



## **Knee Arthroscopy (Single Service)**

*Clinical Guidelines for Medical Necessity Review*

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## Guideline Information:

**Specialty Area:** Diseases & Disorders of the Musculoskeletal System (M00-M99)

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**Type:** ☒ Adult (18+ yo) | ☐ Pediatric (0-17 yo)

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# Medical Necessity Criteria

## ***Service: Knee Arthroscopy***

### General Guidelines

- **Units, Frequency, & Duration:** When medical necessity is met based on described clinical criteria, and exclusionary criteria are absent, knee arthroscopy may be approved as a single service.
- **Criteria for Subsequent Requests:** Approval when medical necessity criteria below are met.
- **Recommended Clinical Approach:** Knee arthroscopy is a standard treatment for the removal of inflamed synovial tissue, fragments of bone or cartilage that are loose, and the removal (or partial removal) of the meniscus. The procedure may also be performed to trim or reconstruct damaged articular cartilage as well as to reconstruct a torn anterior cruciate ligament (ACL) or posterior cruciate ligament. Knee arthroscopy is also performed to treat knee sepsis and issues related to the patella.<sup>1</sup>
- **Exclusions:** This procedure is not recommended if the patient has an active infection.

### Medical Necessity Criteria

#### Indications

→ **Knee arthroscopy** is considered appropriate if **ANY** of the following is **TRUE**:

◆ **Articular cartilage lesion** when **ALL** of the following are **TRUE**:<sup>2</sup>

- Symptoms are related to chondral injury; **AND**
- Advanced imaging demonstrates articular cartilage defect; **AND**
- Failure of conservative management for greater than 3 months, including **ALL** of the following:
  - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
  - Physical therapy; **OR**

◆ **Autologous chondrocyte implantation (ACI)** when **ALL** of the following are **TRUE**:<sup>3</sup>

- The patient has knee symptoms (pain, swelling, mechanical); **AND**
- Loss of function due to isolated chondral lesions over 2 cm and up to 4 cm; **AND**
- Osteochondral defects grade III or IV; **OR**

◆ **Debridement, drainage, or lavage** when **ANY** of the following is **TRUE**:

- The patient has **ANY** of the following conditions:
  - Full-thickness cartilage defect with exposed bone; **OR**
  - Small defect (less than 2-4 cm<sup>2</sup>) and is physically active<sup>4</sup>; **OR**
  - Isolated condylar defect<sup>5-6</sup>; **OR**
  - Arthrofibrosis (e.g., after ACL repair, total knee arthroplasty, or trauma), as indicated by **ALL** of the following:<sup>7</sup>
    - ◆ Loss of range of motion; **AND**
    - ◆ Nonoperative care (e.g., physical therapy, manipulation under anesthesia) has been tried and failed; **OR**
  - Isolated chondromalacia of the patella (i.e., symptomatic, with fragmentation, and unresponsive to nonoperative therapy)<sup>8</sup>; **OR**
  - Infected joint<sup>9-10</sup>; **OR**
  - Osteomyelitis<sup>11</sup>; **OR**

◆ **Intraarticular joint pathology evaluation** when **ANY** of the following is **TRUE**:<sup>12-13</sup>

- Chronic knee pain and **ALL** of the following are **TRUE**:
  - Unknown etiology of symptoms; **AND**
  - Failure of conservative management for greater than 3 months, including **ALL** of the following:
    - ◆ Oral steroids, anti-inflammatory medications, or analgesics; **AND**
    - ◆ Physical therapy; **AND**
    - ◆ **ANY** of the following:
      - Corticosteroid injection if medically appropriate; **OR**

- Corticosteroid injection is contraindicated; **AND**
    - Imaging does not yield definitive results; **AND**
    - Diagnostic arthrocentesis with synovial fluid analysis when **ANY** of the following is **TRUE**:
      - ◆ Nondiagnostic; **OR**
      - ◆ Not indicated; **OR**
  - Symptoms include locking, catching, and giving way; **OR**
  - Imaging demonstrates **ANY** of the following:
    - A loose body; **OR**
    - A foreign body (e.g., hardware); **OR**
  - Hemangioma with symptoms; **OR**
- ◆ **Lateral retinacular release for patellar compression syndrome** when **ALL** of the following are **TRUE**:
  - Failure of conservative management for greater than 3 months, including **ALL** of the following:
    - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
    - Physical therapy; **AND**
    - **ANY** of the following:
      - ◆ Corticosteroid injection if medically appropriate; **OR**
      - ◆ Corticosteroid injection is contraindicated; **AND**
  - The patient has **ANY** of the following:
    - Chondromalacia patella; **OR**
    - Patellofemoral instability done in conjunction with other stabilization or realignment procedures; **OR**
    - Lateral patellar hyperpressure syndrome<sup>14</sup>; **OR**
    - Abnormal patellar tracking after total knee arthroplasty; **AND**
  - Advanced imaging shows **ANY** of the following:
    - Patellar compression syndrome; **OR**
    - Abnormal patellar tracking; **OR**
- ◆ **Synovectomy** when **ALL** of the following are **TRUE**:<sup>15-16</sup>
  - Failure of conservative management for greater than 3 months, including **ALL** of the following:
    - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
    - Physical therapy; **AND**

- **ANY** of the following:
  - ◆ Corticosteroid injection if medically appropriate; **OR**
  - ◆ Corticosteroid injection is contraindicated; **AND**
- Procedure is indicated by **ANY** of the following:
  - Inflammatory (e.g., rheumatoid arthritis, psoriatic arthritis, Lyme arthritis) arthritis<sup>17</sup>; **OR**
  - Benign neoplastic disorders (osteochondromatosis, tenosynovial giant cell tumor, and recurrent hemarthrosis)<sup>17</sup>; **OR**
  - Recurrent effusion; **OR**
  - Limited range of motion of the knee due to adhesions or scar tissue; **OR**
  - Hemophilic joint disease; **OR**
  - Diffuse tenosynovial giant cell tumor (also known as pigmented villonodular synovitis); **OR**
  - Lipoma arborescens; **OR**
  - Other chronic inflammatory conditions (e.g., antibiotic-resistant Lyme arthritis); **OR**
- ◆ **Treatment of anterior cruciate ligament (ACL) tear** when **ALL** of the following is **TRUE**:<sup>18-20</sup>
  - Advanced imaging shows **ALL** of the following:
    - Presence of ACL tear; **AND**
    - No evidence of advanced arthritis; **AND**
  - Limited activities of daily living (ADLs) due to pain and instability; **AND**
  - Treatment is indicated for **ANY** of the following:
    - ACL tear confirmed that is concurrent with injury of **ANY** of the following:
      - ◆ Medial collateral ligament; **OR**
      - ◆ Anterolateral ligament; **OR**
      - ◆ Posterior cruciate ligament; **OR**
      - ◆ Posterolateral ligamentous corner<sup>21</sup>; **OR**
    - ACL reconstruction required due to the patient's occupation; **OR**
    - Failure of conservative management for greater than 3 months, including **ALL** of the following:
      - ◆ Oral steroids, anti-inflammatory medications, or analgesics; **AND**

- ◆ Physical therapy; **OR**
  - Locked knee is secondary to concomitant displaced meniscal tear; **OR**
  - Treatment recommended due to the patient's activity level (e.g., those that require cutting, jumping, pivoting); **AND**
  - Range of motion restored and initial swelling decreased; **OR**
- ◆ **Treatment of osteochondral defect (e.g., osteochondritis dissecans)** when **ALL** of the following are **TRUE**:<sup>22</sup>
  - Advanced imaging demonstrates osteochondral defect; **AND**
  - **ANY** of the following is **TRUE**:
    - Displaced osteochondral lesion; **OR**
    - Nondisplaced osteochondral lesion; **OR**
    - Presence of loose body; **OR**
- ◆ **Treatment of posterior cruciate ligament (PCL) tear** when **ALL** of the following are **TRUE**:<sup>23</sup>
  - Advanced imaging shows **ALL** of the following:
    - Presence of PCL tear; **AND**
    - No evidence of advanced arthritis; **AND**
  - **ANY** of the following indications for treatment is **TRUE**:
    - ACL tear; **OR**
    - Concomitant avulsion fracture; **OR**
    - Medial collateral ligament tear; **OR**
    - Posterolateral corner of the knee is injured; **OR**
    - Tibial displacement of more than 8 mm is demonstrated on stress radiographs; **OR**
    - Failure of conservative management for greater than 3 months, including **ALL** of the following:
      - ◆ Oral steroids, anti-inflammatory medications, or analgesics; **AND**
      - ◆ Physical therapy; **OR**
- ◆ **Treatment of torn meniscus** when **ANY** of the following is **TRUE**:<sup>1,24-25</sup>
  - Arthroscopic partial meniscectomy when **ANY** of the following is **TRUE**:
    - The tear is an acute tear and **ALL** of the following are **TRUE**:

- ◆ Advanced imaging demonstrates a meniscal tear; **AND**
- ◆ Acute, painful locking knee due to irreparable tear<sup>26-28</sup>; **AND**
- ◆ Persistent mechanical symptoms; **AND**
- ◆ Failure of conservative management for less than 4 weeks for acute tears, including **ALL** of the following:
  - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
  - Physical therapy; **OR**
- The tear is a chronic tear and **ALL** of the following are **TRUE**:
  - ◆ Advanced imaging demonstrates a meniscal tear; **AND**
  - ◆ Persistent mechanical symptoms; **AND**
  - ◆ Failure of conservative management for greater than 3 months with degenerative tears and minimal osteoarthritis, including **ALL** of the following:
    - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
    - Physical therapy; **AND**
    - Activity modification; **AND**
    - **ANY** of the following:
      - Corticosteroid injection if medically appropriate; **OR**
      - Corticosteroid injection is contraindicated; **OR**
  - The tear is a recurrent tear or failed repair demonstrated on advanced imaging<sup>28</sup>; **OR**
- Meniscus repair when **ALL** of the following are **TRUE**:
  - The patient has mechanical symptoms following an acute injury; **AND**
  - The patient has **ANY** of the following advanced imaging findings:<sup>28</sup>
    - ◆ Medial or lateral meniscus tears in a young active patient; **OR**

- ◆ Unstable tears, such as bucket handle and double longitudinal tears; **OR**
- ◆ Isolated simple pattern meniscus tears in stable knees; **OR**
- ◆ Posteromedial and posterolateral root tears; **OR**
- ◆ Longitudinal tears greater than 10 mm; **OR**
- ◆ Tears mostly in the vascular zones of the meniscus; **OR**
- ◆ Acute traumatic meniscal tear<sup>28</sup>; **OR**
- Meniscus allograft is considered appropriate if **ALL** of the following are **TRUE**<sup>3</sup>:
  - Failure of conservative management for greater than 3 months, including **ALL** of the following:
    - ◆ Oral steroids, anti-inflammatory medications, or analgesics; **AND**
    - ◆ Physical therapy; **AND**
    - ◆ **ANY** of the following:
      - Corticosteroid injection if medically appropriate; **OR**
      - Corticosteroid injection is contraindicated; **AND**
  - Physically active patient with persistent pain; **AND**
  - Normal knee alignment and stable knee ligaments; **AND**
  - Advanced imaging shows **ANY** of the following:
    - ◆ The meniscus is damaged beyond repair; **OR**
    - ◆ There is insufficient meniscus left for repair (previous surgery or injury).

## Non-Indications

→ **Knee arthroscopy** is not considered appropriate if **ANY** of the following is **TRUE**:

- ◆ Osteoarthritis of the knee (moderate, severe, or KL grade III or IV)<sup>26,29</sup>; **OR**
- ◆ Active infection at the surgical site; **OR**
- ◆ The procedure is a meniscus allograft and **ANY** of the following is **TRUE**:
  - Inflammatory arthropathy; **OR**
  - BMI greater than 35; **OR**

- Uncorrectable malalignment or instability of the knee; **OR**
- Irreparable chondral damage.

### **Level of Care Criteria**

Outpatient

### **Procedure Codes (CPT/HCPCS)**

| <b>CPT/HCPCS Code</b> | <b>Code Description</b>  |
|-----------------------|--|
| 27412                 | Autologous chondrocyte implantation, knee  |
| 27599                 | Unlisted procedure, femur or 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 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, 2 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                                  |
| 29999 | Unlisted procedure, arthroscopy   |
| J7330 | Cultured chondrocytes implant   |
| S2112 | Knee arthroscopy harvest  |

# Medical Evidence

O'Connor et al. (2022) reviewed the literature to determine the efficacy of arthroscopic knee surgery for the treatment of symptomatic knee osteoarthritis, including for degenerative meniscal tears. While current guidelines discourage the use of the procedure for these indications, it is still performed. The review also analyzed benefits and harms (e.g., debridement, partial meniscectomy, or both) when compared to non-surgical interventions (e.g., physical therapy, exercise, intra-articular glucocorticoid injections, non-arthroscopic lavage, non-steroidal anti-inflammatory drugs, hyaluronic acid injections) or placebo surgery. Sixteen trials were included randomized control trials (RCTs) and trials using quasi-randomised methods of participant allocation. A total of 2105 patients (age range 46 to 65 years; 56% women) met inclusion criteria. The authors conclude that arthroscopic surgery is not recommended for patients with symptomatic degenerative knee disease as evidence does not show clinically significant outcomes in pain, function, or quality of life. In addition, arthroscopy may increase the advancement of knee osteoarthritis and may increase additional surgery (e.g., replacement, osteotomy).<sup>1</sup>

Brignardello-Petersen et al. (2017) performed a systematic review to analyze the effect of arthroscopic surgery vs. conservative treatment (e.g., physical therapy) among patients with degenerative knee disease. The review included 13 RCTs and 12 observational studies that focus on primary outcomes including pain, function, and adverse events. Overall, a small reduction in short- and long-term pain (up to three months), function, and quality of life is noted for patients with degenerative knee disease.<sup>31</sup>

The Academy of Orthopaedic Surgeons (AAOS) has published the following:

- *Management of Anterior Cruciate Ligament Injuries*. The AAOS supports operative treatment in select patients; non-operative treatment is recommended in patients with combined ACL and MCL tears.<sup>19</sup>
- *Management of Osteoarthritis of the Knee (Non-Arthroplasty)*. The AAOS does not recommend arthroscopy with lavage and/or debridement for knee osteoarthritis. Arthroscopic partial meniscectomy may be medically necessary to repair meniscal tears in patients with concomitant mild to moderate osteoarthritis and when conservative treatment (e.g., physical therapy) has been unsuccessful.<sup>24</sup>

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# Clinical Guideline Revision History/Information

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|-------------------------------|------------|--|
| Original Date: March 20, 2023 |            |  |
| Review History                |            |  |
| Version 2                     | 10/13/2023 |  |
| Version 3                     | 12/1/2023  |  |
| Version 4                     | 5/30/2024  |  |
| Version 5                     | 9/20/2024  | Updated language regarding conservative treatment. |
|                               |            |  |