Medical Policy
Surgical Treatment of Femoroacetabular Impingement

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Policy Number: 145
BCBSA Reference Number: 7.01.118

Related Policies
- Hip Resurfacing, #046

Policy
Commercial Members: Managed Care (HMO and POS), PPO, and Indemnity Medicare HMO BlueSM and Medicare PPO BlueSM Members

Open or arthroscopic treatment of femoroacetabular impingement (FAI) may be MEDICALLY NECESSARY when ALL the age, symptom and imaging conditions below have been met:

Age
- Candidates should be skeletally mature with documented closure of growth plates (e.g., 15 years or older).

Symptoms
- Moderate-to-severe hip pain that is worsened by flexion activities (e.g., squatting or prolonged sitting) that significantly limits activities, AND
- Unresponsive to conservative therapy for at least 3 months (including activity modifications, restriction of athletic pursuits and avoidance of symptomatic motion), AND
- Positive impingement sign on clinical examination (pain elicited with 90 degrees of flexion and internal rotation and adduction of the femur).

Imaging
- Morphology indicative of cam or pincer-type FAI, e.g., pistol-grip deformity, femoral head-neck offset with an alpha angle greater than 50 degrees, a positive wall sign, acetabular retroversion (overcoverage with crossover sign), coxa profunda or protrusion, or damage of the acetabular rim, AND
- High probability of a causal association between the FAI morphology and damage, e.g., a pistol-grip deformity with a tear of the acetabular labrum and articular cartilage damage in the anterosuperior quadrant, AND
No evidence of advanced osteoarthritis, defined as Tonnis grade II or III, or joint space of less than 2 mm, AND
No evidence of severe (Outerbridge grade IV) chondral damage.

Treatment of femoroacetabular impingement in all other situations is INVESTIGATIONAL.

Prior Authorization Information
Commercial Members: Managed Care (HMO and POS)
Prior authorization is NOT required.

Commercial Members: PPO, and Indemnity
Prior authorization is NOT required.

Medicare Members: HMO Blue SM
Prior authorization is NOT required.

Medicare Members: PPO Blue SM
Prior authorization is NOT required.

CPT Codes / HCPCS Codes / ICD-9 Codes
The following codes are included below for informational purposes. Inclusion or exclusion of a code does not constitute or imply member coverage or provider reimbursement. Please refer to the member’s contract benefits in effect at the time of service to determine coverage or non-coverage as it applies to an individual member.

Providers should report all services using the most up-to-date industry-standard procedure, revenue, and diagnosis codes, including modifiers where applicable.

CPT Codes

<table>
<thead>
<tr>
<th>CPT codes:</th>
<th>Code Description</th>
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<tbody>
<tr>
<td>29914</td>
<td>Arthroscopy, hip, surgical; with femoroplasty (ie, treatment of cam lesion)</td>
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<tr>
<td>29915</td>
<td>Arthroscopy, hip, surgical; with acetabuloplasty (ie, treatment of pincer lesion)</td>
</tr>
<tr>
<td>29916</td>
<td>Arthroscopy, hip, surgical; with labral repair</td>
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Description

Femoroacetabular impingement (FAI), a condition that has been recently recognized, is an anatomical mismatch between the head of the femur and the acetabulum resulting in compression of the labrum or articular cartilage during flexion. FAI may become pathologic with repetitive movement and/or increased force on the hip joint. High-demand activities may also result in pathologic impingement in hips with normal morphology.

FAI consists of two types of impingement, known as cam impingement and pincer impingement, which may occur alone or, more frequently, together. Symptomatic cam impingement is found most frequently in young male athletes. Pincer impingement is associated with overcoverage of the acetabulum and pinching of the labrum, with pain more typically beginning in women of middle age. It has been proposed that impingement with damage to the labrum and/or acetabulum is a causative factor in the development of hip osteoarthritis, and that as many as half of cases currently categorized as primary osteoarthritis may have an etiology of FAI.

Open osteochondroplasty of bony abnormalities and treatment of the symptomatic cartilage defect is considered the gold standard for complex bony abnormalities. However, open osteochondroplasty is invasive, requiring transection of the greater trochanter (separation of the femoral head from the femoral shaft) and dislocation of the hip joint to provide full access to the femoral head and acetabulum. In addition to the general adverse effects of open surgical procedures, open osteochondroplasty with dislocation has been associated with non-union, neurologic and soft tissue lesions.
Additionally, it is known that surgical treatment of FAI pathology is less effective for pain reduction in patients with late stage osteoarthritis, and delay in the surgical correction of bony abnormalities may lead to disease progression to the point where joint preservation is no longer appropriate.

Summary
Five prospective/consecutive case series with more than 100 hips/patients treated for FAI have been identified. These studies show a 20-point improvement on the MHHS at short to mid-term follow-up, indicating a change from marked pain with a serious limitation of activities pre-operatively to mild pain after treatment, or from moderate pain with some limitations of ordinary activity or work to slight or no pain after treatment. Given that the arthroscopic procedure was developed around 2004, long-term follow-up is limited.

What can be ascertained from the current literature?

- Not all patients with FAI morphology will have FAI pathology.
- There is a high association between FAI pathology and idiopathic osteoarthritis, but this may represent a small proportion of the total cases of hip osteoarthritis.
- Patients may present with hip pain that can be diagnosed as FAI by a combination of clinical evaluation, radiographs, and MR arthrography.
- In cases in which there is a positive impingement test result, anterosuperior labral or acetabular damage identified on MR arthrography and a pistol-grip morphology identified on imaging, there is a very high probability that the acetabular damage is caused by impingement of the femoral head-neck junction against the acetabular rim. FAI can be verified intraoperatively.
- Repair of the labrum alone can improve symptoms in the short term. It is reasonable to expect that debridement/osteoplasty of the bump or bone spur would reduce continued abrasion in the long term. Some studies, albeit of low quality, support this view.
- Treatment of FAI is most effective in younger patients without osteoarthritis (Tonnis grade 0 or I) or severe cartilage damage. Although osteoarthritis can be identified with plain film radiographs, articular damage is not always identified with current imaging techniques.
- There is a high probability that symptoms in patients with osteoarthritis (Tonnis grade II or III, or joint space of less than 2 mm) or severe cartilage damage (Outerbridge grade IV) will not improve following osteoplasty. These patients may require THA for progressing pain within 5 years.
- In large case series, arthroscopic treatment of FAI in young to middle-age patients without osteoarthritis and showing mild to moderate cartilage damage results in 75% to 85% of patients improved.
- Smaller case series suggest that open treatment of FAI in young to middle-age patients with moderate to severe cartilage damage results in 50% to 70% of patients improved. Non-union has been reported to occur in 27% of patients following the transection of the great trochanter with hip dislocation.

What cannot be ascertained from the literature?

- It is not known which patients with FAI morphology are most likely to progress to osteoarthritis. The progression of pincer impingement with damage initially restricted to the labrum may follow a different time course than cam-type impingement.
- It is not known whether treatment of FAI will reduce the occurrence of osteoarthritis.

Based on 1) the intraoperatively established relationship between FAI morphology and damage to the acetabulum, 2) the consistent improvement in symptoms reported in large prospective case series, and 3) the potential for continued and irreparable cartilage damage if FAI pathology is not addressed, it may be considered medically necessary to debride the bone at the same time that the labrum and/or articular cartilage is being repaired when specific criteria are met. This conclusion is supported by clinical input from physician specialty societies and academic medical centers. Because of the differing benefits and risks of open and arthroscopic approaches, patients should make an informed choice.
The evidence is insufficient to permit conclusions concerning the effect of this procedure on the development of osteoarthritis. Therefore, treatment of FAI morphology in the absence of symptoms is considered investigational.

Due to the unclear balance of risks and benefits, questions regarding whether, when, and how to treat symptomatic FAI in children with SCFE are difficult. Although the impact of not treating FAI is established, there is limited evidence on treatment outcomes in pediatric patients. The open dislocation procedure is technically demanding with a high risk of serious complications and has not been shown to be safe and effective outside of a few highly specialized centers. In addition, questions remain concerning selection criteria and the appropriate timing and approach for FAI treatment in patients with developmental hip disorders. In a 2009 review of SCFE, surgeons from Children’s Hospital Boston considered subcapital correction osteotomy with surgical dislocation to be an emerging treatment, stating that, “Currently, we recommend that this type of treatment should be restricted to few select specialized centers until the availability of long-term results and outcome. Also, this type of treatment has a steep learning curve, and it is advised to learn this surgical technique at a specialized center.” (40) Since this approach has not been shown to be safe and effective outside of a few specialized centers, surgical treatment of FAI in pediatric patients is considered investigational.

### Policy History

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<th>Date</th>
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<tbody>
<tr>
<td>9/2014</td>
<td>New references added from BCBSA National medical policy.</td>
</tr>
<tr>
<td>12/1/09</td>
<td>Medical Policy 145 effective 12/1/09.</td>
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### Information Pertaining to All Blue Cross Blue Shield Medical Policies

Click on any of the following terms to access the relevant information:
- Medical Policy Terms of Use
- Managed Care Guidelines
- Indemnity/PPO Guidelines
- Clinical Exception Process
- Medical Technology Assessment Guidelines

### References


