

Evidence Discussion [CMM-312: Knee Surgery-Arthroscopic and Open Procedures: Posterior Cruciate Ligament (PCL) Reconstruction]

Risks of knee arthroscopy for posterior cruciate ligament (PCL) reconstruction include but are not limited to failure to improve, failure to heal, PCL graft 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 of posterior cruciate ligament injury / tear may include function-limiting pain as well as instability, swelling, 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/ hemarthrosis, positive instability tests (posterior drawer, posterior sag/tibial drop-back, or quadriceps active), reduced range of motion and joint line tenderness. **2**

Injuries to the PCL often (up to 95%) occur in combination with other ligamentous, chondral or meniscal injuries. Isolated low-grade (Grade I or II) PCL injuries can usually be managed non-operatively but Grade III injuries, in conjunction with other ligamentous injury or repairable meniscus tears, often require surgical reconstruction. **2** Imaging via MRI or CT arthrogram may be helpful in identifying the extent of injury and should confirm a tear/disruption or significant laxity of the PCL that corresponds to the patient's symptoms and physical examination. MRI has been found to have a sensitivity, specificity and accuracy of nearly 100% in acute PCL tears and is an important adjunct to the diagnosis. **2** Stress radiographs allow for comparison of the magnitude of posterior tibial displacement, and translation of 8 or more millimeters has been validated as consistent with complete PCL tear. **2**

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. **3** Non-operative management may include rest, ice, compression and NSAID medication as well as bracing and rehabilitation protocols. This may be satisfactory for long-term management in low-grade injuries as the PCL has a strong intrinsic healing capability. Residual posterior laxity with subsequent meniscal tears and osteoarthritis may be a disadvantage of non-operative management in higher-grade injuries. **4, 5, 6**

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.

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