

National Imaging Associates, Inc. []	
Clinical guidelines: HIP ARTHROSCOPY	Original Date: November 2015
CPT Codes**: - Femoroacetabular Impingement (FAI) Hip Surgery: 29914, 29915, 29916 - Hip Surgery – Other: 29860, 29861, 29862, 29863 <i>**See UM Matrix for allowable billed groupings and additional covered codes</i>	Last Revised Date: May 2022 May 2023
Guideline Number: NIA_CG_314	Implementation Date: January 202423

GENERAL INFORMATION

It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.

General Requirements

Elective arthroscopic surgery of the hip may be considered if the following general criteria are met:

- There is clinical correlation of the individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of daily living [ADLs], occupational, athletic)
- Individual is medically stable with no uncontrolled comorbidities
- Individual does not have an active local or systemic infection
- Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in treatment program

Clinical notes should address:

- Symptom onset, duration, and severity

^{*}~~National Imaging Associates, Inc. (NIA) is a subsidiary of Magellan Healthcare, Inc.~~

- Loss of function and/or limitations
- Type and duration of non-operative management modalities (where applicable).

Non-operative management must include **TWO** or more of the following, unless otherwise specified:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Ice/Heat
- Protected weight bearing
- Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
- Brace/orthosis
- Weight optimization
- Corticosteroid injections

INDICATIONS

Diagnostic or operative arthroscopy of the hip may be medically necessary when performed in conjunction with **periacetabular osteotomy (PAO)**^{1, 2}

OR

As indicated in the following sections:

DIAGNOSTIC HIP ARTHROSCOPY

All requests for diagnostic hip arthroscopy will be considered and decided on a case-by-case basis and are rarely deemed medically necessary.

Diagnostic hip arthroscopy may be medically necessary when **ALL** of the following criteria are met:

- At least 6 months of hip pain with documented loss of function
- Failure of at least 12 weeks of non-operative treatment, including at least **two** of the following:
 - Rest or activity modifications/limitations
 - Ice/heat
 - Protected weight bearing
 - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol
 - Brace/orthosis
 - Physical therapy or properly instructed home exercise program
 - Weight optimization

- Corticosteroid injection
- Indeterminate radiographs **AND** MRI findings

Individual must have **no radiographic findings of any of the following**:

- Significant arthritis (joint space less than 2 mm on X-ray or subchondral edema on MRI)
- Femoroacetabular impingement (non-spherical femoral head or prominent head-neck junction (pistol-grip deformity), alpha angle > 50 degrees, 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° and/or cross-over sign)
- Hip dysplasia (lateral center edge angle < 20 degrees, anterior center edge angle < 20 degrees, Tönnis angle > 15 degrees or femoral head extrusion index > 25%), unless combined with concomitant periacetabular osteotomy^{1, 2}
- Fractures of the femoral head or acetabulum
- Labral tear (on MRI or MR arthrogram)
- Pigmented villonodular synovitis (PVNS) or synovial chondromatosis
- Intra-articular loose body
- Adductor tear or hamstring tear
- Pubic edema or osteitis pubis
- Gluteus medius or minimus tear
- Ischiofemoral impingement (narrowed ischiofemoral and quadratus femoris spaces)

LABRAL TEARS and FEMOROACETABULAR IMPINGEMENT (FAI)

LABRAL REPAIR

Arthroscopic labral repair may be medically necessary when **ALL** of the following criteria 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 **two** 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 significant hip joint arthritis, defined as joint space narrowing 2 mm or less³⁻⁶ or Tönnis grade 3⁷⁻¹¹ [see Grading Appendix] Weight-bearing X-rays are not required¹².

NOTE: Arthroscopy of the hip for labral repair is considered not medically necessary in the presence of significant hip joint arthritis (joint space narrowing 2 mm or less³⁻⁵ or a Tönnis grade 3) [see Grading Appendix],^{5, 13, 14} or dysplasia [see grading appendix] unless combined with concomitant periacetabular osteotomy.^{1, 2}

CAM, Pincer, Combined CAM & Pincer Repair

Arthroscopic CAM, pincer or combined CAM and pincer repair may be medically necessary when **ALL** of the following criteria are met:

- Positional hip pain
- Failure of at least 6 weeks of non-operative treatment, including **at least two** of the following¹⁵⁻¹⁷:
 - 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
- Positive impingement sign on physical exam (hip or groin pain with flexion, adduction, and internal rotation (FADIR test)¹⁸
- **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 > 50 degrees indicating CAM impingement [see radiographic measurement appendix]^{19, 20}
 - 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° and/or cross-over sign indicating pincer deformity [see radiographic measurement appendix]
 - Combination of CAM and pincer criteria
- No evidence of significant hip joint arthritis, defined as joint space narrowing 2 mm or less³⁻⁶ or a Tönnis Grade 3 [see Grading Appendix]^{5, 7, 8, 13, 14, 21}
- Skeletally mature patient [partial or complete closure of the proximal femoral physis]²²
- BMI < 40^{23, 24} *
- Radiographic images show no evidence of ~~ANY indicators for~~ severe or advanced hip dysplasia [see grading appendix]²⁵ unless combined with concomitant periacetabular osteotomy^{1, 2} **

*Individuals with a BMI > 40 will be reviewed on a case-by-case basis.

Additional Notes:

There is no evidence to support hip arthroscopy for FAI and/or labral tear in an asymptomatic individual and there is a ~~very~~ high prevalence of abnormal radiographs found in asymptomatic individuals²⁶⁻²⁸: 33% of asymptomatic hips have a cam lesion, 66% of asymptomatic hips have a pincer lesion, and 68% of asymptomatic hips have a labral tear.

**Even though hip dysplasia, as well as symptomatic FAI and labral tears are believed to be precursors to hip arthritis,²⁹ arthroscopy is not indicated solely for the treatment of osteoarthritis of the hip^{5, 13, 14} and rarely indicated for severe dysplasia,²⁵ unless combined with concomitant periacetabular osteotomy.^{1, 2} However, individuals with borderline dysplasia (lateral center-edge angle [LCEA], 18° to 25°)³⁰, that require arthroscopic procedures appear to do as well as those with no evidence of dysplasia.³⁰⁻³²

Recent literature has demonstrated that individuals who undergo hip arthroscopy for femoroacetabular impingement syndrome and have an unrepaired capsule have lower functional outcome scores, achievement of meaningful outcomes, success rates, as well as greater failure rates and reported pain when compared with individuals who have complete capsular closure.³³⁻³⁵

ARTHROSCOPY FOR SYNOVECTOMY, BIOPSY, OR REMOVAL OF LOOSE OR FOREIGN BODY

Arthroscopic synovectomy, biopsy, removal of loose or foreign body, or a combination of these procedures may be medically necessary when the following criteria are met:

- X-ray, MRI, or CT evidence of acute post-traumatic intra-articular foreign body or displaced fracture fragment^{36, 37};

OR

- When **ALL** of the following criteria are met:
 - Hip pain associated with grinding, catching, locking, or popping
 - Physical examination demonstrates painful range of motion of the hip
 - Failure of at least 12 weeks of non-operative treatment, including at least **two** 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
- Radiographs, CT, and/or MRI demonstrate synovial proliferation, calcifications, nodularity, inflammation, pannus, or a loose body.

BACKGROUND

This guideline addresses the following elective, non-emergent, arthroscopic hip repair procedures:

- Diagnostic arthroscopy
- Femoroacetabular impingement (FAI)
- Labral repair only
- CAM, pincer, CAM & pincer combined
- Synovectomy, biopsy, or removal of loose or foreign body

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, 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.

OVERVIEW

FEMOROACETABULAR IMPINGEMENT (FAI)^{5, 14, 38-43}

FAI is a condition characterized by a mechanical impingement between the proximal femur/femoral head (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 and “isolated” labral tears are very uncommon (as are labral tears caused by trauma).^{44, 45} Labral repair (compared with labral debridement) and capsular closure (compared with unrepaired capsulotomy) are associated with a lower risk of conversion to arthroplasty.³³⁻³⁵

CAM, PINCER, COMBINED CAM & PINCER REPAIR

Technically not a repair, this procedure involves bony decompression, shaving, osteoplasty, femoroplasty, acetabuloplasty, and/or osteochondroplasty. Greater than 95% of labral repairs should be performed with at least a femoral osteoplasty or an acetabuloplasty. For persistent

symptoms, FAI surgery appears to be more successful than physical therapy and activity modification⁴⁶ and has been shown to be effective in returning athletes to their sport.^{47, 48}

GRADING APPENDIX

Tönnis Classification of Osteoarthritis by Radiographic Changes

Grade	Description
0	No signs of osteoarthritis
1	Mild: Increased sclerosis, slight narrowing of the joint space, no or slight loss of head sphericity
2	Moderate: Small cysts, moderate narrowing of the joint space moderate loss of head sphericity
3	Severe: Large cysts, severe narrowing or obliteration of the joint space, severe deformity of the head

Hip Dysplasia

Defined as any of the following criteria:

- Lateral center edge angle < 20 degrees
- Anterior center edge angle < 20 degrees
- Tönnis angle > 15 degrees
- Femoral head extrusion index > 25%
- Borderline dysplasia (lateral center-edge angle [LCEA], 18° to 25°)

Radiographic Measurement Appendix⁴⁹

Alpha Angle

- Alpha angle was measured on the AP pelvis and Dunn 45° radiographs. First, a Mose circle was placed around the circumference of the femoral head. A line was drawn from the center of the femoral head down the center of the femoral neck. A line was then

drawn connecting the center of the femoral head to the point of the Mose circle where the head goes out of round. The angle bisecting these two lines was the alpha angle

- An alpha angle of 55° (Dunn 45°) or greater or an alpha angle of 50° (AP pelvis) was defined as cam morphology

Femoral Head Extrusion

- Femoral head extrusion index was measured as the proportion (%) of laterally uncovered femoral head versus the femoral head (horizontal distance)
 - A femoral head extrusion index greater than 25% defined dysplasia

Global Acetabular Retroversion

- Global acetabular retroversion was defined by the presence of a prominent ischial spine sign or posterior wall sign
 - Prominent ischial spine sign: Visible ischial spine medial to the iliopectineal line on AP pelvis radiograph
 - Posterior wall sign: Center of the femoral head lateral to the posterior wall of the acetabulum

Lateral Center Edge Angle

- Lateral center edge angle was measured after multiple lines were drawn on the AP pelvis radiograph. First, a Moses circle was placed around the circumference of the femoral head. Next, a line was drawn connecting the ischial tuberosities. A perpendicular line was then drawn up through the center of the femoral head from the ischial tuberosity line. Then, a line was drawn from the center of the femoral head to the most lateral aspect of the sourcil. The angle bisecting the latter two lines was the lateral center edge angle
 - A lateral center edge angle less than 20° defines dysplasia, 20 to 25° borderline dysplasia, 26 to 39° normal, and greater than 40° lateral over coverage pincer impingement
 - Lateral over coverage was defined as a lateral center edge angle greater than 40°.

POLICY HISTORY

Date	Summary
<u>2023</u>	Updated references for Femoroacetabular Impingement (FAI)
May 2022	<ul style="list-style-type: none"> ● Updated references ● Removal of sections pertaining to extra-articular (Endoscopic) and articular cartilage restoration procedures (CPT codes have not been assigned to these procedures that currently use unlisted procedure codes).

	<ul style="list-style-type: none"> • Clarified: Significant arthritis (joint space less than 2 mm on X-ray or subchondral edema on MRI) • Replaced “patient” with “individual” where appropriate
June 2021	<ul style="list-style-type: none"> • Deleted requirement for standing X-rays for labral or FAI surgery • Reorganization of labral repair and FAI section • Added statement pertaining to the importance of capsular closure for FAI surgery
October 2020	<ul style="list-style-type: none"> • Added indication for hip arthroscopy when performed in conjunction with a periacetabular osteotomy (PAO) • Deleted the age requirement (<50) for labral repair or FAI surgery • Added definition of “skeletally mature” to articular cartilage restoration/repair: partial or complete closure of proximal femoral physis • Deleted weight restriction for articular cartilage restoration/repair (BMI <35) • Updated references
October 2019	<ul style="list-style-type: none"> • Updated references • Kellgren-Lawrence grading system deleted
November 2018	<ul style="list-style-type: none"> • “Diagnostic Hip Arthroscopy”: Added section to clarify the indications for a diagnostic hip arthroscopy and added definition of indeterminate X-rays and MRI • “Articular Cartilage Restorative/Repair (Chondroplasty, Microfracture, ACL Procedures)” is a new section, added for completeness to mirror Knee Arthroscopy and will be reviewed on a case-by-case basis; included descriptive content in ‘Overview’ section • Added and updated references

REFERENCES

1. Ricciardi BF, Mayer SW, Fields KG, Wentzel C, Kelly BT, Sink EL. Patient Characteristics and Early Functional Outcomes of Combined Arthroscopic Labral Refixation and Periacetabular Osteotomy for Symptomatic Acetabular Dysplasia. *Am J Sports Med.* Oct 2016;44(10):2518-2525. doi:10.1177/0363546516651829
2. Sabbag CM, Nepple JJ, Pascual-Garrido C, Lalchandani GR, Clohisy JC, Sierra RJ. The Addition of Hip Arthroscopy to Periacetabular Osteotomy Does Not Increase Complication Rates: A Prospective Case Series. *Am J Sports Med.* Mar 2019;47(3):543-551. doi:10.1177/0363546518820528
3. Boykin RE, Patterson D, Briggs KK, Dee A, Philippon MJ. Results of arthroscopic labral reconstruction of the hip in elite athletes. *Am J Sports Med.* Oct 2013;41(10):2296-301. doi:10.1177/0363546513498058
4. Geyer MR, Philippon MJ, Fagrelus TS, Briggs KK. Acetabular labral reconstruction with an iliotibial band autograft: outcome and survivorship analysis at minimum 3-year follow-up. *Am J Sports Med.* Aug 2013;41(8):1750-6. doi:10.1177/0363546513487311
5. Philippon MJ, Briggs KK, Yen YM, Kuppersmith DA. Outcomes following hip arthroscopy for femoroacetabular impingement with associated chondrolabral dysfunction: minimum two-year follow-up. *J Bone Joint Surg Br.* Jan 2009;91(1):16-23. doi:10.1302/0301-620x.91b1.21329
6. Nakashima H, Utsunomiya H, Kanazaki S, et al. Is Arthroscopic Hip Labral Repair/Reconstruction Surgery Effective for Treating Femoroacetabular Impingement in the Presence of Osteoarthritis? *Clin J Sport Med.* Jul 1 2021;31(4):367-373. doi:10.1097/jsm.0000000000000768
7. Byrd JWT, Bardowski EA, Jones KS. Influence of Tönnis Grade on Outcomes of Arthroscopic Management of Symptomatic Femoroacetabular Impingement. *Arthroscopy.* Aug 2018;34(8):2353-2356. doi:10.1016/j.arthro.2018.03.021
8. Chandrasekaran S, Darwish N, Gui C, Lodhia P, Suarez-Ahedo C, Domb BG. Outcomes of Hip Arthroscopy in Patients with Tönnis Grade-2 Osteoarthritis at a Mean 2-Year Follow-up: Evaluation Using a Matched-Pair Analysis with Tönnis Grade-0 and Grade-1 Cohorts. *J Bone Joint Surg Am.* Jun 15 2016;98(12):973-82. doi:10.2106/jbjs.15.00644
9. Hiza E, Dierckman BD, Guanche C, Applegate G, Shah D, Ryu JH. Reliability of the Tönnis Classification and Its Correlation With Magnetic Resonance Imaging and Intraoperative Chondral Damage. *Arthroscopy.* Feb 2019;35(2):403-408. doi:10.1016/j.arthro.2018.08.036
10. Kovalenko B, Bremjit P, Fernando N. Classifications in Brief: Tönnis Classification of Hip Osteoarthritis. *Clin Orthop Relat Res.* Aug 2018;476(8):1680-1684. doi:10.1097/01.blo.0000534679.75870.5f
11. Ochiai D. Editorial Commentary: Tönnis Classification-Beauty (or Hip Arthritis) Is Truly in the Eye of the Beholder. *Arthroscopy.* Feb 2019;35(2):409-410. doi:10.1016/j.arthro.2018.10.104
12. Bessa FS, Williams BT, Polce EM, et al. No Differences in Hip Joint Space Measurements Between Weightbearing or Supine Anteroposterior Pelvic Radiographs. *Arthroscopy.* Nov 2020;36(11):2843-2848. doi:10.1016/j.arthro.2020.07.009

13. Egerton T, Hinman RS, Takla A, Bennell KL, O'Donnell J. Intraoperative cartilage degeneration predicts outcome 12 months after hip arthroscopy. *Clin Orthop Relat Res*. Feb 2013;471(2):593-9. doi:10.1007/s11999-012-2594-y
14. Stevens MS, Legay DA, Glazebrook MA, Amirault D. The evidence for hip arthroscopy: grading the current indications. *Arthroscopy*. Oct 2010;26(10):1370-83. doi:10.1016/j.arthro.2010.07.016
15. Wall PD, Fernandez M, Griffin DR, Foster NE. Nonoperative treatment for femoroacetabular impingement: a systematic review of the literature. *Pm r*. May 2013;5(5):418-26. doi:10.1016/j.pmrj.2013.02.005
16. Casartelli NC, Bizzini M, Maffiuletti NA, et al. Exercise Therapy for the Management of Femoroacetabular Impingement Syndrome: Preliminary Results of Clinical Responsiveness. *Arthritis Care Res (Hoboken)*. Aug 2019;71(8):1074-1083. doi:10.1002/acr.23728
17. Ebert JR, Raymond AC, Aujla RS, D'Alessandro P. The Effect of a Formal Nonoperative Management Program Combining a Hip Injection With Structured Adjunctive Exercise Rehabilitation in Patients With Symptomatic Femoroacetabular Impingement Syndrome. *Am J Sports Med*. Mar 2023;51(3):694-706. doi:10.1177/03635465221148744
18. Pålsson A, Kostogiannis I, Ageberg E. Combining results from hip impingement and range of motion tests can increase diagnostic accuracy in patients with FAI syndrome. *Knee Surg Sports Traumatol Arthrosc*. Oct 2020;28(10):3382-3392. doi:10.1007/s00167-020-06005-5
19. Nepple JJ, Carlisle JC, Nunley RM, Clohisy JC. Clinical and radiographic predictors of intra-articular hip disease in arthroscopy. *Am J Sports Med*. Feb 2011;39(2):296-303. doi:10.1177/0363546510384787
20. Saito M, Tsukada S, Yoshida K, Okada Y, Tasaki A. Correlation of alpha angle between various radiographic projections and radial magnetic resonance imaging for cam deformity in femoral head-neck junction. *Knee Surg Sports Traumatol Arthrosc*. Jan 2017;25(1):77-83. doi:10.1007/s00167-016-4046-9
21. Lei P, Conaway WK, Martin SD. Outcome of Surgical Treatment of Hip Femoroacetabular Impingement Patients with Radiographic Osteoarthritis: A Meta-analysis of Prospective Studies. *J Am Acad Orthop Surg*. Jan 15 2019;27(2):e70-e76. doi:10.5435/jaaos-d-17-00380
22. Pennock AT, Bomar JD, Johnson KP, Randich K, Upasani VV. Nonoperative Management of Femoroacetabular Impingement: A Prospective Study. *Am J Sports Med*. Dec 2018;46(14):3415-3422. doi:10.1177/0363546518804805
23. Perets I, Rybalko D, Chaharbakhshi EO, Mu BH, Chen AW, Domb BG. Minimum Five-Year Outcomes of Hip Arthroscopy for the Treatment of Femoroacetabular Impingement and Labral Tears in Patients with Obesity: A Match-Controlled Study. *J Bone Joint Surg Am*. Jun 6 2018;100(11):965-973. doi:10.2106/jbjs.17.00892
24. Bech NH, Kodde IF, Dusseldorp F, Druyts PA, Jansen SP, Haverkamp D. Hip arthroscopy in obese, a successful combination? *J Hip Preserv Surg*. Apr 2016;3(1):37-42. doi:10.1093/jhps/hnv076

25. Parvizi J, Bican O, Bender B, et al. Arthroscopy for labral tears in patients with developmental dysplasia of the hip: a cautionary note. *J Arthroplasty*. Sep 2009;24(6 Suppl):110-3. doi:10.1016/j.arth.2009.05.021
26. Register B, Pennock AT, Ho CP, Strickland CD, Lawand A, Philippon MJ. Prevalence of abnormal hip findings in asymptomatic participants: a prospective, blinded study. *Am J Sports Med*. Dec 2012;40(12):2720-4. doi:10.1177/0363546512462124
27. Blankenstein T, Grainger A, Dube B, Evans R, Robinson P. MRI hip findings in asymptomatic professional rugby players, ballet dancers, and age-matched controls. *Clin Radiol*. Feb 2020;75(2):116-122. doi:10.1016/j.crad.2019.08.024
28. Lee AJ, Armour P, Thind D, Coates MH, Kang AC. The prevalence of acetabular labral tears and associated pathology in a young asymptomatic population. *Bone Joint J*. May 2015;97-b(5):623-7. doi:10.1302/0301-620x.97b5.35166
29. Fayad TE, Khan MA, Haddad FS. Femoroacetabular impingement: an arthroscopic solution. *Bone Joint J*. Nov 2013;95-b(11 Suppl A):26-30. doi:10.1302/0301-620x.95b11.33016
30. Nepple JJ, Parilla FW, Pashos GE, Clohisy JC. Outcomes of Periacetabular Osteotomy for Borderline Acetabular Dysplasia. *J Bone Joint Surg Am*. Jan 18 2023;105(2):137-144. doi:10.2106/jbjs.22.00491
31. Matsuda DK, Kivlan BR, Nho SJ, et al. Arthroscopic Outcomes as a Function of Acetabular Coverage From a Large Hip Arthroscopy Study Group. *Arthroscopy*. Aug 2019;35(8):2338-2345. doi:10.1016/j.arthro.2019.01.055
32. Domb BG, Owens JS, Glein RM, Jimenez AE, Maldonado DR. Borderline Dysplasia After Primary Hip Arthroscopy with Capsular Plication and Labral Preservation: Ten-Year Survivorship and Patient-Reported Outcomes. *J Bone Joint Surg Am*. May 3 2023;105(9):687-699. doi:10.2106/jbjs.22.00340
33. Beck EC, Suppauksorn S, Nho SJ. The Role of Comprehensive Capsular Management in Hip Arthroscopy for the Treatment of Femoroacetabular Impingement Syndrome. *Arthroscopy*. Jan 2020;36(1):9-11. doi:10.1016/j.arthro.2019.10.028
34. Bolia I, Briggs KK, Philippon MJ. Superior Clinical Outcomes with Capsular Closure versus Non-Closure in Patients Undergoing Arthroscopic Hip Labral Repair. *Orthop J Sports Med*. 2018;6(3 Suppl):2325967118S00009. doi:10.1177/2325967118S00009
35. Riff AJ, Kunze KN, Movassaghi K, et al. Systematic Review of Hip Arthroscopy for Femoroacetabular Impingement: The Importance of Labral Repair and Capsular Closure. *Arthroscopy*. Feb 2019;35(2):646-656.e3. doi:10.1016/j.arthro.2018.09.005
36. Mullis BH, Dahners LE. Hip arthroscopy to remove loose bodies after traumatic dislocation. *J Orthop Trauma*. Jan 2006;20(1):22-6. doi:10.1097/01.bot.0000188038.66582.ed
37. Ross JR, Larson CM, Bedi A. Indications for Hip Arthroscopy. *Sports Health*. Sep/Oct 2017;9(5):402-413. doi:10.1177/1941738117712675
38. Domb BG, Chen SL, Shapira J, Maldonado DR, Lall AC, Rosinsky PJ. The Evolution of Hip Arthroscopy: What Has Changed Since 2008-A Single Surgeon's Experience. *Arthroscopy*. Mar 2020;36(3):761-772. doi:10.1016/j.arthro.2019.10.009

39. Byrd JW. Peritrochanteric access and gluteus medius repair. *Arthrosc Tech*. 2013;2(3):e243-6. doi:10.1016/j.eats.2013.02.014
40. Byrd JWT. Editorial Commentary: Hip Arthroscopy-A Microcosm in the Evolution of Arthroscopy in Sports Medicine. *Arthroscopy*. Mar 2020;36(3):773-775. doi:10.1016/j.arthro.2020.01.005
41. Fabricant PD, Heyworth BE, Kelly BT. Hip arthroscopy improves symptoms associated with FAI in selected adolescent athletes. *Clin Orthop Relat Res*. Jan 2012;470(1):261-9. doi:10.1007/s11999-011-2015-7
42. Lynch TS, Terry MA, Bedi A, Kelly BT. Hip arthroscopic surgery: patient evaluation, current indications, and outcomes. *Am J Sports Med*. May 2013;41(5):1174-89. doi:10.1177/0363546513476281
43. Malviya A, Stafford GH, Villar RN. Impact of arthroscopy of the hip for femoroacetabular impingement on quality of life at a mean follow-up of 3.2 years. *J Bone Joint Surg Br*. Apr 2012;94(4):466-70. doi:10.1302/0301-620x.94b4.28023
44. Bedi A, Kelly BT. Femoroacetabular impingement. *J Bone Joint Surg Am*. Jan 2013;95(1):82-92. doi:10.2106/jbjs.K.01219
45. Dolan MM, Heyworth BE, Bedi A, Duke G, Kelly BT. CT reveals a high incidence of osseous abnormalities in hips with labral tears. *Clin Orthop Relat Res*. Mar 2011;469(3):831-8. doi:10.1007/s11999-010-1539-6
46. Palmer AJR, Ayyar Gupta V, Fernquest S, et al. Arthroscopic hip surgery compared with physiotherapy and activity modification for the treatment of symptomatic femoroacetabular impingement: multicentre randomised controlled trial. *Bmj*. Feb 7 2019;364:l185. doi:10.1136/bmj.l185
47. Memon M, Kay J, Hache P, et al. Athletes experience a high rate of return to sport following hip arthroscopy. *Knee Surg Sports Traumatol Arthrosc*. Oct 2019;27(10):3066-3104. doi:10.1007/s00167-018-4929-z
48. Minkara AA, Westermann RW, Rosneck J, Lynch TS. Systematic Review and Meta-analysis of Outcomes After Hip Arthroscopy in Femoroacetabular Impingement. *Am J Sports Med*. Feb 2019;47(2):488-500. doi:10.1177/0363546517749475
49. Harris JD, Gerrie BJ, Varner KE, Lintner DM, McCulloch PC. Radiographic Prevalence of Dysplasia, Cam, and Pincer Deformities in Elite Ballet. *Am J Sports Med*. Jan 2016;44(1):20-7. doi:10.1177/0363546515601996

ADDITIONAL RESOURCES

1. Ayeni OR, Levy BA, Musahl V, Safran MR. Current state of the art of hip arthroscopy. *Knee Surg Sports Traumatol Arthrosc*. Apr 2014;22(4):711-3. doi:10.1007/s00167-014-2866-z
2. Bessa FS, Williams BT, Polce EM, et al. No Differences in Hip Joint Space Measurements Between Weightbearing or Supine Anteroposterior Pelvic Radiographs. *Arthroscopy*. Nov 2020;36(11):2843-2848. doi:10.1016/j.arthro.2020.07.009

3. Bozic KJ, Chan V, Valone FH, 3rd, Feeley BT, Vail TP. Trends in hip arthroscopy utilization in the United States. *J Arthroplasty*. Sep 2013;28(8 Suppl):140-3. doi:10.1016/j.arth.2013.02.039
4. Byrd JW. Routine arthroscopy and access: Central and peripheral compartments, iliopsoas bursa, peritrochanteric, and subgluteal spaces. In: Byrd J, ed. *Operative Hip Arthroscopy*. 3rd ed ed. Springer; 2012:131-60.
15. Byrd JWT, Jones KS. Arthroscopic Acetabular Labral Repair in Patients Over the Age of 60 Years: A Matched Case-Control Study. *Arthroscopy*. May 2019;35(5):1406-1410. doi:10.1016/j.arthro.2018.11.015
26. Carreira DS, Emmons BR. The Reliability of Commonly Used Radiographic Parameters in the Evaluation of the Pre-Arthritic Hip: A Systematic Review. *JBJS Rev*. Feb 2019;7(2):e3. doi:10.2106/jbjs.Rvw.18.00048
7. Colvin AC, Harrast J, Harner C. Trends in hip arthroscopy. *J Bone Joint Surg Am*. Feb 15 2012;94(4):e23. doi:10.2106/jbjs.J.01886
38. Glick JM, Valone F, 3rd, Safran MR. Hip arthroscopy: from the beginning to the future--an innovator's perspective. *Knee Surg Sports Traumatol Arthrosc*. Apr 2014;22(4):714-21. doi:10.1007/s00167-014-2859-y
9. Hiza E, Dierckman BD, Guanche C, Applegate G, Shah D, Ryu JH. Reliability of the Tönnis Classification and Its Correlation With Magnetic Resonance Imaging and Intraoperative Chondral Damage. *Arthroscopy*. Feb 2019;35(2):403-408. doi:10.1016/j.arthro.2018.08.036
10. Kovalenko B, Bremjit P, Fernando N. Classifications in Brief: Tönnis Classification of Hip Osteoarthritis. *Clin Orthop Relat Res*. Aug 2018;476(8):1680-1684. doi:10.1097/01.blo.0000534679.75870.5f
11. McDonald JE, Herzog MM, Philippon MJ. Return to play after hip arthroscopy with microfracture in elite athletes. *Arthroscopy*. Feb 2013;29(2):330-5. doi:10.1016/j.arthro.2012.08.028
12. Montgomery SR, Ngo SS, Hobson T, et al. Trends and demographics in hip arthroscopy in the United States. *Arthroscopy*. Apr 2013;29(4):661-5. doi:10.1016/j.arthro.2012.11.005
13. Nwachukwu BU, McFeely ED, Nasreddine AY, Krcik JA, Frank J, Kocher MS. Complications of hip arthroscopy in children and adolescents. *J Pediatr Orthop*. Apr-May 2011;31(3):227-31. doi:10.1097/BPO.0b013e31820cad5
14. Ochiai D. Editorial Commentary: Tönnis Classification-Beauty (or Hip Arthritis) Is Truly in the Eye of the Beholder. *Arthroscopy*. Feb 2019;35(2):409-410. doi:10.1016/j.arthro.2018.10.104
15. Shearer DW, Kramer J, Bozic KJ, Feeley BT. Is hip arthroscopy cost-effective for femoroacetabular impingement? *Clin Orthop Relat Res*. Apr 2012;470(4):1079-89. doi:10.1007/s11999-011-2023-7
416. Trivedi NN, Sivasundaram L, Su CA, et al. Indications and Outcomes of Arthroscopic Labral Reconstruction of the Hip: A Systematic Review. *Arthroscopy*. Jul 2019;35(7):2175-2186. doi:10.1016/j.arthro.2019.02.031

17. Zaltz I, Kelly BT, Larson CM, Leunig M, Bedi A. Surgical treatment of femoroacetabular impingement: what are the limits of hip arthroscopy? *Arthroscopy*. Jan 2014;30(1):99-110. doi:10.1016/j.arthro.2013.10.005

~~Reviewed / Approved by NIA Clinical Guideline Committee~~

POLICY HISTORY

<u>Date</u>	<u>Summary</u>
<u>May 2023</u>	<ul style="list-style-type: none">• <u>Updated references for Femoroacetabular Impingement (FAI)</u>
<u>May 2022</u>	<ul style="list-style-type: none">• <u>Updated references</u>• <u>Removal of sections pertaining to extra-articular (Endoscopic) and articular cartilage restoration procedures (CPT codes have not been assigned to these procedures that currently use unlisted procedure codes).</u>• <u>Clarified: Significant arthritis (joint space less than 2 mm on X-ray or subchondral edema on MRI)</u>• <u>Replaced “patient” with “individual” where appropriate</u>

Reviewed / Approved by NIA Clinical Guideline Committee

Disclaimer: *National Imaging Associates, Inc. (NIA) authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. These policies are not meant to supplant your normal procedures, evaluation, diagnosis, treatment and/or care plans for your patients. Your professional judgement must be exercised and followed in all respects with regard to the treatment and care of your patients. These policies apply to all Evolent Health LLC subsidiaries including, but not limited to, National Imaging Associates (“NIA”). The policies constitute only the reimbursement and coverage guidelines of NIA. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies. NIA reserves the right to review and update the guidelines at its sole discretion. Notice of such changes, if necessary, shall be provided in accordance with the terms and conditions of provider agreements and any applicable laws or regulations.*

GENERAL INFORMATION

~~It is an expectation that all patients receive care/services from a licensed clinician. All appropriate supporting documentation, including recent pertinent office visit notes, laboratory data, and results of any special testing must be provided. If applicable: All prior relevant imaging results and the reason that alternative imaging cannot be performed must be included in the documentation submitted.~~

Disclaimer: Magellan Healthcare service authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. These policies are not meant to supplant your normal procedures, evaluation, diagnosis, treatment and/or care plans for your patients. Your professional judgement must be exercised and followed in all respects with regard to the treatment and care of your patients. These policies apply to all Magellan Healthcare subsidiaries including, but not limited to, National Imaging Associates (“Magellan”). The policies constitute only the reimbursement and coverage guidelines of Magellan. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies. Magellan reserves the right to review and update the guidelines at its sole discretion. Notice of such changes, if necessary, shall be provided in accordance with the terms and conditions of provider agreements and any applicable laws or regulations.

