Cohere Medical Policy - Subchondroplasty

Clinical Guidelines for Medical Necessity Review

Version: 3
Cohere Health UMC Approval Date: July 24, 2025
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Revision: Not Applicable
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Important Notices

Notices & Disclaimers:

GUIDELINES SOLELY FOR COHERE'S USE IN PERFORMING MEDICAL NECESSITY REVIEWS AND ARE NOT INTENDED TO INFORM OR ALTER CLINICAL DECISION MAKING OF END USERS.

Cohere Health, Inc. ("**Cohere**") has published these clinical guidelines to determine medical necessity of services (the "**Guidelines**") for informational purposes only, and solely for use by Cohere's authorized "**End Users**". These Guidelines (and any attachments or linked third party content) are not intended to be a substitute for medical advice, diagnosis, or treatment directed by an appropriately licensed healthcare professional. These Guidelines are not in any way intended to support clinical decision making of any kind; their sole purpose and intended use is to summarize certain criteria Cohere may use when reviewing the medical necessity of any service requests submitted to Cohere by End Users. Always seek the advice of a qualified healthcare professional regarding any medical questions, treatment decisions, or other clinical guidance. The Guidelines, including any attachments or linked content, are subject to change at any time without notice.

Other Notices:

Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein.

Policy Information:

Specialty Area: Musculoskeletal Care
Policy Name: Cohere Medical Policy - Subchondroplasty
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17yo)

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Medical Necessity Criteria

Service: Subchondroplasty

Cohere Health takes an evidence-based approach to reviewing imaging and procedure requests, meaning that sufficient clinical information must be provided at the time of submission to determine medical necessity. Documentation must include a recent and detailed history, physical examination related to the onset or change in symptoms, relevant lab results, prior imaging, and details of previous treatments. Advanced imaging or procedures should be requested after a clinical evaluation by the treating provider, which may include referral to a specialist.

- When a specific clinical indication is not explicitly addressed in the Cohere Health medical policy, medical necessity will be determined based on established clinical best practices, as supported by evidence-based literature, peer-reviewed sources, professional society guidelines, and state or national recommendations, unless otherwise directed by the health plan.
- Requests submitted without clinical documentation, or those that do not align with the provided clinical information—such as mismatched procedure, laterality, body part, or CPT code—may be denied for lack of medical necessity due to insufficient or inconsistent clinical information.
- When there are multiple diagnostic or therapeutic procedures requested simultaneously or within the past three months, each will be reviewed independently. Clinical documentation must clearly justify all of the following:
    - The medical necessity of each individual request
    - Why prior imaging or procedures were inconclusive, or why additional/follow-up studies are needed
    - How the results will impact patient management or treatment decisions
- Requests involving adjacent or contiguous body parts may be considered not medically necessary if the documentation demonstrates that the patient's primary symptoms can be adequately assessed with a single study or procedure.

Description

Subchondroplasty is a minimally invasive fluoroscopically assisted procedure that targets and fills chronic subchondral bone defects, often called bone marrow lesions. The technique aims to reduce pain by treating bone lesions caused by knee osteoarthritis and insufficiency fractures. The procedure involves using a hard-setting bone substitute material engineered from a calcium phosphate mineral compound, injected into areas requiring structural support to the subchondral bone.[1] "Subchondroplasty" is a marketing tradename not recognized as standard diagnosis or generic procedure terminology.

Medical Necessity Criteria

Indications

Subchondroplasty is considered appropriate if **ANY** of the following is **TRUE**:

- This procedure is clinically unproven and not medically necessary. There is inconclusive evidence of its effectiveness.

Non-Indications

Subchondroplasty is not considered appropriate if **ANY/ALL** of the following is **TRUE**:

- This is not applicable, as there are no indications.

Level of Care Criteria

None.

Procedure Codes (CPT/HCPCS)

CPT/HCPCS 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

In a recent observational study, Cohen et al. (2025) evaluated the 12-month outcomes of subchondroplasty in treating symptoms of mild-to-moderate knee osteoarthritis patients with persistent bone marrow lesions of the knee. At the end of the 12-month follow-up, 79 patients completed the study. They found statistically significant improvements in all clinical endpoints from baseline to the 12-month follow-up. In the same period, no severe adverse events were reported. They concluded that for mild-to-moderate osteoarthritic knees, subchondroplasty is a safe and efficient treatment for symptoms associated with persistent bone marrow lesions. However, they point out that randomized design clinical trials with rigorous radiological data collection will be required to recommend subchondroplasty as a standard practice.[2]

Di Matteo et al. (2021) performed a systematic review to study the efficacy of intraosseous injections for patients with bone marrow lesions impacted by knee osteoarthritis. Twelve studies that used various types of injections were identified. A total of 459 patients were included with one of the three types of injections: calcium phosphate, platelet-rich plasma, and bone marrow concentrate. They concluded that while injections are minimally invasive and have a low complication rate, more high-quality evidence is needed to establish support.[3]

Nairn et al. (2021) conducted a systematic review of the literature to characterize the clinical results of the subchondroplasty procedure and determine if patients who underwent the procedure had improvements in pain and functional outcomes. They examined 45 unique results and 17 studies and found that subchondroplasty suggests possible improvements in pain, functionality, and minimal immediate transition to total knee arthroplasty, with low complication rates. They suggest that subchondroplasty has shown promising initial results but caution that high-quality, comparative studies with long-term follow-up are needed.[4]

Krebs et al. (2020) conducted a small retrospective chart review and phone survey to determine the outcomes of knee arthroscopy with adjunctive subchondroplasty. These include improving self-rated visual analog scale (VAS) pain scores, conversion rate to arthroplasty, and overall satisfaction following the procedure. While the procedure demonstrated clinically significant improvements in VAS pain scores, they concluded that additional research is needed to define the indications and prognostic indicators precisely.[5]

References

1. Randelli P, Compagnoni R, Ferrua P, et al. Efficacy of subchondroplasty in the treatment of pain associated with bone marrow lesions in the osteoarthritic knee. *Orthop J Sports Med.* 2023 May 16;11(5): 23259671231163528. doi: 10.1177/23259671231163528. PMID: 37213661; PMCID: PMC10192663

2. Cohen SB, Hajnik C, Loren GJ, et al. Prospective evaluation of clinical outcomes of the subchondroplasty procedure for treatment of symptomatic bone marrow lesions of the knee. *J Knee Surg.* 2025 May;38(6):290-299. doi: 10.1055/a-2501-0910. Epub 2024 Dec 12. PMID: 39667406; PMCID: PMC12020494

3. Di Matteo B, Polignano A, Onorato F, et al. Knee intraosseous injections: A systematic review of clinical evidence of different treatment alternatives. *Cartilage*. 2021 Dec;13(1_suppl):1165S-1177S. doi: 10.1177/1947603520959403. PMID: 32959675; PMCID: PMC8808871

4. Nairn LN, Subramaniam M, Ekhtiari S, et al. Safety and early results of subchondroplasty® for the treatment of bone marrow lesions in osteoarthritis: A systematic review. *Knee Surg Sports Traumatol Arthrosc.* 2021 Nov;29(11):3599-3607. doi: 10.1007/s00167-020-06294-w. Epub 2020 Sep 29. PMID: 32990774

5. Krebs NM, Kehoe JL, Van Wagner MJ, et al. The efficacy of subchondroplasty for the treatment of knee pain associated with bone marrow lesions. *Spartan Med Res J.* 2020 Jan 30;4(2):11767. doi: 10.51894/001c.11767. PMID: 33655174; PMCID: PMC7746108

Policy Revision History/Information

Original Date: October 13, 2023		
Review History		
Version 2	04/26/2024	Annual review.
Version 3	07/24/2025	Annual review. New Description section added. No changes in indications and non-indications. No changes in procedure codes. Literature review - Medical Evidence section updated (Nairn et al., 2021; Cohen et al., 2025).