

02-20000-35

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Next Review: No Longer Scheduled for Routine Review (NLR)

## Subject: Femoroacetabular Impingement (FAI) Syndrome Surgery (Open or Arthroscopic)

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

<a href="#">Position Statement</a>	<a href="#">Billing/Coding</a>	<a href="#">Reimbursement</a>	<a href="#">Program Exceptions</a>	<a href="#">Definitions</a>	<a href="#">Related Guidelines</a>
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### DESCRIPTION:

Femoroacetabular impingement (FAI) is a condition characterized by a mechanical conflict impingement between the femur (cam) and/or the acetabulum (pincer), that may result in labral injury (labral tear) or articular cartilage injury (chondral defect, arthritis). Up to 95% of labral tears are observed in the presence of FAI. "Isolated" labral tears and labral tears caused by trauma are very uncommon.

There are three types of FAI: pincer, cam, and combined impingement.

1. Pincer: This type of impingement occurs because extra bone extends out over the normal rim of the acetabulum. The labrum can be crushed under the prominent rim of the acetabulum.
2. Cam: In cam impingement the femoral head is not round and cannot rotate smoothly inside the acetabulum. A bump forms on the edge of the femoral head that grinds the cartilage inside the acetabulum.
3. Combined: Combined impingement just means that both the pincer and cam types are present.

Arthroscopy introduces a fiber-optic camera into the hip joint through a small incision for diagnostic visualization purposes. This camera may also be used in the surrounding extra-articular areas, in a procedure called endoscopy. Other instruments may then be introduced to remove, repair, or reconstruct joint pathology.

Open and arthroscopic non-arthroplasty hip repair surgeries are performed as dictated by the type and severity of injury and/or disease. Surgical indications are based on relevant clinical symptoms, physical

exam, radiologic findings, and response to non-operative, conservative management when medically appropriate.

## **POSITION STATEMENT:**

### **Labral repair**

Open or arthroscopic labral repair **meets the definition of medical necessity** when **ALL** of the following are met:

- Hip or groin pain in positions of flexion and rotation that may be associated with mechanical symptoms of locking, popping, or catching
- Positive provocative test on physical exam with pain at the hip joint with flexion, adduction, and internal rotation (FADIR test)
- Acetabular labral tear on MRI, with or without intra-articular contrast
- Failure of at least 6 weeks of non-operative treatment, including at least 2 of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Ice/heat
  - Protected weight bearing
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
  - Weight optimization
  - Corticosteroid injection
- No evidence of hip joint arthritis, defined as joint space narrowing of 2mm or less, or Tonnis Grade 2 or 3 on weight-bearing AP radiograph
- Under age 50

Open or arthroscopic labral repair **does not meet the definition of medical necessity:**

- In the presence of significant hip joint arthritis (Tonnis grade 2 or greater)
- In the presence of dysplasia\*\*
- In the presence of other structural abnormality that would require skeletal correction

### **CAM, Pincer, Combined Cam and Pincer Repair**

Open or arthroscopic CAM, pincer or combined CAM and pincer repair **meets the definition of medical necessity** when **ALL** of the following are met:

- Positional hip pain
- Failure of at least 6 weeks of non-operative treatment, including at least 2 of the following:
- Positive impingement sign on physical exam [(hip or groin pain with flexion, adduction and internal rotation (FADIR test)]

- **ANY** of the following radiograph, CT, and/or MRI findings of FAI:
  - Non-spherical femoral head or prominent head-neck junction (pistol-grip deformity) with alpha angle >55 degrees indicating CAM impingement
  - Overhang of the anterolateral rim of the acetabulum, posterior wall sign, prominent ischial spine sign, acetabular protrusion, or retroversion with a center edge (CE) angle >35 degrees and/or cross-over sign indicating pincer deformity
- No evidence of hip joint arthritis, defined as a Tonnis Grade 2 or 3 (joint space less than 2mm) on weight-bearing AP radiograph
- Skeletally mature
- Under age 50
- BMI < 40
- Radiographic images show no evidence of ANY indicators for hip dysplasia\*\*

Open or arthroscopic treatment of the hip for femoroacetabular impingement (FAI) syndrome **does not meet the definition of medical necessity:**

- In the presence of significant hip joint arthritis (Tonnis grade 2 or greater)
- In the skeletally immature candidate (open proximal femoral physis)

**\*Hip dysplasia is defined as any of the following:**

- Lateral center edge angle < 20 degrees
- Anterior center edge angle < 20 degrees
- Tonnis angle >15 degrees
- Femoral head extrusion index > 25%

## **BILLING/CODING INFORMATION:**

### **CPT Coding:**

29914	Arthroscopy, hip, surgical; with femoroplasty (i.e., treatment of cam lesion)
29915	Arthroscopy, hip, surgical; with acetabuloplasty (i.e., treatment of pincer lesion)
29916	Arthroscopy, hip, surgical; with labral repair

There are no specific CPT codes for reporting the open treatment of FAI.

## **REIMBURSEMENT INFORMATION:**

Refer to section entitled **POSITION STATEMENT**.

## **PROGRAM EXCEPTIONS:**

**Federal Employee Program (FEP):** Follow FEP guidelines.

**State Account Organization (SAO):** Follow SAO guidelines.

**Medicare Advantage products:**

No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

**DEFINITIONS:**

**Outerbridge grades:**

- Grade 0: Normal
- Grade I: Cartilage with softening and swelling
- Grade II: Partial-thickness defect with fissures on the surface that do not reach subchondral bone or exceed 1.5 cm in diameter
- Grade III: Fissuring to the level of subchondral bone in an area with a diameter more than 1.5 cm
- Grade IV: Exposed subchondral bone head

**Tonnis classification of osteoarthritis by radiographic changes:**

- Grade 0: No signs of osteoarthritis (OA)
- Grade 1: Increased sclerosis of femoral head or acetabulum, slight joint space narrowing or slight slipping of joint margin, no or slight loss of head sphericity
- Grade 2: Small cysts in femoral head or acetabulum, moderate joint space narrowing, moderate loss of head sphericity
- Grade 3: Large cysts, severe joint space narrowing or obliteration of joint space, severe deformity of the head, avascular necrosis

**RELATED GUIDELINES:**

[Hip Arthroplasty, 02-20000-50](#)

[Hip Arthroscopy and Open, Non-Arthroplasty Hip Repair, 02-20000-55](#)

**OTHER:**

None applicable.

**REFERENCES:**

1. American Academy of Orthopedic Surgeons (AAOS) Website. AAOS Now. Hip arthroscopy for pediatric FAI safe, reliable. June 2008.
2. American Academy of Orthopedic Surgeons (AAOS) Website. AAOS Now. SCFE leads to symptomatic FAI. July 2009.
3. American Academy of Orthopedic Surgeons (AAOS) Website. AAOS Now. Early screening is vital for FAI. Feb 2009.

4. American Academy of Orthopedic Surgeons (AAOS) Website. Orthoinfo. Femoroacetabular impingement (FAI). September 2010. Accessed 07/03/14.
5. Blue Cross and Blue Shield Association Medical Policy Reference Manual. Surgical Treatment of Femoroacetabular Impingement, (05/22/14).
6. Brigham and Women's Hospital. Department of Rehabilitation Services. Standard of Care. Hip Labral Tears. [Cited June 01, 2010].
7. ClinicalTrials.gov; Prevalence of Femoroacetabular Impingement in Asymptomatic Patients. NCT00606047. (Updated 01/31/08).
8. Espinosa N, Beck M, Rothenfluh DA, Ganz R, Leunig M. Treatment of femoro-acetabular impingement: preliminary results of labral refixation. Surgical technique. J Bone Joint Surg Am. 2007 Mar; 89 Suppl 2 Pt. 1:36-53.
9. Femoroacetabular Impingement (FAI). Orland Park Orthopedics. Center for Sports Medicine. 16450 S. 104th Avenue, Orland Park, IL 60467. [Cited June 01, 2010]
10. Ganz R, Leunig M, Leunig-Ganz K, HarrisWH. The etiology of osteoarthritis of the hip: an integrated mechanical concept. Clin Orthop Relat Res. 2008 Feb;466(2):264-72.
11. Groh MM, Herrera J. A comprehensive review of hip labral tears. Curr Rev Musculoskelet Med. 2009 Jun;2(2):105-17.
12. HAYES Health Technology Brief: "Arthroscopic Hip Surgery for Femoroacetabular Impingement (FAI)" (06/21/06).
13. Hegmann KT, editor(s). Occupational medicine practice guidelines. Evaluation and management of common health problems and functional recovery in workers. 3rd ed. Elk Grove Village (IL): American College of Occupational and Environmental Medicine; 2011. p. 1-440.
14. James SL, Ali K, Malara F, Young D, O'Donnell J, Connell DA. MRI findings of femoroacetabular impingement. AJR Am J Roentgenol. 2006 Dec;187(6):1412-9.
15. Kang C, Hwang DS, Cha SM. Acetabular labral tears in patients with sports injury. Clin Orthop Surg. 2009 Dec;1(4):230-5.
16. Labral Tear of the Hip Joint. About.com: Orthopedics. [Cited June 01, 2010]
17. Labral Tears and FAI. My Hip Space. [Cited June 01, 2010]
18. Matsuda, DK. Arthroscopic surgery for hip impingement: It works for me; A surgeon's perspective – from both sides of the scalpel. American Academy of Orthopedic Surgeons (AAOS) Now; June 2008 Issue.
19. MayoClinic.com. Hip labral Tear. [Cited June 01, 2010]
20. Mayo Clinic - Hip Arthroscopy in Young Adults with Femoroacetabular Impingement. Accessed 07/24/13.
21. Meldrum, Russel Femoroacetabular Impingement (FAI).. [Cited June 01, 2010].
22. National Health Library; Trauma and Orthopaedics Specialist Library. Surgery for femoroacetabular impingement. Editorial written for the 2008 National Knowledge Week on Osteoarthritis; Professor Damian Griffin, contributing writer. (10/01/07)
23. National Imaging Associates. Hip Arthroscopy and Open, Non-Arthroplasty Hip Repair Clinical Guideline 2018.
24. National Imaging Associates. Hip Arthroscopy and Open, Non-Arthroplasty Hip Repair Clinical Guideline, 2019.
25. National Institute for Health and Clinical Excellence (NICE), Interventional Procedure Guidance 203, Open femoro-acetabular surgery for hip impingement syndrome, (01/07). (replaced by IPG 403)

26. National Institute for Health and Clinical Excellence (NICE), Interventional Procedure Guidance 403, Open femoro–acetabular surgery for hip impingement syndrome, (07/11).
27. National Institute for Health and Clinical Excellence (NICE), Interventional procedure guidance 408, Arthroscopic femoro–acetabular surgery for hip impingement syndrome (09/2011).
28. National Library for Health. Trauma and Orthopaedics Specialist Library. Surgery for femoroacetabular impingement. 2007
29. Nord RM, Meislin RJ. Hip arthroscopy in adults. Bull NYU Hosp Jt Dis. 2010;68(2):97-102.
30. Orthopaedia – Femoroacetabular impingement. In: Orthopaedia – Collaborative Orthopaedic Knowledgebase. Created May 30, 2007 05:25 by Michael Taunton, Last modified Oct 22, 2008 12:55 ver.30.
31. Peters, Christopher L, Erickson, Jill A. Treatment of Femoroacetabular Impingement with Surgical Dislocation and Debridement in Young Adults. J or Bone and Joint Surgery. 2006; 88:1735-1741.
32. Philippon MJ, Schroder e Souza BG, Briggs KK. Labrum: resection, repair and reconstruction sports medicine and arthroscopy review. Sports Med Arthrosc. 2010 Jun;18(2):76-82.
33. Philippon MJ, Weiss DR, Kuppersmith DA, Briggs KK, Hay CJ. Arthroscopic labral repair and treatment of femoroacetabular impingement in professional hockey players. Am J Sports Med. 2010 Jan;38(1):99-104.
34. Philippon, MJ, et al. Outcomes following hip arthroscopy for femoroacetabular impingement with associated chondrolabral dysfunction. J or Bone and Joint Surgery – British Volume, Jan 2009, Vol 91-B, Issue 1, 16-23.
35. Sampson, TG. Arthroscopic Treatment of Femoroacetabular Impingement; Techniques in Orthopaedics. (2005) 20:56-62.

### **COMMITTEE APPROVAL:**

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy & Coverage Committee on 06/27/19.

### **GUIDELINE UPDATE INFORMATION:**

07/15/08	New Medical Coverage Guideline.
05/15/09	Scheduled review; Description section revised; no change in position statement; references updated.
07/15/10	Scheduled review; Description and Position Statement sections updated to include descriptive information and criteria regarding labral tear repairs; coding section updated; references updated.
09/15/10	Unscheduled review of position statement regarding labral tear repair; Position Statement unchanged.
01/01/11	Annual HCPCS coding update; added 29914, 29915, and 29916.
09/15/11	Annual review; position statement revised; references updated; formatting changes.
08/15/12	Scheduled review; position statement revised regarding labral tear repairs; references updated.
09/15/13	Scheduled review; position statement criteria revised regarding “age”; Program Exceptions section updated; references updated.
09/15/14	Annual review; position statement unchanged, references updated.
11/01/15	Revision: ICD-9 Codes deleted.
10/15/16	Revision: deleted CPT code 29862. [Refer to MCG 02-20000-55, Hip Arthroscopy and Open, Non-Arthroplasty Hip Repair].
07/15/18	Scheduled review. Revised description section; added separate criteria for labral, CAM, pincer, and combined CAM/pincer repair. Reformatted guideline. Updated references.
07/15/19	Scheduled review. Revised not medically necessary criteria. Updated references.