



Hip Core Decompression With or Without Bone Grafting - Single Service

Clinical Guidelines for Medical Necessity Review

Version: 1
Effective Date: May 28, 2024

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.

©2024 Cohere Health, Inc. All Rights Reserved.

Other Notices:

HCPCS® and CPT® copyright 2024 American Medical Association. All rights reserved.

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.

HCPCS and CPT are registered trademarks of the American Medical Association.

Guideline Information:

Specialty Area: Diseases & Disorders of the Musculoskeletal System

Guideline Name: Hip Core Decompression With or Without Bone Grafting (Single Service)

Literature review current through: 5/28/2024

Document last updated: 5/28/2024

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

Table of Contents

Important Notices	2
Table of Contents	3
Medical Necessity Criteria	4
Service: Hip Core Decompression With or Without Bone Grafting	4
General Guidelines	4
Medical Necessity Criteria	4
Indications	4
Non-Indications	5
Level of Care Criteria	5
Procedure Codes (CPT/HCPCS)	5
Medical Evidence	7
References	9
Clinical Guideline Revision History/Information	10

Medical Necessity Criteria

Service: Hip Core Decompression With or Without Bone Grafting

General Guidelines

- **Units, Frequency, & Duration:** None.
- **Criteria for Subsequent Requests:** None.
- **Recommended Clinical Approach:** Core decompression (CD) is a technique used to treat early (stage I-II) osteonecrosis of the hip. The procedure is an effective method with an overall success rate of 65% up to 54 months follow-up depending on the Ficat stage. Surgical treatment depends on the severity and location of the disease, which is determined with MRI. CD is recommended for pre-collapse osteonecrosis if the lesion is less than 30% of the femoral head volume.¹⁻² Encouraging results are found when CD is performed for small lesions in the early (pre-collapse) stages of femoral head osteonecrosis.³ Bone grafting may provide mechanical support for the osteonecrotic lesion and delivery of bone marrow cells into the necrotic femoral head in early-stage osteonecrosis lowers the conversion rate to total hip arthroplasty.¹⁻² CD has limited efficacy in patients over 50.
- **Exclusions:** None.

Medical Necessity Criteria

Indications

→ **Hip core decompression with or without bone grafting** is considered appropriate if **ALL** of the following is **TRUE**:

- ◆ The patient has **ANY** of the following positive findings:
 - Clinical symptoms of **ANY** of the following:
 - Difficulty standing,
 - painful weight bearing on the affected hip,
 - Impaired mobility; **OR**
 - Pain in the hip, buttocks, groin, or thigh; **OR**
 - Physical exam findings including **ANY** of the following:
 - Limited passive range of motion; **OR**
 - Painful range of motion; **OR**
 - Pain with straight leg raise against resistance; **AND**
- ◆ Advanced imaging shows **ALL** of the following³:

- Osteonecrosis (stage I-II); **AND**
- Minimal to no collapse of the femoral head (stage I-II).

Non-Indications

- **Hip core decompression with or without bone grafting** is not considered appropriate if **ANY** of the following is **TRUE**³:
- ◆ Imaging shows moderate or severe arthritis
 - ◆ Advanced imaging shows advanced (stage III-IV) stages of osteonecrosis; **OR**
 - ◆ The patient is over the age of 50.

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
20933	Partial hemicortical intercalary allograft of bone
26992	Incision of bone cortex of pelvis; Incision of bone cortex of pelvis and hip joint; Incision of bone cortex of hip joint for bone abscess; Incision of bone cortex of hip joint for osteomyelitis; Incision of bone cortex of pelvis for bone abscess; Incision of bone cortex of pelvis for osteomyelitis; Incision of bone cortex of hip joint; Incision of bone cortex of pelvis and hip joint for bone abscess; Incision of bone cortex of pelvis and hip joint for osteomyelitis
27071	Deep craterization of wing of ilium; Deep partial excision of wing of ilium; Intramuscular craterization of wing of ilium; Subfascial craterization of wing of ilium; Deep craterization of greater trochanter of femur; Deep craterization of symphysis pubis; Deep partial excision of greater trochanter of femur; Deep partial excision of symphysis pubis; Intramuscular craterization of great trochanter of femur; Intramuscular craterization of symphysis pubis; Subfascial craterization of great trochanter of femur; Subfascial craterization of symphysis pubis

27170	Bone grafting
27299	Unlisted procedure on hip joint; Unlisted procedure on pelvis
S2325	Hip core decompression

Medical Evidence

Andronic et al. (2021) conducted a systematic review to evaluate core decompression (CD) of the femoral head in avascular necrosis (AVN) to preserve the hip joint. The review followed PRISMA guidelines to assess studies reporting CD outcomes for AVN. Studies that included additional implants or augmentation techniques were excluded. Forty-nine studies covering 2540 hips were included (mean follow-up of 75.1 months; mean age at surgery of 39 years). Most studies reported improvement in outcome scores, though a minority indicated only partial improvement or poor outcomes. Pooled data from 20 studies (1134 hips, mean follow-up of 56 months) showed that 38% of patients underwent THR at an average of 26 months post-CD. The authors concluded that approximately 38% of patients, primarily with early-stage osteonecrosis, required total hip replacement (THR) within an average of 26 months following CD without augmentation.⁴

Kang et al. (2018) performed a study to compare the outcomes of CD alone vs. CD combined with bone marrow mesenchymal stem cell (BMMSC) implantation for osteonecrosis of the femoral head (ONFH). One hundred patients (106 hips) were analyzed – the CD and BMMSC group had a lower total hip replacement arthroplasty (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 (ARCO stages I and II), CD and 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 group up to 10-year follow-up. Age and gender did not significantly affect THA conversion rates. 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 regarding the evaluation and treatment of osteonecrosis of the femoral head. 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. Conflicting results in the second trial show no differences between alendronate and placebo.³

References

1. Kang JS, Suh YJ, Moon KH, et al. Clinical efficiency of bone marrow mesenchymal stem cell implantation for osteonecrosis of the femoral head: A matched pair control study with simple core decompression. *Stem Cell Res Ther.* 2018 Oct 25;9(1):274. doi: 10.1186/s13287-018-1030-y. PMID: 30359323; PMCID: PMC6202854.
2. Jawad MU, Haleem AA, Scully SP. In brief: Ficat classification: avascular necrosis of the femoral head. *Clin Orthop Relat Res.* 2012 Sep;470(9):2636-9. doi: 10.1007/s11999-012-2416-2. PMID: 22760600; PMCID: PMC3830078.
3. Zalavras CG, Lieberman JR. Osteonecrosis of the femoral head. *J Am Acad Orthop Surg.* 2014;22(7):455-464. doi: 10.5435/jaaos-22-07-455. PMID: 24966252.
4. Andronic O, Weiss O, Shoman H, et al. What are the outcomes of core decompression without augmentation in patients with nontraumatic osteonecrosis of the femoral head? *Int Orthop.* 2021 Mar;45(3):605-613. doi: 10.1007/s00264-020-04790-9. PMID: 32886152; PMCID: PMC7892522.

Clinical Guideline Revision History/Information

Original Date: May 28, 2024	
Review History	