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Subject: Knee Arthroscopy and Open, Non-Arthroplasty Knee Repair

DESCRIPTION:

Knee arthroscopy is a surgical procedure that introduces a camera into the knee joint without making a large incision through the skin and other soft tissues. The camera displays pictures on a video monitor and allows the surgeon to guide miniature surgical instruments to perform surgery.

Summary and Analysis of Evidence

Rietbergen et al (2022) conducted a retrospective study using administrative data from January to December 2016 in 13 orthopedic centers in the Netherlands. Medical records were selected from a random sample of 538 patients aged 50+ with degenerative knee disease in whom arthroscopy was performed, and which included the indications for arthroscopy. 65% had valid indications reported in the medical records but 35% were performed without a reported valid indication and, therefore, potentially low value care. Degen et al (2019) evaluated the longitudinal trends in knee arthroscopy utilization in relation to published negative randomized controlled trials, focusing on annual rates, patient demographics and associated 30-day post-operative complications. 68,346 patients underwent knee arthroscopy, of which 69.5% represented partial meniscectomies. The annual procedural rate, as a proportion of all reported cases, increased significantly from 2006 to 2016. The overall incidence of complications was 2.0%, with major complications in 0.9% and minor complications in 1.0%. Common complications included a return to the operating room (0.5%), deep vein thrombosis/thrombophlebitis (0.4%), and superficial infection (0.2%). Operating time > 90 min, diabetes, steroid use, ASA class 2+, and dialysis-dependency were the predictors of overall complication rates.

The evidence for surgical debridement (with or without chondroplasty) for treatment of osteoarthritis of the knee is limited. An UpToDate review, “Overview of surgical therapy of knee and hip osteoarthritis”

(Mandl, Martin; 2025) states, “Although it may seem intuitive that "cleaning out the joint" may improve clinical symptoms, this has not been borne out in clinical trials. A trial was conducted including 180 predominantly male and White patients under 75 years of age with knee OA. Patients were randomly assigned to arthroscopic lavage, arthroscopic debridement and lavage, or sham surgery. During the 24-month follow-up period, there were no differences in knee pain and/or function among patients who received lavage, debridement, or the sham surgery. A limitation of the study was related to the study population, which included few women, who typically have a higher prevalence of OA. Another randomized trial of 178 patients with moderate to severe knee OA evaluated arthroscopic debridement and lavage in combination with medical and physical therapy versus medical and physical therapy alone. At two years, there were no significant differences in Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) scores, which is a validated instrument for OA of the knee and hip that includes an assessment of pain, stiffness, and physical function. Sherman et al (2018) studied chondral and osteochondral lesions of the patellofemoral (PF) joint, and concluded that “(c)hondroplasty affords the quickest recovery, as there are typically no weight bearing restrictions, no bracing, and patients can return to activities without limitations during recovery. Debridement is the surgical treatment of choice for unstable, small (<2 cm2), partial or full thickness lesions in low demand patients or in patients who are not good candidates for more complex cartilage restoration pathways (i.e., obesity, non-compliant). For larger, unstable lesions in high demand patients, debridement may be performed for mechanical symptoms at the time of staging arthroscopy alongside biopsy for future cell based cartilage transplantation.” Mosier et al (2016) examined the management of patellofemoral cartilage lesions, concluding “patients with patellofemoral cartilage lesions in whom nonsurgical treatment fails may be candidates for surgical treatment. Surgical treatment strategies for the management of patellofemoral cartilage lesions are guided by the size, quality, and location of the defect. Recent advancements in cartilage restoration and arthroplasty techniques as well as appropriate patient selection and meticulous surgical technique have resulted in promising outcomes in patients with patellofemoral cartilage lesions who undergo surgical treatment.”

Evidence for partial and total meniscectomy includes an UpToDate review “Meniscus injury of the knee” (Cardone, Jacobs; 2025), which states “The decision to undergo surgery for a meniscal tear depends upon several factors, including: frequency of symptoms (eg, daily), general knee function (eg, unable to squat, unstable knee), type of tear (eg, complex tear extending to the articular surface), presence of osteoarthritis or damage to the articular cartilage or other structures, and likelihood that leaving meniscus unrepaired will lead to further damage of the articular cartilage. Surgical options include partial or total meniscectomy and repair of the meniscal tear. Open or arthroscopic surgery can be performed. An important surgical principle when performing meniscectomy is to retain as much functioning meniscus as possible.” Doral et al (2018) concluded, “It is the orthopaedic surgeon's responsibility to combine clinical information, radiological images, and clinical experience in an effort to individualize management of meniscal tears, taking into account factors related to the patient and lesion. Surgeons should strive not to operate in most cases, but to protect, repair or reconstruct, in order to prevent early development of osteoarthritis by restoring the native structure, function, and biomechanics of the meniscus. Currently, there are three main methods of modern surgical management of meniscus tears: arthroscopic partial meniscectomy; meniscal repair with or without augmentation techniques; and meniscal reconstruction.”

Yow et al (2021) concluded “(m)eniscal allograft transplantation provides treatment options for patients with a meniscus-deficient knee with lifestyle-limiting symptoms in the absence of advanced degenerative changes. Meniscal transplantation helps to restore the native biomechanics of the involved knee, which may provide chondroprotective effects and restoring additional knee stability. Improvements in pain, function, and activity level have been seen in appropriately selected patients undergoing transplantation. Although various surgical implantation options exist, the majority focus on reproducing native attachments of the meniscal roots to allow near normal mechanics. Although meniscal transplantation may serve as a salvage procedure for symptomatic patients with a meniscus-deficient knee, it may prevent or delay the necessity of a more invasive arthroplasty procedure.” Southworth et al (2020) stated “Meniscus allograft transplantation is an established surgical treatment indicated in symptomatic meniscus-deficient patients with minimal to no arthritis. Treatment decision making should be individualized after a thorough history and physical examination, with diagnostic imaging and arthroscopy to assess the status of the meniscus. Outcomes in meniscus allograft transplantation are favorable, with reported significant improvements in clinical outcome and low failures in short- and midterm follow-up studies.”

UpToDate review, “Approach to acute knee pain and injury in children and skeletally immature adolescents” (Hergenroeder, 2025) states “based upon observational studies, the most common indications for arthroscopy in children with acute knee injuries include ACL tears, meniscal lesions, osteochondral fractures, and tibial intercondylar eminence fractures. Arthroscopy is the most accurate method of diagnosing the cause of internal derangement in patients with a knee effusion. False-positive results are rare and, apart from posterior meniscus injuries, false-negative results are also rare. Arthroscopy is used selectively as an adjunct to the history, physical examination, and MRI when there is a diagnostic dilemma. The only absolute indication for arthroscopy is mechanical disruption of normal knee function.”

Evidence for ACL reconstruction and repair includes an UpToDate review, “Anterior cruciate ligament injury” (Friedberg, d'Hemecourt; 2025) that states “ACL reconstruction is generally performed with arthroscopy using a tendon graft to replace the ruptured ACL. Graft selection remains a source of debate among orthopedic surgeons … Of note, patient factors (eg, prior knee injury, comorbidity), resources, and surgeon training and preference all factor into graft selection. In addition, surgical technique, especially proper graft positioning, plays a significant role in surgical success or failure regardless of graft type. Both native (autograft) and cadaver (allograft) tendons can be used for ACL reconstruction. Neither graft has clearly demonstrated superior functional outcomes in controlled trials. Potential advantages of the patellar graft include increased initial strength and stiffness compared with an uninjured ACL. In addition, patellar tendon grafts include a portion of bone at either end, which allows for bone-to-bone healing in the femoral and tibial tunnels made during surgery and earlier graft fixation. The main disadvantage is pain at the harvest site. Systematic reviews confirm that reconstruction using the patellar tendon graft results in greater anterior knee pain compared with other grafts.”

Richter et al (2016) stated, “Numerous surgical techniques have been developed to address focal cartilage defects. Cartilage treatment strategies are characterized as palliation (eg, chondroplasty and debridement), repair (eg, drilling and microfracture [MF]), or restoration (eg, autologous chondrocyte implantation [ACI], osteochondral autograft [OAT], and osteochondral allograft [OCA]). The “Holy Grail” for treatment of focal articular cartilage lesions is a method that restores organized hyaline cartilage through a practical, minimally invasive approach with minimal morbidity not only peri-operatively but

also over an extended period of time. The large number of surgical options for chondral defects are evidence of the difficulty in replicating hyaline cartilage function. Microfracture is a marrow stimulation technique considered the first-line treatment given its minimally invasive nature, technical ease, limited surgical morbidity, and relatively low cost. With the OAT technique, defects can be filled immediately with mature, hyaline articular cartilage. The area to be treated should not exceed 4 cm2, and donor site morbidity can be a concern. Perpendicular access to the cartilage surface, either arthroscopically or via a mini-open technique, is critical to allow the donor plug to be flush to re-create the normal articular contour and contact pressures. In a retrospective study, patients treated with MF or OAT mosaicplasty for symptomatic articular cartilage defects of the femoral condyles or trochlea had similar clinical outcomes at intermediate-term follow-up (up to 5 years). However, patients treated with OAT mosaicplasty maintained a superior level of athletic activity compared with those treated with MF. The OAT group had better clinical scores, more normal-appearing cartilage on visual assessment, and a subjectively greater percentage of hyaline cartilage histologically, with more than 90% of athletes able to return to their preinjury level of sport compared with only 50% in the MF group. Clinical outcomes of MF were worse in lesions larger than 2 cm2, but there was no association between clinical outcomes and lesion size when treated with OAT. No significant differences at long-term follow-up were seen between patients treated with MF or OAT mosaicplasty in patient-reported outcomes, muscle strength, or radiological outcome. While techniques may improve patient outcomes, though no single technique can reproduce normal hyaline cartilage."

Del Buono et al (2013) studied the effectiveness and complications of posterior cruciate ligament (PCL) surgery and compare outcomes, advantages and disadvantages of reconstructive and augmentation procedures. A total of 34 studies, 22 retrospective, 9 prospective and 5 randomized control trials were reviewed. The authors concluded "(a)ugmentation and reconstruction procedures are grossly equivalent, but more data examining the long-term functional status, recovery to preinjury daily and sport activities and occurrence of degenerative changes are needed." Ahn et al (2016) conducted a systematic review to address the stability outcome from <PCL> reconstruction and conservative treatments. The authors noted "more satisfactory and consistent stability in the reconstructive treatment group. However, more complications and small differences of stability between groups should be also considered."

Mowers et al (2023) compared patient-reported outcomes and complications in patients with medial collateral ligament (MCL) injuries undergoing repair versus reconstruction with a minimum 2-year follow-up. They concluded "MCL reconstruction versus repair both demonstrate improved International Knee Documentation Committee, Lysholm, and Tegner scores. MCL repair demonstrates higher rates of postoperative knee stiffness and failure at a minimum 2-year follow-up." Vosoughi et al (2021) examined management of collateral ligament injuries in the knee. They noted, "(d)irect repair is recommended for acute cases. Ligament reconstruction is indicated whenever a chronic MCL injury or failed MCL repair is encountered or whenever the ligament quality is inappropriate. It provides the knee with stability against valgus and rotational stress."

Hinckel et al (2021) examined surgical treatments of focal cartilage defects of the knee, including marrow-stimulation techniques microfracture and drilling. They noted these can be performed either open or arthroscopically, but the latter has become more common in recent years. The authors stated, "(s)hort-term outcomes for MST, especially in smaller defects in younger patients, have yielded results comparable to other cartilage restoration techniques." Mirza et al (2015) studied marrow stimulating techniques in the management of knee cartilage defects. They found reported symptomatic

improvement in 80 % of patients at an 11-year follow-up in one study (2005), which included younger patients with defects that were less than 4 cm2. Others showed deterioration after initial improvement, especially in patients who are older than 40. The best results seem to occur in young patients with small lesions (<2–3 cm2) that are less than 1 year old. They found that treatment failure is common beyond the 5 year post-operative period.

Klinge et al (2019) evaluated outcomes of surgery for lateral and/or distal patellar chondrosis at 15 years. Satisfactory results were reported in 94% of knees, based simply on patients' subjective evaluation of the degree of success perceived. For 35% of knees, patients reported engaging in recreational activities, whereas for 18%, patients were minimally active. The average pain score (range, 0-10) for 75% was 2.1, and most of these patients showed grade I or II arthrosis. Weber et al (2016) studied outcomes of various surgeries on patellofemoral chondrosis/patellofemoral dislocation. The authors states, “(d)istal realignment procedures should be implemented in recurrent instability associated with patella alta, increased tibial tubercle-trochlear groove distances, and lateral and distal patellar chondrosis.” “…the need for distalization is customized and precisely defined on the basis of the severity of malrotation and patella alta and on an assessment of lateral and/or distal patellar facet chondrosis.”

Lipina et al (2019) investigated the effect of knee arthroscopic synovectomy (AS) on the disease activity, quality-of-life (QoL), and the functional status of patients with rheumatoid arthritis (RA). A retrospective analysis on 138 RA patients showed significant positive changes: the activity of the disease decreased, and patients' functional status and QoL improved. The authors concluded “AS is effective treatment for recurrent synovitis of the knee in RA patients. This technique improves the functional status of patients and their quality of life and reduces the activity of the disease.”

Zhao et al (2019) enrolled 23 patients in a study to compare the effectiveness of arthroscopic loose body removal with conservative treatment for knee osteoarthritis (KOA). The cure rate for KOA in the surgery group was significantly higher than that in the conservative group. In conclusion, the results demonstrated that arthroscopic loose body removal is a more effective treatment than conservative therapy for KOA. Zmerly et al (2022) looked at loose bodies encountered during clinical activity and as a finding during knee arthroscopy. The authors stated: “In the case of symptomatic intra-articular loose bodies, treatment consists of fragment removal and the management of related diseases (e.g.., lifestyle modification, physiotherapy, pharmacological, and surgical treatment).”

Hamawandi et al (2022) studied 80 patients with lateral patellar compression syndrome to evaluate functional outcome after either open or arthroscopic release of lateral patellar compression syndrome. There was significant difference in functional outcome, measured by Lysholm knee scoring scale, between preoperative and postoperative assessment periods in both groups . There was significantly better functional outcome at 2 years of follow-up with arthroscopic release. There was no recurrence in either group, but there were 4 patients in the group of open release who developed medial patellar instability. Chen et al (2020) evaluated treatment of lateral patellar compression syndrome (LCPS) with release either by outside synovial membrane (OSM) or by through synovial membrane (TSM). All participants had significant reduction in knee pain and improved function at up to 5 years. The authors concluded, “Arthroscopic lateral patella retinaculum release (LLPR) for the treatment of LPCS can effectively improve the function and symptoms of patellofemoral joint with the advantages of small trauma, rapid recovery and less complications. But, the number of occurrences of hemarthrosis and joint adhesion were significantly higher in the TSM group than in the OSM group.”

UpToDate review “Recognition and initial management of patellar dislocations” (Moore, Bothner; 2025) states, “(t)here are limited and conflicting data regarding the benefit of operative repair in children and young adults with lateral patellar dislocation. In a meta-analysis of 10 studies (8 randomized trials and 2 quasi-randomized trials with a total of 519 adolescents and young adults with patellar dislocation), there was high uncertainty that surgery, compared with non-operative treatment, decreased the risk of recurrent dislocations or improved knee function.” However, the review further states that prompt orthopedic surgery referral is warranted for acute lateral patellar dislocations that cannot be reduced, superior dislocations that cannot be reduced, and intra-articular dislocations. Regarding patellar subluxation, the review concluded “(t)reatment of patellar subluxation is best guided by a sports medicine specialist or orthopedic surgeon. Non-operative management is aimed at strengthening the quadriceps, principally the vastus medialis obliquus, and minimizing knee valgus by strengthening the hip abductors. Surgical procedures are also available to either release the tension from the lateral patellar retinaculum or reconstruct the medial patellofemoral ligament when conservative treatment has failed.”

Fackler et al (2022) performed a review of the literature to assess the efficacy and complications of arthroscopic lysis of adhesions (LOA) and manipulation under anesthesia (MUA) for postoperative arthrofibrosis of the knee. They evaluated whether any relevant subgroups are associated with different clinical presentation and outcomes, using 8 studies that included 240 patients. All studies demonstrated a significant improvement (41.6°) in arc of motion after arthroscopic LOA. The authors concluded that arthroscopic LOA and MUA is a safe and efficacious treatment for postoperative arthrofibrosis of the knee.

Gomoll et al (2023) evaluated the 5-year rate of survival without undergoing arthroplasty or high tibial osteotomy (HTO) in subjects with mild-to-moderate medial compartment knee osteoarthritis (OA) who were treated with an implantable shock absorber (ISA) system. Three prospective, sequential, multicenter, international, single-arm clinical trials were conducted comprising subjects who received an ISA for symptomatic medial knee OA after failing ≥ 6 months of conservative therapy. All 171 enrolled subjects were followed for a minimum of 2, and up to 5, years after device implantation. Overall, 90.6% (155/171) of subjects survived without requiring arthroplasty/HTO at last follow-up (mean 3.2 ± 1.6 years). The authors concluded that “in younger patients with mild-to-moderate symptomatic medial compartment knee OA, implantation of the ISA device resulted in a 5-year survival rate of 85% from undergoing arthroplasty or HTO. The ISA system may be an effective treatment option for working-age patients with medial knee OA who are not candidates for or do not desire more invasive surgical approaches. Diduch et al (2023) comducted a prospective open-label cohort study with a historical control arm. Subjects underwent ISA placement or high tibial osteotomy (HTO). The primary endpoint was a composite variable combining pain, function, specific adverse events, integrity of implant or hardware, and conversion to subsequent surgery. The primary endpoint demonstrated superiority of the ISA arm versus the HTO arm, with 85.6% of ISA subjects meeting all criteria compared with 65.5% of HTO subjects. At 24 months, the proportions of subjects considered responders were 95.8% (ISA) versus 87.9% (HTO) for pain and 91.7% (ISA) versus 81.3% (HTO) for function. The ISA procedure was well tolerated, with 13.4 days to full weightbearing status versus 58.0 days for the HTO arm. The authors concluded “treatment with an ISA demonstrated noninferiority and superiority versus treatment with HTO in subjects aged 25-65 years who had OA of the medial knee. Treatment with ISA has high clinical

benefit and is durable through at least 24 months." Limitations included the open-label, non-randomized design and use of historical controls which could have biased outcomes.

POSITION STATEMENT:

Diagnostic Knee Arthroscopy

Diagnostic knee arthroscopy **meets the definition of medical necessity** when **ALL** of the following are met:

- Limited range of motion, effusion, and/or painful weight bearing, present for at least 3 months, **AND**
- Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
    - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification, **AND**
- Xray and MRI results are inconclusive, **AND**
- No imaging evidence of meniscus tear, loose body, advanced arthritis (Kellgren grade III or IV), or fracture

Arthroscopic Debridement

Arthroscopic debridement for treatment of osteoarthritis **meets the definition of medical necessity** when the following are met:

- Osteoarthritis is classified as Outerbridge grade I or II, **AND**
- There are mechanical symptoms (including, but are not limited to, locking, snapping, or popping), **AND**
- Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
    - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification

Debridement of femoral condyle or tibial plateau articular cartilage **meets the definition of medical necessity** when **ALL** of the following are met:

- Imaging evidence of localized femoral condyle or tibial plateau articular cartilage damage, **AND**
- Knee pain, loss of function and/or persistent effusion, **AND**
- Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
    - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification

Debridement for treatment of patellofemoral chondrosis **meets the definition of medical necessity** when **ALL** of the following are met:

- Anterior knee pain with loss of function such as difficulty walking, kneeing, or squatting, localized to the patellofemoral joint, **AND**
- No evidence of advanced osteoarthritis (Kellgren grade III or IV), **AND**
- Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
    - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification

Debridement for arthrofibrosis **meets the definition of medical necessity** when **ALL** of the following are met:

- Presence of pain, stiffness, limited ability to straighten the le.g., limping, and/or swelling, **AND**
- Failure of at least 6 weeks of physical therapy

Meniscectomy/Meniscal Repair

Meniscectomy and/or meniscal repair **meets the definition of medical necessity** for any of the following:

- Acute injury with onset of pain with twisting/rotation, crepitus, locking, giving way, difficulty straightening, or joint line tenderness, when the following are met:
    - MRI evidence of a frank lateral or medial meniscus-bucket handle tear, **AND**
    - Failure of at least 6 weeks of conservative non-operative management that includes at least 2 of the following:
        - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification
- MRI evidence of a tear considered repairable by the surgeon, with pain that corresponds to the location of the tear, when the following are met:
    - MRI evidence of a frank (non-degenerative) meniscus tear, **AND**
    - Xrays demonstrate absent or minimal osteoarthritis (Kellgren-Lawrence grade 0-2), **AND**
    - Failure of at least 6 weeks of conservative non-operative management that includes at least 2 of the following:
        - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification

- A child or adolescent with any type of meniscal tear confirmed on MRI, when at least 1 of the following symptoms is present:
    - Swelling
    - Popping
    - Joint line tenderness
    - Locking
    - Pain with stair climbing
    - Difficulty straightening

Meniscal Allograft Transplant

Meniscal allograft transplant **meets the definition of medical necessity** when the following are met:

- Failure of at least 6 weeks of conservative non-operative management that includes at least 2 of the following: Medications (unless contraindicated), assistive device(s), home exercise, physical therapy, therapeutic injections into the joint, activity modification, **AND**
- Individual is considered too young (e.g., age 54 or younger) to be an appropriate candidate for total knee arthroplasty or other reconstructive knee surgery, **AND**
- Disabling knee pain with activity, **AND**
- Absence of greater than 50% of the meniscus, established by imaging or prior surgery, **AND**
- Documented minimal to absent diffuse degenerative changes in the surrounding articular cartilage (e.g., Outerbridge grade II or less, <50% joint space narrowing), **AND**
- Normal knee biomechanics or alignment and stability is present or will be achieved concurrently with meniscal transplantation, **AND**
- Allograft is non-collagen and harvested via a cadaver (either fresh viable, fresh frozen, cryopreserved, or lyophilized)

Meniscal allograft transplant also meets the definition of medical necessity when performed in combination, either concurrently or sequentially, with treatment of focal articular cartilage lesions using any of the following procedures:

- Autologous chondrocyte implantation, **OR**
- Osteochondral allografting, **OR**
- Osteochondral autografting

Ligament Reconstruction/Repair

Anterior Cruciate Ligament (ACL) Reconstruction with Allograft or Autograft

ACL reconstruction or repair **meets the definition of medical necessity** for the following:

- Acute injury with joint instability, and the following:
    - Locking, catching, popping, buckling, **AND**
    - MRI evidence of a complete ACL tear, **AND**
    - Osteoarthritis is absent or minimal (Kellgren-Lawrence grade 0-2)
- Persistent pain or loss of knee function, and the following:
    - MRI evidence of a partial or complete ACL tear, **AND**
    - Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
        - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification
- Persistent pain or loss of knee function with ligament instability or a repairable meniscus, and the following:
    - MRI evidence of a partial or complete ACL tear

Posterior Cruciate Ligament (PCL) Reconstruction

Posterior cruciate ligament (PCL) reconstruction or repair **meets the definition of medical necessity** when **ALL** of the following are met:

- MRI evidence of a complete PCL tear, **AND**
- Knee instability (locking, catching, popping, buckling), **AND**
- Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
    - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification
- Absent or minimal osteoarthritis (Kellgren-Lawrence grade 0-2)

Microfracture, Abrasion, and Drilling

Microfracture, abrasion and drilling techniques of the knee **meet the definition of medical necessity** when **ALL** of the following are met:

- There is an articular cartilage lesion on MRI imaging, **AND**
- There is pain and/or swelling, **AND**
- There are mechanical symptoms (including, but not limited to, locking, snapping, or popping)

Osteochondral Allografting and Autografting

Osteochondral allografting

Osteochondral allografting **meets the definition of medical necessity** as a technique to repair:

- Full-thickness chondral defects of the knee caused by acute or repetitive trauma, when other cartilage repair techniques (e.g., microfracture, osteochondral autografting or autologous chondrocyte implantation) would be inadequate due to lesion size, location, or depth

Osteochondral autografting

Osteochondral autografting **meets the definition of medical necessity** for the following:

- Treatment of symptomatic full-thickness cartilage defects of the knee caused by acute or repetitive trauma, when **ALL** of the following are met:
    - Inadequate response to a prior surgical procedure (e.g., abrasion, microfracture, drilling), **AND**
    - Candidate is a skeletally mature adolescent with documented closure of growth plates (e.g., ≥15 years), **OR** an adult considered too young to be an appropriate candidate for total knee arthroplasty or other reconstructive knee surgery (e.g., ≤55 years), **AND**
    - Focal, full-thickness (grade III or IV) unipolar lesions on the weight-bearing surface of the femoral condyles, trochlea, or patella that are between 1 and 2.5 cm2 in size, **AND**
    - The articular cartilage surrounding the lesion(s) is Outerbridge grade II or less, and normal-appearing hyaline cartilage surrounding the border of the defect, **AND**
    - Normal knee biomechanics, **OR** alignment and stability will be achieved concurrently with osteochondral grafting.

Synovectomy

Synovectomy **meets the definition of medical necessity** for the following:

- Bleeding into the joint from injury or bleeding disorder
- Painful plica, and the following:
    - Failure of at least 3 months of conservative non-operative management that includes at least 2 of the following:
        - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification, **AND**
    - No improvement in symptoms following joint aspiration and/or steroid injection
- Presence of proliferative synovial disease (e.g., proliferative pigmented villonodular synovitis, synovial chondromatosis, sarcoid synovitis, traumatic hypertrophic synovitis), and the following:
    - No improvement in symptoms following joint aspiration and/or steroid injection, **AND**
    - Failure of at least 6 weeks of conservative non-operative management that includes at least 2 of the following:
        - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy, therapeutic injections into the joint; activity modification
- Presence of proliferative rheumatoid synovitis, and the following:

- No improvement in symptoms following joint aspiration and/or steroid injection, **AND**
- No improvement in symptoms following a minimum of 6 months of DMARD therapy (if not contraindicated)

Loose Body Removal

Loose body removal **meets the definition of medical necessity** when **BOTH** of the following are met:

- Symptoms, including but not limited to, popping, clicking, pain on pivoting, catching, locking, or buckling that affect function of the knee
- Imaging documentation of a loose body

Lateral Release

Lateral release **meets the definition of medical necessity** when **ALL** of the following are met:

- Imaging evidence of lateral patellar tilt, **AND**
- No patellar dislocation, **AND**
- Medial patellofemoral osteoarthritis is Kellgren-Lawrence grade 0 or 1, **AND**
- Patellar tilt test reveals lateral patellofemoral pain, **AND**
- Failure of at least 6 months of conservative non-operative management that included supervised physical therapy and at least 1 of the following:
  - Medications (unless contraindicated); assistive device(s); home exercise; therapeutic injections into the joint; activity modification

Patellar Realignment

Patellar realignment **meets the definition of medical necessity** for the following:

- Acute traumatic patellar dislocation injury that requires urgent operative management, **OR**
- Recurrent patellar dislocation or subluxation, and the following:
  - Evidence of patellar instability by physical exam, **AND**
  - Medial patellofemoral ligament insufficiency by imaging, **AND**
  - Failure of 6 months of conservative non-operative management that included at least 2 of the following:
    - Medications (unless contraindicated); assistive device(s); home exercise; physical therapy; therapeutic injections into the joint; activity modification, **OR**
- Patellofemoral tenderness and abnormal articulation of the patella, and the following:
  - No fracture or loose body by imaging, **AND**
  - Patellar misalignment by imaging, **AND**

- Failure of 6 months of conservative non-operative management that included supervised physical therapy, and at least 1 of the following:
  - Medications (unless contraindicated); assistive device(s); home exercise; therapeutic injections into the joint; activity modification

Lysis of Adhesions for Arthrofibrosis of the Knee

Lysis of adhesions for arthrofibrosis of the knee **meets the definition of medical necessity** when **ALL** of the following are met:

- Post-surgical, post-trauma, or post-infection arthrofibrosis of the knee, **AND**
- Inadequate range of motion impacting knee function, **AND**
- Failure of 6 weeks of supervised physical therapy, **AND**
- At least 3 months have passed since surgery, traumatic injury, or infection

Medial Knee Implanted Shock Absorber (MISHA™) Knee System

The use of a medial knee implanted shock absorber (e.g., MISHA™ Knee System) for any indication is considered **experimental or investigational**. Data in published medical literature are inadequate to permit scientific conclusions on long-term and net health outcomes.

****Kellgren-Lawrence Grading System**

Grade 0: No radiographic features of osteoarthritis

Grade 1: Doubtful joint space narrowing and possible osteophytic lipping

Grade 2: Definite osteophyte formation with possible joint space narrowing on anteroposterior weight-bearing radiograph

Grade 3: Multiple osteophytes, definite narrowing of joint space, some sclerosis and possible bony deformity

Grade 4: Large osteophytes, marked narrowing of joint space, severe sclerosis and definite bony deformity

****Outerbridge Arthroscopic Grading System**

Grade 0: Normal cartilage

Grade I: Softening and swelling/blistering

Grade II: Partial thickness defect, fissures < 1.5cm diameter/wide

Grade III: Fissures /defects down to subchondral bone with intact calcified cartilage layer, diameter > 1.5cm

Grade IV: Exposed subchondral bone

BILLING/CODING INFORMATION:

CPT Coding

27332	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial OR lateral
27333	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial AND lateral
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
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
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)
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)
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction

HCPCS Coding

C8003	Implantation of medial knee extraarticular implantable shock absorber spanning the knee joint from distal femur to proximal tibia, open, includes measurements, positioning and adjustments, with imaging guidance (e.g., fluoroscopy) (e.g., MISHA™) **(Investigational)**
G0289	Arthroscopy, knee, surgical, for removal of loose body, foreign body, debridement/shaving of articular cartilage (chondroplasty) at the time of other surgical knee arthroscopy in a different compartment of the same knee

REIMBURSEMENT INFORMATION:

Refer to section entitled **POSITION STATEMENT**.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: The following National Coverage Determinations (NCDs) were reviewed on the last guideline review date: Arthroscopic Lavage and Arthroscopic Debridement for the Osteoarthritic Knee (150.9), and Collagen MENISCUS Implant (150.12), located at cms.gov.

If this Medical Coverage Guideline contains a step therapy requirement, in compliance with Florida law 627.42393, members or providers may request a step therapy protocol exemption to this requirement if based on medical necessity. The process for requesting a protocol exemption can be found at Coverage Protocol Exemption Request

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

Autologous Chondrocyte Implantation (ACI), 02-20000-17
Knee Arthroplasty, 02-20000-60

OTHER:

None applicable.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 05/22/25.

GUIDELINE UPDATE INFORMATION:

10/15/16	New Medical Coverage Guideline.
04/15/17	Revision: minor changes to lateral release/patellar realignment criteria (mercer merchant view changed to 45 degrees flexion). Updated references.
07/15/18	Scheduled review. Added general criteria for elective surgery of the knee. Revised criteria for diagnostic knee arthroscopy; debridement with/without chondroplasty; meniscectomy/meniscal repair; anterior cruciate ligament (ACL) reconstruction with allograft or autograft; posterior cruciate ligament (PCL) reconstruction; articular cartilage restoration/repair; loose body removal; lateral release/patellar realignment. Added Marx scale and Tegner score. Updated references.
07/15/19	Scheduled review. Revised criteria for diagnostic knee arthroscopy, meniscectomy/meniscal repair, lateral release/patellar realignment, and patellar malalignment and/or patellar instability. Updated references.
10/15/19	Revision; added clarifying language for relative versus absolute contraindications for meniscectomy and meniscal repair.
07/15/20	Scheduled review. Revised position statement and CPT coding. Added criteria for meniscal transplant (relocated from MCG 02-20000-25, Meniscal Allograft Transplantation). Updated references.
05/15/21	Scheduled review. Revised criteria for debridement chondroplasty, meniscectomy/meniscal repair, restorative marrow techniques, and surgery for patellar malalignment and/or patellar instability. Updated references.
06/10/23	Scheduled review. Revised description. Revised criteria for ACL reconstruction and PCL reconstruction. Updated references.
12/09/23	Revision. Revised criteria for diagnostic knee arthroscopy; arthroscopic debridement; meniscectomy/meniscal repair; meniscal allograft transplant; microfracture, abrasion, and drilling; osteochondral allografting and autografting; synovectomy; loose body removal; lateral release; patellar realignment; and lysis of adhesions for arthrofibrosis of the knee.
06/15/24	Scheduled review. Revised description. Maintained position statement and updated references.
10/15/24	Revised description. Added coverage statement for medial knee implanted shock absorber (eg, MISHA™). Updated references.
01/01/25	Annual CPT/HCPCS coding update. Added C8003.
06/15/25	Scheduled review. Revised description, maintained position statement and updated references.