



Patellofemoral Reconstruction/Realignment – Single Service

Clinical Guidelines for Medical Necessity Review

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Important Notices

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Guideline Information:

Specialty Area: Diseases & Disorders of the Musculoskeletal System

Guideline Name: Patellofemoral Reconstruction/Realignment (Single Service)

Literature review current through: 5/7/2024

Document last updated: 5/10/2024

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

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Medical Necessity Criteria

Service: Patellofemoral Reconstruction/Realignment

General Guidelines

- **Units, Frequency, & Duration:** None.
- **Criteria for Subsequent Requests:** Failure of previous patellofemoral reconstruction with recurrent instability or new injury.
- **Recommended Clinical Approach:** A patellofemoral reconstruction is typically recommended for dislocation and symptoms that recur despite non-surgical measures or with acute osteochondral injury.¹ Patellofemoral reconstruction can be done alone without distal realignment or a trochleoplasty if the bony constructs are normal. Grafting with muscle tendons (e.g., hamstring) is recommended due to their stiffness and similarity to the medial patellofemoral ligament. Recent studies suggest a 30° flexion of the knee during the procedure.²
- **Exclusions:** None.

Medical Necessity Criteria

Indications

- **Patellofemoral Reconstruction/Realignment** is considered appropriate if **ALL** of the following is **TRUE**:
- ◆ The patient has **ANY** of the following:
 - Failure of conservative management and continued patellofemoral pain for greater than 3 months, including **ALL** of the following¹:
 - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
 - Physical therapy; **AND**
 - Knee brace, patellar sleeve, or kinesio taping³; **AND**
 - **ANY** of the following:
 - ◆ Intra-articular corticosteroid injection if medically appropriate; **OR**
 - ◆ Intra-articular corticosteroid injection is contraindicated; **OR**

- The patient is experiencing a second dislocation or the first dislocation is associated with an osteochondral or chondral injury²⁻⁵; **OR**
- The patient has a loose body; **OR**
- Abnormal patellar tracking after a total knee arthroplasty;
AND
- ◆ Advanced imaging study (MRI) shows **ANY** of the following:
 - Abnormal patellar tracking; **OR**
 - Disruption of the medial patellofemoral ligament; **OR**
 - Loose body; **OR**
 - Osteochondral or articular cartilage injury.

Non-Indications

- **Patellofemoral Reconstruction/Realignment** may not be considered appropriate if **ANY** of the following is **TRUE**:
- ◆ Severe patellofemoral arthritis; **OR**
 - ◆ Active joint infection.

Level of Care Criteria

Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
27420	Reconstruction of dislocating patella
27422	Repair, Revision, and/or Reconstruction Procedures on the Femur (Thigh Region) and Knee Joint
27424	Reconstruction for dislocating Patella with patellectomy
27524	Open treatment of knee cap fracture with insertion of hardware and/or removal of knee cap

Medical Evidence

Yoo et al. (2023) performed a meta-analysis to compare the effectiveness of various treatments for primary patellar dislocation, including medial patellofemoral ligament (MPFL) reconstruction, MPFL repair, combined proximal realignment (CPR), and conservative management. The systematic literature review and meta-analysis focused on randomized controlled trials (RCTs) and prospective studies involving 626 patients. While significant differences related to functional outcomes among the treatments, MPFL reconstruction demonstrated significantly better re-dislocation rates than MPFL repair, CPR, and conservative management. The analysis suggested a lower probability of re-dislocation with MPFL reconstruction than MPFL repair. Overall, MPFL repair and reconstruction are more effective options for preventing re-dislocation in primary patellar dislocation cases.⁶

Migliorini et al. (2022) conducted a study to assess the role of allografts versus autografts in MPFL reconstruction for patients with patellofemoral instability. Twelve studies involving 474 procedures were analyzed, with a mean follow-up of 42.2 months. While autografts showed slightly better Tegner, Kujala, and Lysholm scores, autografts and allografts had similar rates of persistent instability sensation and revision. However, the allograft group demonstrated a lower rate of re-dislocations. The findings suggest that allografts could be a viable option for MPFL reconstruction in selected patients, offering comparable patient-reported outcome measures and revision rates, with a tendency toward lower re-dislocation rates than autografts.⁷

Dall'Oca et al. (2020) performed a study that focused on the MPFL and its significance in lateral patellar dislocation injuries, which account for 3% of knee injuries. While MPFL reconstruction is a reliable procedure with varying rates of recurrent instability, the authors aimed to identify proper indications for MPFL reconstruction and highlight the critical aspects of the procedure. The research indicates that a history of multiple patellar dislocations is a significant indication for ligament reconstruction, particularly following unsuccessful conservative treatments and in cases of persistent patellofemoral instability. However, there has yet to be a clear consensus on the gold standard technique for MPFL reconstruction. The authors conclude that while there is limited literature comparing outcomes, it is challenging to determine the most appropriate technique as surgical procedures evolve.¹

References

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