mature individuals (closed growth plates) after failure of at least 6 weeks conservative treatment (immobilization, physical therapy, activity modification).

Meniscectomy or Meniscal Repair

Meniscectomy and/or meniscal repair may be considered medically necessary when **ALL** of the following criteria have been met:

1. MRI confirms an acute meniscal tear that extends to the articular surface and the MRI does NOT demonstrate any of the following:
 - a. Moderate or severe articular cartilage thinning.
 - b. Full-thickness articular cartilage loss or defects.

Medical Policy

- c. Extrusion of the meniscus
 - d. Subchondral edema
 - e. Mmore than mild osteophytes
 - f. Subchondral cysts or an impression of “moderate” or “advanced/severe” arthritis.
2. Patient reports significant knee pain and any **ONE** of the following mechanical symptoms:
 - a. Knee range of motion is “blocked” due to pain.
 - b. Giving-way, subjective weakness, or buckling of the knee.
 - c. Painful locking, catching, or popping during weight bearing activities.
3. **TWO OR MORE** of the following physical examination findings:
 - a. Limited range of motion.
 - b. Evidence of joint swelling/effusion.
 - c. Joint line tenderness.
 - d. Positive McMurray’s Test, Thessaly Test, or Apley’s Compression.
4. Failure of provider-directed non-surgical management for at least three (3) months in duration including **ALL** of the following:
 - a. Analgesics or anti-inflammatory medications.
 - b. Physical therapy or detailed professionally-directed home exercise program.
 - c. Activity modification.

Additional Requirements:

- Meniscectomy/saucerization for discoid lateral meniscus is considered medically necessary when MRI confirms the presence of a discoid meniscus and **ALL** of the above criteria are met (other than demonstration of a meniscal tear).
- Acute traumatic meniscal tear associated with function limiting pain **AND** locked knee doesn’t require three months of provider directed non-surgical therapy.

Meniscal Allograft Transplantation

Meniscal Allograft Transplantation may be considered medically necessary when **ALL** of the following criteria are met:

1. Significant knee pain
2. Pre-operative studies (MRI or previous arthroscopy) reveal absence or near-absence of the meniscus.
3. Degenerative changes must be absent or minimal (Outerbridge grade II or less)**
4. Knee must be stable prior to surgery or be surgically corrected at the time of the allograft (i.e., intact or reconstructed ACL).

Medical Policy

5. Normal knee alignment or knee alignment will be surgically corrected at time of allograft.
6. Body Mass Index of 35 or less.
7. Individual is under the age of 50 years.
8. Failure of provider directed non-surgical management for at least three months duration.

Anterior Cruciate Ligament (ACL) reconstruction

Anterior Cruciate Ligament (ACL) reconstruction may be considered medically necessary when **ALL** the following criteria have been met:

1. Significant knee pain that interferes with activities of daily living.
2. Individual needs to return to activities that require cutting, pivoting and agility activities.
3. MRI results confirm complete ACL tear.
4. No evidence of moderate or severe arthritis (Kellgren-Lawrence* grade 3 or 4)
5. Any **ONE** of the following physical examination findings:
 - a. Positive Lachman's Test
 - b. Positive anterior Drawer Test
 - c. Positive Pivot shift Test
6. Individual reports persistent instability which is noted as giving away or "buckling" after trial of at least 12 weeks of nonoperative therapy (eg, immobilization, knee brace, physical therapy) **OR**; when **ALL** the following criteria are met:
 - a. MRI results confirm ACL tear associated with another ligament injury (multi-ligamentous knee injury) or repairable meniscus tear,
 - b. No evidence of severe arthritis (Kellgren-Lawrence grade 3 or 4)
 - c. Failure of provider directed non-surgical management for at least 3 months, except in acute injury setting where hemarthrosis, effusion and joint instability have been documented.

Posterior Cruciate Ligament reconstruction

Posterior Cruciate Ligament reconstruction or repair may be medically necessary when **ALL** of the following criteria are met:

1. MRI demonstrates PCL tear
2. Significant knee pain interfering with activities of daily living.
3. Patient reports persistent instability which is noted as giving away or "buckling" after trial of at least 12 weeks of nonoperative therapy (e.g., immobilization, knee brace, physical therapy)

Medical Policy

4. PCL tear is associated with either ACL, MCL or LCL tears or avulsion fracture
5. Absence of severe arthritis (Kellgren-Lawrence grade 3 or 4)

Medial/Lateral Collateral Ligament (MCL/LCL)

Medial/Lateral Collateral Ligament (MCL/LCL) tear confirmed by imaging may be considered medically necessary when **ALL** of the following criteria are met:

- a. Significant knee pain interfering with activities of daily living
- b. Patient reports knee instability which is noted as giving way, weakness or buckling
- c. MRI demonstrates a tear of medial or lateral collateral ligament (MCL/LCL)
- d. Failure of provider-directed non-surgical management for at least 12 weeks duration, except in an acute injury setting of the lateral collateral ligament (LCL) (including the posterolateral corner) where total disruption of the ligament documented on MRI and effusion and joint instability have been documented on physical examination **AND** one of the following:
 - i. Positive Valgus Stress Test (Medial)
 - ii. Positive Varus Stress Test (Lateral)

Synovectomy

Synovectomy is considered medically necessary when **ALL** of the following criteria have been met:

- a. Significant pain associated with loss of knee function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
- b. Any **ONE** of the following physical examination findings:
 - i. Limited range of motion
 - ii. Evidence of joint swelling/effusion
- c. Failure of provider-directed non-surgical management for at least three (3) months in duration (analgesics, immobilization, physical therapy)
- d. MRI or CT arthrogram demonstrates evidence of synovitis or plica
- e. Presence of one of the following:
 - i. Plica syndrome
 - ii. Rheumatoid arthritis
 - iii. Hemophilic joint disease
 - iv. Pigmented villonodular synovitis

Medical Policy

- v. Lipoma arborescens
- vi. Other chronic inflammatory conditions (e.g., antibiotic-resistant Lyme arthritis)
- vii. Recurrent hemarthrosis (i.e., secondary to sickle cell anemia, bleeding diathesis, etc).

Autologous Chondrocyte Implantation (ACI)

Refer to MED_Clin_Ops-117 Autologous Chondrocyte Implantation Policy

Additional Services

Excision of symptomatic Baker's cyst confirmed by imaging and/or physical exam that is not amenable to treatment with ultrasound-guided fine needle aspiration after failure of at least 12 weeks conservative treatment (e.g., immobilization, knee brace, physical therapy).

1. Debridement, drainage, or lavage for one of the following:
 - a. Infection
 - b. Rheumatoid arthritis
 - c. Arthrofibrosis confirmed by loss of range of motion after prior surgery or trauma, after failure of at least 12 weeks of documented physical therapy.
2. Open or arthroscopic lateral retinacular release for treatment of patellar compression syndrome, confirmed by a positive patella glide or patella tilt test
3. Fracture reduction (arthroscopic assist)
4. Treatment of arthrofibrosis or patellar clunk syndrome after total knee replacement, confirmed by exam (e.g., limited range of motion, retropatellar crepitus), that has failed to improve with at least 12 weeks of documented physical therapy.
5. Articular cartilage lesion and ALL of the following:
 - a. Cartilage defect demonstrated on MRI
 - b. Symptoms attributed to chondral injury
 - c. Failure of at least 12 weeks of documented physical therapy

EXCLUSIONS/LIMITATIONS:

The following procedures are considered **not medically necessary** due to insufficient evidence of efficacy:

1. Mosaicplasty, or osteochondral cylinder transplantation

Medical Policy

2. Osteochondral autograft transplant and osteoarticular transfer system (OATS)
3. Subchondral Drilling or Microfracturing
4. Osteochondral allograft transplant
5. Collagen Meniscus Implants (CMI) are unproven and not medically necessary for treating meniscus injuries or tears due to insufficient evidence of efficacy.
6. Medical Collateral Ligament (MCL) repair/reconstruction is considered **NOT** medically necessary in an acute injury setting including an isolated MCL repair.
7. Knee arthroscopy is considered NOT medically necessary for the following:
 - a. Treatment of osteoarthritis
 - b. Treatment of meniscal tear in knee with osteoarthritis
 - c. Arthroscopic treatment of subchondral/bone marrow lesions and insufficiency fractures is considered investigational (including but not limited to Subchondroplasty®).
 - d. Focal resurfacing of a single knee joint defect (e.g., Arthrosurface Knee HemiCAP®, UniCAP®)
 - e. “In-office” diagnostic arthroscopy (e.g., Mi-Eye™, VisionScope®)
 - f. For persons with significant co-morbidities, the medical record must contain documentation of the risk/benefit of knee arthroscopy

DEFINITIONS

1. **Arthroscopic knee surgery** is a procedure that allows doctors to view the knee joint without making a large incision through the skin and other soft tissues. Arthroscopic knee surgery is used to diagnose and treat a wide range of knee problems.
2. **Arthrofibrosis** is 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.
3. **Autologous chondrocyte implantation** was developed for the treatment of traumatic cartilage defects in an attempt to prevent or delay total knee replacement. The first step of the procedure is an arthroscopic examination of the chondral lesion followed by harvesting of cartilage from a lesser weight-bearing portion of the knee. The cartilage specimen is then sent for chondrocyte isolation and culture in the laboratory. The second stage of the procedure, which includes defect preparation and implantation of chondrocytes, takes place 5 to 9 weeks later. The chondrocytes are injected into the defect and covered with a periosteal patch, which is sutured to the edge of the defect.

Medical Policy

4. **The Osteochondral Allograft Transplantation (OATS Procedure)** 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.

5. Kellgren-Lawrence Grading System

- a. Grade 0: No radiographic features of osteoarthritis
- b. Grade 1: Doubtful joint space narrowing and possible osteophytic lipping
- c. Grade 2: Definite osteophyte formation with possible joint space narrowing on anteroposterior weightbearing radiograph
- d. Grade 3: Multiple osteophytes, definite narrowing of joint space, some sclerosis and possible bony deformity
- e. Grade 4: Large osteophytes, marked narrowing of joint space, severe sclerosis and definite bony deformity

6. Outerbridge Classification

The Outerbridge classification is a grading system for joint cartilage breakdown:

- a. Grade 0 - normal
- b. Grade I - cartilage with softening and swelling
- c. Grade II - a partial-thickness defect with fissures on the surface that do not reach subchondral bone or exceed 1.5 cm in diameter
- d. Grade III - fissuring to the level of subchondral bone in an area with a diameter more than 1.5 cm
- e. Grade IV - exposed subchondral bone

7. **Subchondral Drilling or Microfracturing** is a procedure that is used to correct traumatic full-thickness cartilage (chondral) defects within a joint. Microfracture uses an awl to penetrate the subchondral bone of the defect to attempt to induce mesenchymal stem cells of the bone marrow to differentiate into fibrocartilage.

8. **Mosaicplasty** (or osteochondral cylinder transplantation) is a surgical technique which 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.

Medical Policy

CODING CPT CODES

Applicable CPT® codes:

27301	Incision and drainage, deep abscess, bursa, or hematoma, thigh or knee region
27303	Incision, deep, with opening of bone cortex, femur or knee (e.g., osteomyelitis or bone abscess)
27310	Arthrotomy, knee, with exploration, drainage, or removal of foreign body (e.g., infection)
27323	Biopsy, soft tissue of thigh or knee area; superficial
27324	Biopsy, soft tissue of thigh or knee area; deep (subfascial or intramuscular)
27327	Excision, tumor, soft tissue of thigh or knee area, subcutaneous; less than 3 cm
27328	Excision, tumor, soft tissue of thigh or knee area, subfascial (e.g., intramuscular); less than 5 cm
27329	Radical resection of tumor (e.g., sarcoma), soft tissue of thigh or knee area; less than 5 cm
27330	Arthrotomy, knee; with synovial biopsy only
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
27337	Excision, tumor, soft tissue of thigh or knee area, subcutaneous; 3 cm or greater
27339	Excision, tumor, soft tissue of thigh or knee area, subfascial (e.g., intramuscular); 5 cm or greater
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)
27364	Radical resection of tumor (e.g., sarcoma), soft tissue of thigh or knee area; 5 cm or greater

Medical Policy

27365	Radical resection of tumor, femur or knee
27372	Removal of foreign body, deep, thigh region or knee area
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 autograph[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
27438	Arthroplasty, patella; with prosthesis
27440	Arthroplasty, knee, tibial plateau;
27454	Osteotomy, multiple, with realignment on intramedullary rod, femoral shaft (e.g., Sofield type procedure)
27455	Osteotomy, proximal tibia, including fibular excision or osteotomy includes correction of genu varus [bowleg] or genu valgus [knock-knee]); before epiphyseal closure
27457	Osteotomy, proximal tibia, including fibular excision or osteotomy (includes correction of genu varus [bowleg] or genu valgus [knock-knee]) after epiphyseal closure
27465	Osteoplasty, femur; shortening (excluding 64876)
27466	Osteoplasty, femur; lengthening
27468	Osteoplasty, femur; combined, lengthening and shortening with femoral segment transfer
27470	Repair, nonunion or malunion, femur, distal to head and neck; without graft (e.g., compression technique)
27472	Repair, nonunion or malunion, femur, distal to head and neck; with iliac or other autogenous bone graft (includes obtaining graft)
27495	Prophylactic treatment (nailing, pinning, plating, or wiring) with or without methylmethacrylate, femur
29850	Arthroscopically aided treatment of intercondylar spine(s) and/or tuberosity fracture(s) of the knee, with or without manipulation; without internal or external

Medical Policy

	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)
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)

Medical Policy

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

Applicable HCPCS Codes:

S2112	Arthroscopy, knee, surgical for harvesting of cartilage
G0428	Collagen meniscus implant procedure for filling meniscal defects (e.g., CMI, collagen scaffold, Menaflex)

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Medical Policy

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Medical Policy

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POLICY HISTORY

Approved by UM Committee 7/14/2022

Original Effective Date	November 19, 2020
Revised Date	January 2021 – Small Group added as applicable product January 2022 – Annual Review July 2022 – Update to reflect changes related to ACI and new ACI policy March 2023 – Adopted by MA UMC