Cohere Medical Policy - Hip Core Decompression with or without Bone Grafting

Clinical Policy for Medical Necessity Review

Version: 2
Cohere Health UMC Approval Date: July 24, 2025
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Revision: Not Applicable
Next Annual Review: July 24, 2026

Important Notices

Notices & Disclaimers:

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Policy Information:

Specialty Area: Musculoskeletal Care
Policy Name: Cohere Medical Policy - Hip Core Decompression with or without Bone Grafting
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Hip Core Decompression with or without Bone Grafting

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

Core decompression (CD) is a minimally invasive surgery that involves drilling into the part of the femoral head affected by osteonecrosis (also referred to as avascular necrosis). CD helps relieve pressure within the bone, restore blood flow, and reduce pain. Surgical treatment depends on the severity and location of the disease, which is determined by advanced imaging.[1,2]

Medical Necessity Criteria

Indications

Hip core decompression with or without bone grafting is considered medically appropriate if **ALL** of the following are **TRUE**[3,4]:

- The patient has **ANY** of the following[4-6]:
  - Hip pain; **OR**
  - Functional disability; **AND**
- Advanced imaging with radiologic report that demonstrates **ALL** of the following[7]:
  - Osteonecrosis (stage I-II)[8]; **AND**
  - Minimal to no collapse of the femoral head (stage I-II).[8]

Non-Indications

Hip core decompression with or without bone grafting is not considered medically appropriate if **ANY** of the following is **TRUE**[7]:

- Imaging shows moderate or severe arthritis; **OR**
- Advanced imaging shows advanced osteonecrosis (stage III-IV)[8]; **OR**
- The patient is 50 years of age or older.[8,9]

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
20933	Allograft, includes templating, cutting, placement and internal fixation, when performed; hemicortical intercalary, partial (ie, hemicylindrical) (List separately in addition to code for primary

	procedure)
26992	Incision, bone cortex, pelvis and/or hip joint (eg, osteomyelitis or bone abscess)
27071	Partial excision, wing of ilium, symphysis pubis, or greater trochanter of femur, (craterization, saucerization) (eg, osteomyelitis or bone abscess); deep (subfascial or intramuscular)
27170	Bone graft, femoral head, neck, intertrochanteric or subtrochanteric area (includes obtaining bone graft)
27299	Unlisted procedure, pelvis or hip joint
S2325	Hip core decompression

Medical Evidence

Hu et al. (2023) performed a network meta-analysis of 18 randomized controlled trials (RCTs) to analyze surgical interventions for osteonecrosis of the femoral head (ONFH). All trials were in non-traumatic ONFH, and most included outcomes for improvement in Harris hip score (HHS) or rate of conversion to total hip arthroplasty (THA). While core decompression (CD) offers promising results for the treatment of ONFH and is commonly used in clinical practice, no significant differences in preventing ONFH progression were found when comparing CD to other surgical interventions (e.g., autologous bone grafting, free fibula grafting, vascularized bone grafting) in this study. All treatments involving bone grafting appeared to be effective in these trials.[3]

Andronic et al. (2021) conducted a systematic review to evaluate the CD of the femoral head in avascular necrosis (AVN; also known as osteonecrosis) to preserve the hip joint. Studies that included additional implants or augmentation techniques were excluded. Forty-nine studies covering 2540 hips were included (mean follow-up: 75.1 months; mean age at surgery: 39 years). Most studies reported improvement in outcome scores and pain improvement. Pooled data from 20 studies (1134 hips; mean follow-up: 56 months) showed that 38% of patients, primarily with early-stage AVN, underwent THA at an average of 26 months post-CD.[5]

Kang et al. (2018) performed a matched pair control study to compare the outcomes of CD alone vs CD combined with bone marrow mesenchymal stem cell (BMMSC) implantation for patients with ONFH. One hundred patients (106 hips) were analyzed; the CD+BMMSC group had a lower THA conversion rate compared to the CD-only group (28.3% vs 49%). The progression of the ONFH stage was similar between groups. However, in early-stage ONFH (stages I and II), CD+BMMSC significantly reduced clinical failure compared to CD alone (20% vs 50%). Survival analysis indicated a longer time to failure in the CD and BMMSC groups, up to 10 years of follow-up. Age and gender did not significantly affect THA conversion rates, and no complications were reported. The study suggests that BMMSC implantation for early-stage ONFH may decrease the need for THA but does not impact ONFH progression.[1]

Zalavras and Lieberman (2014) reviewed the literature for the American Academy of Orthopedic Surgeons (AAOS) regarding the evaluation and treatment of ONFH. They concur that magnetic resonance imaging (MRI) is the preferred imaging modality. In younger patients, preserving the femoral head with CD and bone grafting may be combined with other therapies, such as stem cell transplantation. If the femoral head collapses, the recommended treatment is arthroplasty. In one of two randomized trials, alendronate used for early-stage osteonecrosis significantly reduced disease progression and femoral head collapse; however, conflicting results in the second trial show no differences between alendronate and placebo.[7]

Osteonecrosis outcomes following CD treatment, including pain relief, conversion to THA, osteonecrosis stage, and lesion size, are "poor," "fair," or "good."[4] While hip CD is often the first line of treatment, there is no consensus for the treatment of ONFH to date.[3,4,10-12] The conflicting evidence for each treatment criterion suggests that no single factor may be sufficient for predicting treatment outcomes in osteonecrosis of the hip. This underscores the need for a multifaceted approach to patient selection and more well-designed, prospective, multicenter clinical trials.

References

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Policy Revision History/Information

Original Date: May 28, 2024		
Review History		
Version 2	07/24/2025	Annual review. Clarified the indications due to a lack of society guidance and literature evidence. Deleted the separate indications for clinical symptoms or physical exam and added one broad indication. Updated advanced imaging indication to include “with radiologic report that demonstrates.” Literature review - Medical Evidence section updated (Hu et al., 2023; Konarski et al., 2022; Petek et al., 2019; Rajagopal et al., 2012; Min et al., 2008).