

Evidence Discussion (CMM-312 Knee Surgery-Arthroscopic and Open Procedures: Meniscectomy or Meniscal Repair)

Risks of knee arthroscopy for meniscectomy or meniscal repair include but are not limited to failure to improve, failure to heal, meniscal retearing, iatrogenic articular cartilage damage, complications related to fixation implants, neurovascular injury, infection, ecchymosis, hemarthrosis, arthrofibrosis, deep venous thrombosis, pulmonary embolism, and death, as well as complications related to risks of general and local anesthesia. **1**

Given the potential possibility for significant complications, proper patient selection is crucial to minimize the risk-benefit ratio.

Symptoms may include pain as well as mechanical symptoms such as blocked range of motion, weakness/giving way or buckling of the knee, or painful locking/clicking/catching/popping during weight-bearing activities. Supportive exam findings include joint effusion, joint line tenderness, painful/limited range of motion and positive meniscal tests (McMurray's/Thessaly/Apley's compression test). **2**

Imaging should confirm findings on MRI/ CT arthrogram amenable to arthroscopic meniscectomy or meniscal repair, including meniscal tearing that extends to the articular surface and corresponds to the patient's symptoms and physical examination.

Because several large randomized controlled trials have failed to demonstrate significant benefit of arthroscopic partial meniscectomy in the presence of osteoarthritis, arthroscopic meniscectomy and/or meniscal repair is considered not medically necessary in patients with Kellgren-Lawrence Grade II or greater x-ray findings except in the presence of an acutely locked knee on physical examination. **3**

It has been shown that many patients may improve with a course of conservative care and this may very well obviate the need for surgical treatment. **7, 8, 9** While degenerative meniscus tears have been documented in 35% of the general population over 50 years of age (and 60% of those over 50 with concomitant osteoarthritis) only 2/3 of them are symptomatic. **10** Studies have shown no clear relationship between the presence of meniscal tear on MRI and patient functional outcomes and pain. **11**

As risk for major complications exists, symptoms, physical exam findings and imaging findings should support surgical intervention. Although the use of any coverage criteria includes the possible risk of delayed care, EviCore firmly believes the benefits of our evidence-based criteria best ensure patient safety and highly outweigh any clinical harms.

1. Arthroscopic Surgery for Degenerative Knee: Systematic Review and Meta-analysis of Benefits and Harms, BMJ 2015: 350:h2747, J B Thorlund, C B Juhl, E M Roos, L S Lohmander

2. Reito, A., Harris, I. A., & Karjalainen, T. (2021). Arthroscopic partial meniscectomy: did it ever work? A narrative review from basic research to proposed disease framework and science of clinical practice. *Acta Orthopaedica*, 1–10. <https://doi.org/10.1080/17453674.2021.1979793>
3. *Curr Rev Musculoskelet Med*. 2022 Oct; 15(5): 336–343. Published online 2022 Jun 21. doi: 10.1007/s12178-022-09770-7, PMCID: PMC9463417 PMID: 35727503, Current Controversies in Arthroscopic Partial Meniscectomy, Amanda Avila, Kinjal Vasavada, Dhruv S. Shankar, Massimo Petrera, Laith M. Jazrawi, and Eric J. Strauss
4. Migliorini, F., Schäfer, L., Bell, A. et al. Meniscectomy is associated with a higher rate of osteoarthritis compared to meniscal repair following acute tears: a meta-analysis. *Knee Surg Sports Traumatol Arthrosc* 31, 5485–5495 (2023). <https://doi.org/10.1007/s00167-023-07600-y>
5. Faucett SC, Geisler BP, Chahla J, Krych AJ, Kurzweil PR, Garner AM et al (2019) Meniscus root repair vs meniscectomy or nonoperative management to prevent knee osteoarthritis after medial meniscus root tears: clinical and economic effectiveness. *Am J Sports Med* 47:762–769
6. Xu C, Zhao J (2015) A meta-analysis comparing meniscal repair with meniscectomy in the treatment of meniscal tears: the more meniscus, the better outcome? *Knee Surg Sports Traumatol Arthrosc* 23:164–170
7. Karia M, Ghaly Y, Al-Hadithy N, Mordecai S, Gupte C. Current concepts in the techniques, indications and outcomes of meniscal repairs. *Eur J Orthop Surg Traumatol*. 2019 Apr;29(3):509-520.
8. Pompan DC. Appropriate use of MRI for evaluating common musculoskeletal conditions. *Am Fam Physician*. 2011 Apr 15;83(8):883-4.
9. Jones BQ, Covey CJ, Sineath MH Jr. Nonsurgical Management of Knee Pain in Adults. *Am Fam Physician*. 2015 Nov 15;92(10):875-83.
10. Englund M, Guermazi A, Gale D, Hunter DJ, Aliabadi P, Clancy M, et al. Incidental meniscal findings on knee MRI in middle-aged and elderly persons. *N Engl J Med*. 2008;359(11):1108–1115. doi: 10.1056/nejmoa0800777. [PMC free article] [PubMed] [CrossRef] [Google Scholar]
11. Tornbjerg SM, Nissen N, Englund M, Jørgensen U, Schjerving J, Lohmander LS, et al. Structural pathology is not related to patient-reported pain and function in patients undergoing meniscal surgery. *Br J Sports Med*. 2017;51(6):525–530. doi: 10.1136/bjsports-2016-096456. [PubMed] [CrossRef] [Google Scholar]