



## **Cohere Medicare Advantage Policy – Subchondroplasty**

*Clinical Guidelines for Medical Necessity Review*

**Version:** 2  
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## Guideline Information:

**Specialty Area:** Disorders of the Musculoskeletal System

**Guideline Name:** Cohere Medicare Advantage Policy - Subchondroplasty

**Date of last literature review:** 6/12/2024

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

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# Medical Necessity Criteria

**Service: Subchondroplasty**

## Benefit Category

Not applicable.

## Recommended Clinical Approach

Subchondroplasty is a novel technique aimed at reducing pain by treating bone lesions caused by knee osteoarthritis and insufficiency fractures. The procedure involves the use of bone substitute material that is injected into areas requiring structural support in the subchondral bone.<sup>1</sup>

## Evaluation of Clinical Benefits and Potential Harms

Cohere Health uses the criteria below to ensure consistency in reviewing the conditions to be met for coverage of subchondroplasty procedures. This process helps to prevent both incorrect denials and inappropriate approvals of medically necessary services. Specifically, limiting incorrect approvals reduces the risks associated with unnecessary procedures, such as complications from surgery, adverse reactions, and infection.

The potential clinical harms of using these criteria may include:

- Inadequate management of knee pain due to inappropriate denials: This can lead to the progression of bone marrow lesions (BML) and osteoarthritis (OA), resulting in worsening pain and decreased mobility. According to Randelli et al., inadequate management can result in persistent pain and progression of OA, necessitating more invasive procedures later.<sup>1</sup>
- Risks with inappropriate surgical procedures: These include infection, bleeding requiring a transfusion, injury to neurovascular structures, anesthetic risk, and the need for repeat or additional procedures due to failure of the subchondroplasty, resulting in progression of knee arthritis. Subchondroplasty has been associated with complications such as extravasation of the calcium phosphate (CaP) cement, leading to pain and inflammation.<sup>3,7</sup> Additionally, Huddleston et al. report early

post-operative complications including pain and inflammation due to the hardening of the bone substitute material.<sup>5</sup>

- Adverse effects from delayed or denied treatment: This can worsen patient outcomes, such as increased pain and reduced mobility. Delayed surgical intervention can lead to further degradation of the joint, making it more challenging to treat effectively and increasing the likelihood of requiring total knee arthroplasty.<sup>2,4</sup>
- Increased healthcare costs and complications: This can result from the inappropriate use of emergency services and additional treatments. Unaddressed or improperly managed BMLs and OA can lead to significant increases in healthcare costs due to the need for more extensive and emergency interventions later in life.<sup>1,3</sup>

The clinical benefits of using these criteria include:

- Improved patient outcomes: Ensuring timely and appropriate access to subchondroplasty can prevent further joint degeneration and improve pain management. Subchondroplasty has been shown to provide significant pain relief and improved functional outcomes in patients with early-stage OA and BMLs, as reported by Huddleston et al.<sup>5</sup>
- Reduction in complications and adverse effects: Proper use of subchondroplasty criteria helps to avoid unnecessary interventions and their associated risks. This procedure is minimally invasive and can delay the need for more invasive surgeries, such as total knee replacement.<sup>6</sup>
- Enhanced overall patient satisfaction and healthcare experience: Ensuring that subchondroplasty is used appropriately leads to better patient outcomes and higher satisfaction rates due to effective treatment and reduced complications. According to Di Matteo et al., subchondroplasty provides significant improvement in pain and function, enhancing overall patient satisfaction.<sup>2</sup>

This policy includes provisions for expedited reviews and flexibility in urgent cases to mitigate risks of delayed access. Evidence-based criteria are employed to prevent inappropriate denials, ensuring that patients receive medically necessary care. The criteria aim to balance the need for effective treatment with the minimization of potential harms, providing numerous clinical benefits in helping avoid unnecessary complications from inappropriate care.

In addition, the use of these criteria is likely to decrease inappropriate denials by creating a consistent set of review criteria, thereby supporting optimal patient outcomes and efficient healthcare utilization.

### Medical Necessity Criteria

#### Indications

→ **Subchondroplasty** is considered appropriate if **ALL** of the following are **TRUE**:

- ◆ This procedure is unproven and not medically necessary. There is insufficient evidence of its effectiveness for these indications.

#### Non-Indications

→ **Subchondroplasty** is not considered appropriate if **ALL** of the following are **TRUE**:

- ◆ This procedure is unproven and not medically necessary. There is insufficient evidence of its effectiveness for these indications.

### Level of Care Criteria

Outpatient

### Procedure Codes (HCPCS/CPT)

HCPCS/CPT Code	Code Description
0707T	Injection(s), bone-substitute material (e.g., calcium phosphate) into subchondral bone defect (i.e., bone marrow lesion, bone bruise, stress injury, microtrabecular fracture), including imaging guidance and arthroscopic assistance for joint visualization

## Medical Evidence

Di Matteo et al. (2021) performed a systematic review to study the efficacy of intraosseous injections for patients with bone marrow lesions that are impacted by knee osteoarthritis. Twelve studies were identified that used various types of injections. A total of 459 patients were included with one of the three types of injections - calcium phosphate, platelet-rich plasma, and bone marrow concentrate. While injections are minimally invasive and have a low complication rate, the research lacks high-quality evidence to establish support.<sup>2</sup>

Krebs et al. (2020) conducted a small retrospective chart review to determine the outcomes of knee arthroscopy with adjunctive subchondroplasty. These include improvement of self-rated visual analog scale (VAS) pain scores, rate of conversion to arthroplasty, and overall satisfaction following the procedure. While the procedure demonstrated positive outcomes, additional research is needed.<sup>3</sup>

## References

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# Clinical Guideline Revision History/Information

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