2025 Evolent Clinical Guidelines for Medical Necessity Review

MUSCULOSKELETAL SURGERY GUIDELINES

Effective July 1, 2025 – July 1, 2026

Guidelines for Clinical Review Determination

Preamble

Evolent is committed to the philosophy of supporting safe and effective treatment for patients. The medical necessity criteria that follow are guidelines for the provision of diagnostic imaging. These criteria are designed to guide both providers and reviewers to the most appropriate diagnostic tests based on a patient's unique circumstances. In all cases, clinical judgment consistent with the standards of good medical practice will be used when applying the guidelines. Determinations are made based on both the guideline and clinical information provided at the time of the request. It is expected that medical necessity decisions may change as new evidence-based information is provided or based on unique aspects of the patient's condition. The treating clinician has final authority and responsibility for treatment decisions regarding the care of the patient.

Guideline Development Process

These medical necessity criteria were developed by Evolent for the purpose of making clinical review determinations for requests for therapies and diagnostic procedures. The developers of the criteria sets included representatives from the disciplines of radiology, internal medicine, nursing, cardiology, and other specialty groups. Evolent's guidelines are reviewed yearly and modified when necessary following a literature search of pertinent and established clinical guidelines and accepted diagnostic imaging practices.

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Evolent Clinical Guideline 1759 for Cervical Spine Surgery

Guideline Number: Evolent_CG_1759	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: July 2008	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

Operative treatment is indicated only when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

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.

Purpose

This guideline outlines the key surgical treatments and indications for common cervical spinal disorders and is based upon the best available evidence. Spine surgery is a complex area of medicine, and this document breaks out the clinical indications by surgical type.

This guideline does not address spinal deformity surgeries or the clinical indications for spinal deformity surgery.

Scope

Spinal surgeries should be performed only by those with extensive and specialized surgical training (neurosurgery, orthopedic surgery). Choice of surgical approach is based on anatomy, pathology, and the surgeon's experience and preference.

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon's discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

Special Note

See Legislative Language for specific mandates in the State of Washington

INDICATIONS

Anterior Cervical Discectomy with Fusion (ACDF) - Single Level

When one of the two following criteria are met [1,2,3,4,5,6,7,8]:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with **spinal cord compression** - immediate surgical evaluation is indicated. Symptoms may include [9]:
    - Upper extremity weakness

- Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
- Disturbance with coordination
- Hyperreflexia
- Hoffmann sign
- Positive Babinski sign and/or clonus

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with evidence of spinal cord or nerve root compression on magnetic resonance imaging (MRI) or computed tomography (CT) imaging - immediate surgical evaluation is indicated

When ALL of the following criteria are met [8,9,10]:

- Cervical radiculopathy or myelopathy from ruptured disc, spondylosis, spinal instability, or deformity
- Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies confirm the presence of spinal cord or spinal nerve root compression (disc herniation or foraminal stenosis) at the level **corresponding with the clinical findings**. Imaging studies may include:
  - MRI (preferred study for assessing cervical spine soft tissue)
  - CT with or without myelography— indicated in individuals in whom MRI is contraindicated; preferred for examining bony structures, or in individuals presenting with clinical symptoms or signs inconsistent with MRI findings (e.g., foraminal compression not seen on MRI)

As first-line treatment without conservative care measures in the following clinical cases [1,2,6,11]:

- As outlined above for myelopathy or progressive neurological deficit scenarios
- Significant spinal cord or nerve root compression due to tumor, infection, or trauma
- Fracture or instability on radiographic films measuring:
  - Sagittal plane angulation of greater than 11 degrees at a single interspace or greater than 3.5mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3mm in an adult and 5mm in a child

Not recommended [10]:

- In asymptomatic or mildly symptomatic cases of cervical spinal stenosis
- In cases of neck pain alone, without neurological deficits, and no evidence of significant spinal nerve root or cord compression on MRI or CT. *See* ***Cervical Fusion for Treatment of Axial Neck Pain Criteria***

Anterior Cervical Discectomy with Fusion (ACDF) – Multiple Levels

When one of the two following criteria are met [1,2,3,4,5,6,7,8]:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression** – immediate surgical evaluation is indicated. Symptoms may include:
  - Upper extremity weakness
  - Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - Disturbance with coordination
  - Hyperreflexia
  - Hoffmann sign
  - Positive Babinski sign and/or clonus
- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images – immediate surgical evaluation is indicated

When ALL of the following criteria are met [8,10]:

- Cervical radiculopathy or myelopathy due to ruptured disc, spondylosis, spinal instability, or deformity
- Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies confirm the presence of spinal cord or spinal nerve root compression (disc herniation or foraminal stenosis) at multiple levels corresponding with the clinical findings. Imaging studies may include any of the following:
  - MRI (preferred study for assessing cervical spine soft tissue)
  - CT with or without myelography - indicated in individuals in whom MRI is contraindicated; preferred for examining bony structures, or in individuals

presenting with clinical symptoms or signs inconsistent with MRI findings (e.g., foraminal compression not seen on MRI)

As first-line treatment without conservative care measures in the following clinical cases [1,2,6,11]:

- As outlined above for myelopathy or progressive neurological deficit scenarios
- Significant spinal cord or nerve root compression due to tumor, infection, or trauma
- Fracture or instability on radiographic films measuring:
  - Sagittal plane angulation of greater than 11 degrees at a single interspace or greater than 3.5mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3mm in an adult and 5mm in a child

Not recommended [10]:

- In asymptomatic or mildly symptomatic cases of cervical spinal stenosis
- In cases of neck pain alone, without neurological deficits, and no evidence of significant spinal nerve root or cord compression on MRI or CT. *See* ***Cervical Fusion for Treatment of Axial Neck Pain Criteria***

Cervical Posterior Decompression with Fusion - Single Level

When one of the two following criteria are met [1,2,3,4,5,6,7,8,12]:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression** - immediate surgical evaluation is indicated**.** Symptoms may include:
  - Upper extremity weakness
  - Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - Disturbance with coordination
  - Hyperreflexia
  - Hoffmann sign
  - Positive Babinski sign and/or clonus
- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images - immediate surgical evaluation is indicated

When ALL of the following criteria are met [8,10]:

- Cervical radiculopathy or myelopathy from ruptured disc, spondylosis, spinal instability, or deformity
- Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies confirm the presence of spinal cord or spinal nerve root compression (disc herniation or foraminal stenosis) at single level **corresponding with the clinical findings**. Imaging studies may include:
  - MRI (preferred study for assessing cervical spine soft tissue)
  - CT with or without myelography – indicated in individuals in whom MRI is contraindicated; preferred for examining bony structures, or in individuals presenting with clinical symptoms or signs inconsistent with MRI findings (e.g., foraminal compression not seen on MRI)

As first-line treatment without conservative care measures in the following clinical cases [1,2,6,11,12]:

- As outlined above for myelopathy or progressive neurological deficit scenarios
- Significant spinal cord or nerve root compression due to tumor, infection, or trauma
- Fracture or instability on radiographic films measuring:
  - Sagittal plane angulation of greater than 11 degrees at a single interspace or greater than 3.5mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3mm in an adult and 5mm in a child

Not recommended [10]:

- In asymptomatic or mildly symptomatic cases of cervical spinal stenosis
- In cases of neck pain alone, without neurological deficits, and no evidence of significant spinal nerve root or cord compression on MRI or CT. *See* ***Cervical Fusion for Treatment of Axial Neck Pain Criteria***

Cervical Posterior Decompression with Fusion – Multiple Levels

When one of the two following criteria are met [1,2,3,4,5,6,7,8,12]:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression –** immediate surgical evaluation is indicated. Symptoms may include:
  - Upper extremity weakness
  - Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - Disturbance with coordination
  - Hyperreflexia

- Hoffmann sign
- Positive Babinski sign and/or clonus

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images – immediate surgical evaluation is indicated

When ALL of the following criteria are met [8,10]:

- Cervical radiculopathy or myelopathy from ruptured disc, spondylosis, spinal instability, or deformity
- Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies indicate significant spinal cord or spinal nerve root compression at multiple levels **corresponding with the clinical findings**. Imaging studies may include:
  - MRI (preferred study for assessing cervical spine soft tissue)
  - CT with or without myelography - indicated in individuals in whom MRI is contraindicated; preferred for examining bony structures, or in individuals presenting with clinical symptoms or signs inconsistent with MRI findings (e.g., foraminal compression not seen on MRI)

As first-line treatment without conservative care measures in the following clinical cases [1,2,6,11,12]:

- As outlined above for myelopathy or progressive neurological deficit scenarios
- Significant spinal cord or nerve root compression due to tumor, infection, or trauma
- Fracture or instability on radiographic films measuring:
  - Sagittal plane angulation of greater than 11 degrees at a single interspace or greater than 3.5mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3mm in an adult and 5mm in a child

Not recommended [10]:

- In asymptomatic or mildly symptomatic cases of cervical spinal stenosis
- In cases of neck pain alone, without neurological deficits, and no evidence of significant spinal nerve root or cord compression on MRI or CT. *See* ***Cervical Fusion for Treatment of Axial Neck Pain Criteria***

Cervical Fusion for Treatment of Axial Neck Pain

Fusion In Individuals with Non-Radicular Cervical Pain

ALL of the following criteria must be met [13,14]

- Improvement of the symptoms has failed or plateaued, and the residual symptoms of pain and functional disability are unacceptable at the **end of 6 to 12 consecutive months of appropriate, active treatment**, or at the end of longer duration of non-operative programs for those debilitated with complex problems

  [**NOTE:** Mere passage of time with poorly guided treatment is not considered an active treatment program]

- All pain generators are adequately defined and treated
- All physical medicine and manual therapy interventions are completed
- X-ray, MRI, or CT demonstrating disc pathology or spinal instability
- Spine pathology limited to one or two levels unless other complicating factors are involved
- Psychosocial evaluation for confounding issues addressed

NOTE: The effectiveness of three-level or greater cervical fusion for non-radicular pain has not been established.

Cervical Posterior Decompression

The following criteria must be met* [1,2,4,5,6,7,8,15]**:**

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression** - immediate surgical evaluation is indicated. Symptoms may include:
  - Upper extremity weakness
  - Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - Disturbance with coordination
  - Hyperreflexia
  - Hoffmann sign
  - Positive Babinski sign and/or clonus
- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with corresponding evidence of spinal cord or nerve root compression on an MRI or CT scan images - immediate surgical evaluation is indicated

When <u>ALL</u> of the following criteria are met [8]**:**

- Cervical radiculopathy from ruptured disc, spondylosis, or deformity
- Failure of **<u>conservative treatment*</u>** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**

- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies confirm the presence of spinal cord or spinal nerve root compression at the level(s) **corresponding with the clinical findings.** Imaging studies may include **any** of the following:
  - MRI (preferred study for assessing cervical spine soft tissue)
  - CT with or without myelography— indicated in individuals in whom MRI is contraindicated; preferred for examining bony structures, or in individuals presenting with clinical symptoms or signs inconsistent with MRI findings (e.g., foraminal compression not seen on MRI)

Cervical decompression performed as first-line treatment without conservative care in the following clinical cases [1,2,6,15]:

- As outlined above for myelopathy or progressive neurological deficit scenarios
- Spinal cord or nerve root compression due to tumor, infection, or trauma

Not Recommended [10]:

- In asymptomatic or mildly symptomatic cases
- In cases of neck pain alone, without neurological deficits and abnormal imaging findings. *See* ***Cervical Fusion for Treatment of Axial Neck Pain Criteria***
- In individuals with kyphosis or at risk for development of postoperative kyphosis

Cervical Artificial Disc Replacement (Single or Two Level) [8,16,17]

When all of the following criteria are met:

- Skeletally mature individual
- Intractable radiculopathy caused by one-or-two-level disease (either herniated disc or spondolytic osteophyte) located at C3-C7
- Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies confirm the presence of compression at the level(s) corresponding with the clinical findings (MRI or CT)

- Use of an FDA-approved prosthetic intervertebral discs

Contraindications

- Symptomatic multiple level disease affecting 3 or more levels
- Infection (at site of implantation or systemic)
- Osteoporosis or osteopenia
- Instability
  - Translation greater than 3mm difference between lateral flexion-extension views at the symptomatic levels
  - 11 degrees of angular difference between lateral flexion-extension views at the symptomatic levels
- Sensitivity or allergy to implant materials
- Severe spondylosis defined as:
  - > 50% disc-height loss compared to minimally or non-degenerated levels; **OR**
  - Bridging osteophytes; **OR**
  - Absence of motion on lateral flexion-extension views at the symptomatic site
- Severe facet arthropathy
- Ankylosing spondylitis
- Rheumatoid arthritis
- Previous fracture with anatomical deformity
- Ossification of the posterior longitudinal ligament (OPLL)
- Active cervical spine malignancy

Cervical Fusion Without Decompression

Cervical fusion without decompression will be reviewed on a **case-by-case basis**. Atraumatic instability due to Down Syndrome-related spinal deformity, rheumatoid arthritis, or basilar invagination are uncommon, but may require cervical fusion.

Cervical Anterior Decompression (Without Fusion) [8,18]

All requests for anterior decompression without fusion will be reviewed on a **case-by-case basis**.

RISK FACTORS AND CONSIDERATIONS [19,20,21]

- Early intervention may be required in acute incapacitating pain or with progressive neurological deficits
- Individuals may present with pain, numbness, extremity weakness, loss of coordination, gait issues, or bowel and bladder complaints. Non-operative treatment is an important role in the care of individuals with degenerative cervical spine disorders. If these symptoms progress to neurological deficits, from corresponding

spinal cord or nerve root compression, surgical intervention may be warranted.

- Obesity is an identified risk factor for surgical site infection. For individuals undergoing posterior cervical decompression with or without fusion for a diagnosis other than myelopathy, BMI should be less than 40. These cases will be reviewed on a **case-by-case basis** and may be denied given the increased risk of infection.
- If operative intervention is being considered, especially procedures that require a fusion, it is required the person refrain from smoking/nicotine for **at least six weeks** prior to surgery and **during the time of healing**.
- In situations requiring possible need for an operation, a second opinion may be necessary. Psychological evaluation is strongly encouraged before surgery is performed for isolated axial pain to determine if the individual will likely benefit from the treatment.
- It is imperative for the clinician to rule out non-physiologic modifiers of pain presentation, or non-operative conditions mimicking radiculopathy, myelopathy or spinal instability (peripheral compressive neuropathy, chronic soft tissue injuries, and psychological conditions), prior to consideration of elective surgical intervention.

LEGISLATIVE LANGUAGE

Washington

20170120B – Artificial Disc Replacement – Re-review [(22)]

Washington State Health Care Authority

Health Technology Clinical Committee

Final Findings and Decision

HTCC coverage determination:

Cervical artificial disc replacement is a **covered benefit with conditions**, consistent with the criteria identified in the reimbursement determination.

HTCC Reimbursement Determination:

Limitations of coverage:

Patients must meet FDA approved indications for use and not have any contraindications. FDA approval is device specific but includes:

- Skeletally mature patients
- Disc replacement following one- or two-level discectomy for intractable symptomatic radiculopathy or myelopathy confirmed by patient findings and imaging.

Patients must have advanced imaging and clinical evidence of corresponding nerve root or spinal cord compression and have failed or be inappropriate for non-operative care. For two-level procedures, objective evidence of radiculopathy, myelopathy or spinal cord compression at two consecutive levels is required.

Non-covered indicators: NA

Washington State Health Care Authority

Health Technology Clinical Committee

Final Findings and Decision

HTCC Coverage Determination:

Cervical Spinal Fusion for Degenerative Disc Disease is a **covered benefit with conditions**.

HTCC Reimbursement Determination:

Limitations of Coverage

Cervical Spinal Fusion is covered when the following conditions are met:

1. Patients with signs and symptoms of radiculopathy; and
2. Advanced imaging evidence of corresponding nerve root compression; and
3. Failure of conservative (non-operative) care.

Non-Covered Indicators

Cervical Spinal Fusion is not a covered benefit for neck pain without evidence of radiculopathy or myelopathy.

CODING AND STANDARDS

Coding

CPT Codes

- **Anterior Cervical Discectomy with Fusion (ACDF) - Single Level:** 22548, 22551, 22554
- **Anterior Cervical Discectomy with Fusion (ACDF) - Multiple Levels:** +22552, +22585
- **Cervical Posterior Decompression with Fusion - Single Level:** 22590, 22595, 22600
- **Cervical Posterior Decompression with Fusion - Multiple Levels:** 22595, +22614
- **Cervical Artificial Disc Replacement - Single Level:** 22856, 22861, 22864
- **Cervical Artificial Disc Replacement - Two Levels:** +22858, +0095T, +0098T
- **Cervical Posterior Decompression (without fusion):** 63001, 63015, 63020, +63035, 63040, +63043, 63045, +63048, 63050, 63051
- **Cervical Anterior Decompression (without fusion):** 63075, +63076

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

*Conservative Treatment

Non-operative conservative treatment should include a multimodality approach consisting of at least one (1) active and one (1) inactive component targeting the affected spinal region.

- Active Modalities
  - Physical therapy
  - Physician-supervised home exercise program (HEP)**
  - Chiropractic Care
- Inactive Modalities
  - Medications (e.g., NSAIDs, steroids, analgesics)
  - Injections (e.g., epidural steroid injection, selective nerve root block)
  - Medical devices (e.g., TENS unit, bracing)

**Home Exercise Program (HEP)

The following two elements are required to meet conservative therapy guidelines for HEP:

- Documentation of an exercise prescription/plan provided by a physician, physical therapist, or chiropractor; **AND**
- Follow-up documentation regarding completion of HEP after the required 6-week timeframe or inability to complete HEP due to a documented medical reason (i.e., increased pain or inability to physically perform exercises)

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 307 for Cervical Spine Surgery • Updated guideline formatting to Evolent standard • Added language about failure of conservative treatment to the Indications • Updated references
December 2023	• Added legislative language for WA state • Added conservative care language
May 2023	• Updated references • Moved General Information phrase to top of GL

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

REFERENCES

1. Guo S, Lin T, Wu R, Wang Z, Chen G. The Pre-Operative Duration of Symptoms: The Most Important Predictor of Post-Operative Efficacy in Patients with Degenerative Cervical Myelopathy. Brain Sci. 2022; 12: 1088. 10.3390/brainsci12081088.

2. Kwok S S S, Cheung J P Y. Surgical decision-making for ossification of the posterior longitudinal ligament versus other types of degenerative cervical myelopathy: anterior versus posterior approaches. BMC Musculoskelet Disord. 2020; 21: 823. 10.1186/s12891-020-03830-0.

3. Luyao H, Xiaoxiao Y, Tianxiao F, Yuandong L, Ping W. Management of Cervical Spondylotic Radiculopathy: A Systematic review. Global Spine J. Oct 2022; 12: 1912-1924. 10.1177/21925682221075290.

4. Nunna R, Khalid S, Chiu R, Parola R, Fessler R et al. Anterior vs Posterior Approach in Multilevel Cervical Spondylotic Myelopathy: A Nationwide Propensity-Matched Analysis of Complications, Outcomes, and Narcotic Use. Int J Spine Surg. Feb 2022; 16: 88-94. 10.14444/8198.

5. Park D, Jenne J, Bode K, Throckmorton T, Fischer S. Cervical Spondylotic Myelopathy: Surgical Treatment Options. OrthoInfo. 2022; Accessed: September 4, 2024. https://orthoinfo.aaos.org/en/treatment/cervical-spondylotic-myelopathysurgical-treatment-options/.

6. Tetreault L, Karpova A, Fehlings M. Predictors of outcome in patients with degenerative cervical spondylotic myelopathy undergoing surgical treatment: results of a systematic review. Eur Spine J. Apr 2015; 24 Suppl 2: 236-51. 10.1007/s00586-013-2658-z.

7. Xu Y, Chen F, Wang Y, Zhang J, Hu J. Surgical approaches and outcomes for cervical myelopathy with increased signal intensity on T2-weighted MRI: a meta-analysis. J Orthop Surg Res. 2019; 14: 224. 10.1186/s13018-019-1265-z.

8. North American Spine Society. Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders. 2010; Retrieved 2023, from NASS Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care.

9. Lebl D R, Bono C M. Update on the Diagnosis and Management of Cervical Spondylotic Myelopathy. Journal of the American Academy of Orthopaedic Surgeons. 2015; 23: 648-660. 10.5435/JAAOS-D-14-00250.

10. Nikolaidis I, Fouyas I P, Sandercock P A, Statham P F. Surgery for cervical radiculopathy or myelopathy. Cochrane Database Syst Rev. 2010; 2010: Cd001466. 10.1002/14651858.CD001466.pub3.

11. Spitnale M, Grabowski G. Classification in Brief: Subaxial Cervical Spine Injury Classification and Severity Score System. Clin Orthop Relat Res. Oct 2020; 478: 2390-2398. 10.1097/corr.0000000000001463.

12. Audat Z, Fawareh M, Radydeh A, Obeidat M, Odat M et al. Anterior versus posterior approach to treat cervical spondylotic myelopathy, clinical and radiological results with long period of follow-up. SAGE Open Med. 2018; 6: 2050312118766199. 10.1177/2050312118766199.

13. Riew K, Ecker E, Dettori J. Anterior cervical discectomy and fusion for the management of axial neck pain in the absence of radiculopathy or myelopathy. Evid Based Spine Care J. Dec 2010; 1: 45-50. 10.1055/s-0030-1267067.

14. Harrop J S, Gonzalez G A, Qasba R K, Porto G, Wainwright J V et al. Does axial cervical pain improve with surgical fusion? A meta-analysis. Journal of Neurosurgery: Spine. 2023; 1-10. 10.3171/2023.4.SPINE23185.

15. Revesz D, Charalampidis A, Gerdhem P. Effectiveness of laminectomy with fusion and laminectomy alone in degenerative cervical myelopathy. Eur Spine J. May 2022; 31: 1300-1308. 10.1007/s00586-022-07159-1.

16. Eseonu K, Laurent E, Bishi H, Raja H, Ravi K. A Retrospective Comparative Study of Long-Term Outcomes Following Cervical Total Disc Replacement Versus Anterior Cervical Discectomy and Fusion. Cureus. Dec 2022; 14: e32399. 10.7759/cureus.32399.

17. Nunley P, Frank K, Stone M. Patient Selection in Cervical Disc Arthroplasty. International Journal of Spine Surgery. 2020; 14: S29-S35. 10.14444/7088.

18. Donk R D, Verbeek A L M, Verhagen W I M, Groenewoud H, Hosman A J F. Whats the best surgical treatment for patients with cervical radiculopathy due to single-level degenerative disease? A randomized controlled trial. PLoS One. 2017; 12: e0183603. 10.1371/journal.pone.0183603.

19. Badiee R, Mayer R, Pennicooke B, Chou D, Mummaneni P. Complications following posterior cervical decompression and fusion: a review of incidence, risk factors, and prevention strategies. J Spine Surg. Mar 2020; 6: 323-333. 10.21037/jss.2019.11.01.

20. Jackson K 2, Devine J. The Effects of Smoking and Smoking Cessation on Spine Surgery: A Systematic Review of the Literature. Global Spine J. Nov 2016; 6: 695-701. 10.1055/s-0036-1571285.

21. Rajaee S, Kanim L, Bae H. National trends in revision spinal fusion in the USA: patient characteristics and complications. Bone Joint J. Jun 2014; 96-b: 807-16. 10.1302/0301-620x.96b6.31149.

22. Washington State Health Care Authority. Artificial disc replacement - Re-review [Adopted March 17, 2017]. Washington State Health Care Authority. 2008; Accessed: September 23, 2024. www.hca.wa.gov/assets/program/adr-rr-final-findings-decision-20170317.pdf.

23. Washington State Health Care Authority. Cervical Spinal Fusion for Degenerative Disc Disease [Adopted May 17, 2013]. Washington State Health Care Authority. 2013; Accessed: September 23, 2024. www.hca.wa.gov/assets/program/csf_final_findings_decision_052013%5B1%5D.pdf.

Evolent Clinical Guideline 1766 for Lumbar Spine Surgery

Guideline Number:	Applicable Codes	
Evolent_CG_1766		
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date:	**Last Revised Date:**	**Implementation Date:**
June 2013	November 2024	July 2025

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STATEMENT

Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

Aggressive surgical approaches to fusion may be an indication for denial of cases (when such techniques have not been demonstrated to be superior to less morbid techniques) or recommendation for alternative procedure. Because of variable outcomes with fusion surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

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.

Purpose

This guideline outlines the key surgical treatments and indications for common lumbar spinal disorders and is a consensus document based upon the best available evidence. Spine surgery is a complex area of medicine, and this document breaks out the clinical indications by surgical type.

This guideline does not address spinal deformity surgeries or the clinical indications for spinal deformity surgery.

Scope

Spinal surgeries should be performed only by those with extensive and specialized surgical training (neurosurgery, orthopedic surgery). Choice of surgical approach is based on anatomy, pathology, and the surgeon's experience and preference.

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon’s discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

Special Note

See Legislative Language for specific mandates for the State of Washington

INDICATIONS

Lumbar Discectomy/Microdiscectomy [1,2]

Surgical Indications

- When **ALL of the following** are present:
  - Primary radicular symptoms noted upon clinical exam that significantly hinders daily activities
  - Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

  - Imaging studies showing evidence of inter-vertebral disc herniation that correlate exactly with the individual's symptoms/signs

Other Indications

Microdiscectomy may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios:

- Progressive nerve compression resulting in an acute neurologic deficit (motor) due to herniated disc. The neurological deficits should be significant: 0-2/5 on the motor function scale for L5 or S1 roots **OR** 0-3/5 for L3 or L4 roots. Lesser degrees of motor dysfunction may resolve with conservative treatment and are not considered an indication for early surgery
- Cauda equina syndrome

Lumbar Decompression [1,2,3,4]

Laminectomy, Laminotomy, Facetectomy, and Foraminotomy

Surgical Indications

- When **ALL of the following** are present:
  - Neurogenic claudication, and/or radicular leg pain that impairs daily activities
  - Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies demonstrating moderate to severe stenosis consistent with clinical signs/symptoms

Other Indications

Lumbar decompression may be used as the first line of treatment (*no conservative treatment required*) in any of the following clinical scenarios:

- Progressive nerve compression resulting in an acute neurologic (motor) deficit. The neurological deficits should be significant: 0-2/5 on the motor function scale for L5 or S1 roots **OR** 0-3/5 for L3 or L4 roots. Lesser degrees of motor dysfunction may resolve with conservative treatment and are not considered an indication for early surgery
- Cauda equina syndrome
- Spinal stenosis due to tumor, infection, or trauma

Lumbar Spine Fusion [1,3,4,5,6,7,8]

Single Level Fusion With or Without Decompression

Surgical Indications

- When **ALL of the following** are present:
  - Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities **for at least 6 months**
  - Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies corresponding to the clinical findings
- **At least ONE of the following** clinical conditions:
  - Spondylolisthesis (neural arch defect - spondylolytic spondylolisthesis, degenerative spondylolisthesis, and congenital unilateral neural arch hypoplasia)
  - Evidence of segmental instability - Excessive motion, as in degenerative spondylolisthesis, segmental instability, and surgically induced segmental instability
  - Revision surgery for failed previous operation(s) for pseudoarthrosis at the same level at least 9-12 months from prior surgery if significant functional gains are anticipated

- Revision surgery for failed previous operation(s) repeat disk herniations if significant functional gains are anticipated (Note: Many recurrent disc herniations can be treated with discectomy alone, so specific indications for the addition of fusion will be required)
- Fusion for the treatment of spinal tumor, cancer, or infection
- Chronic low back pain or degenerative disc disease (disc degeneration without significant neurological compression presenting with low back pain) must have failed at least 6 months of appropriate active non-operative treatment (**completion of a comprehensive cognitive-behavioral rehabilitation program is mandatory**) and must be evaluated on a case-by-case basis

NOTE: The results of several randomized trials suggest that in many degenerative cases un-instrumented posterolateral intertransverse fusion has similar results to larger instrumented (PLIF, TLIF, etc.) fusion techniques with fewer morbidities and less likelihood of revision surgery. Accordingly, specific findings suggesting more significant instability should be present when larger techniques are used (gaping of facets, gross motion on flexion/extension radiographs, wide disc spaces) [7,9]

Other Indications

Lumbar spinal fusion may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios [1]:

- Progressive nerve compression resulting in an acute neurologic deficit (motor) **AND**
  - One of the aforementioned clinical conditions, except chronic low back pain or degenerative disc disease. The neurological deficits must be significant: 0-2/5 on the motor function scale for L5 or S1 roots **OR** 0-3/5 for L3 or L4 roots. Lesser degrees of motor dysfunction may resolve with conservative treatment and are not considered an indication for early surgery.
- Cauda equina syndrome **AND**
  - One of the aforementioned clinical conditions, except chronic low back pain or degenerative disc disease

Multi-Level Fusion With or Without Decompression

Surgical Indications

- When **ALL of the following** are present:
  - Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for **at least 6 months**
  - Failure of **conservative treatment*** for a minimum of six (6) weeks within the last six (6) months;

NOTE - Failure of conservative treatment is defined as one of the following:

- Lack of meaningful improvement after a full course of treatment; **OR**
- Progression or worsening of symptoms during treatment; **OR**
- Documentation of a medical reason the member is unable to participate in treatment

Closure of medical or therapy offices, patient inconvenience, or noncompliance without explanation does not constitute "inability to complete" treatment.

- Imaging studies corresponding to the clinical findings
- **At least ONE of the following** clinical conditions:
  - Multiple level spondylolisthesis (Note: Fusions in cases with single level spondylolisthesis should be limited to the unstable level)
  - Fusion for the treatment of spinal tumor, trauma, cancer, or infection affecting multiple levels
  - Intra-operative segmental instability

Other Indications

Lumbar spinal fusion may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios [(1)]:

- Progressive nerve compression resulting in an acute neurologic deficit (motor) **AND**
  - One of the aforementioned clinical conditions except chronic low back pain or degenerative disc disease. The neurological deficits must be significant: 0-2/5 on the motor function scale for L5 or S1 roots **OR** 0-3/5 for L3 or L4 roots. Lesser degrees of motor dysfunction may resolve with appropriate conservative treatment and are not considered an indication for early surgery
- Cauda equina syndrome **AND**
  - One of the aforementioned clinical conditions, except chronic low back pain or degenerative disc disease

Repeat Lumbar Spine Fusion Operations

Repeat lumbar fusion operations will be reviewed on a case-by-case basis upon submission of medical records and imaging studies that demonstrate remediable pathology**.** The below must also be **documented and available for review of repeat** fusion requests:

- Rationale as to why surgery is preferred over other non-invasive or less invasive treatment procedures
- Signed documentation that the individual has participated in the decision-making process and understands the high rate of failure/complications

Relative Contraindications for Spine Surgery

NOTE: Cases may not be approved if the below contraindications exist:

- **Medical contraindications to surgery** (e.g., osteoporosis; infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection) [(10,11,12)]
- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [(1,12)] Individuals with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be reviewed on a case-by-case basis and the surgery may be

denied for risk of failure.

- **Active Tobacco or Nicotine use prior to fusion surgery**. Individuals must be free from smoking and/or nicotine use for at least six weeks prior to surgery and during the entire period of fusion healing. [13,14]
- **Morbid Obesity**. Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation. [15,16] These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure.

Non-Covered Procedures

- Percutaneous lumbar discectomy
- Radiofrequency disc decompression
- Percutaneous decompressions
- Laser discectomy
- Intradiscal electrothermal annuloplasty (IDEA) or more commonly called IDET (intradiscal electrothermal therapy)
- Nucleus pulpous replacement
- Pre-sacral fusion

LEGISLATIVE LANGUAGE

Washington

20151120A – Lumbar Fusion for Degenerative Disc Disease [17]

Washington State Health Care Authority

Health Technology Clinical Committee

Findings and Decision

HTCC Coverage Determination:

Lumbar fusion for degenerative disc disease uncomplicated by comorbidities is **not a covered benefit.**

The population addressed in this decision includes individuals > 17 years of age with chronic (3 or more months) lumbar pain and uncomplicated degenerative disc disease; excluded conditions include radiculopathy, spondylolisthesis (> Grade 1) or severe spinal stenosis, as well as acute trauma or systemic disease affecting the lumbar spine (e.g., malignancy).

HTCC Reimbursement Determination:

Limitations of Coverage: N/A

Non-Covered Indicators: N/A

20180518A - Surgery for Lumbar Radiculopathy/Sciatica [18]

Washington State Health Care Authority

Health Technology Clinical Committee

Findings and Decision

HTCC coverage determination:

Surgery for lumbar radiculopathy or sciatica is a **covered benefit with conditions**.

HTCC reimbursement determination:

Limitations of coverage:

Open discectomy or microdiscectomy with or without endoscopy (lumbar laminectomy, laminotomy, discectomy, foraminotomy) are covered with the following conditions:

- For adult patients with lumbar radiculopathy with subjective and objective neurologic findings that are corroborated with an advanced imaging test (i.e., Computed Tomography (CT) scan, Magnetic Resonance Imaging (MRI) or myelogram), AND
- There is a failure to improve with a minimum of six weeks of non-surgical care, unless progressive motor weakness is present

Non-covered indicators:

Minimally invasive procedures that do not include laminectomy, laminotomy, or foraminotomy including but not limited to energy ablation techniques, Automated Percutaneous Lumbar Discectomy (APLD), percutaneous laser, nucleoplasty, etc. are not covered.

CODING AND STANDARDS

Coding

CPT Codes

- **Lumbar Microdiscectomy:** 62380, 63030, +63035
- **Lumbar Decompression:** 63005, 63012, 63017, 63042, +63044, 63047, +63048, 63056, +63057
- **Lumbar Fusion - Single Level:** 22533, 22558, 22612, 22630, 22633, +63052, +63053
- **Lumbar Fusion - Multiple Levels:** +22534, +22585, +22614, +22632, +22634, +63052, +63053

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☐	Medicare Advantage

BACKGROUND

Definitions

Lumbar Discectomy/Microdiscectomy is a surgical procedure to remove part of the damaged spinal disc. The damaged spinal disc herniates into the spinal canal and compresses the nerve roots. Nerve root compression leads to symptoms like low back pain, radicular pain, numbness and tingling, muscular weakness, and paresthesia. Typical disc herniation pain is exacerbated with any movement that causes the disc to increase pressure on the nerve roots.

Lumbar Decompression (**Laminectomy, Laminotomy, Facetectomy, and Foraminotomy):** Laminectomy is a common decompression surgery. The American Association of Neurological Surgeons defines laminectomy as a surgery to remove the back part of vertebra, lamina, to create more space for the spinal cord and nerves. The most common indication for laminectomy is spinal stenosis. Spondylolisthesis and herniated disk are also frequent indications for laminectomy. Decompression surgery is usually performed as part of lumbar fusion surgery.

Lumbar Fusion Surgery: Lumbar spinal fusion (arthrodesis) is a surgical procedure used to treat spinal conditions of the lumbar, e.g., degenerative disc disease, spinal stenosis, injuries/fractures of the spine, spinal instability, and spondylolisthesis. Spinal fusion is a "welding" process that permanently fuses or joins together two or more adjacent bones in the spine, immobilizing the vertebrae and restricting motion at a painful joint. It is usually performed after other surgical procedures of the spine, such as discectomy or laminectomy. The goal of fusion is to increase spinal stability, reduce irritation of the affected nerve roots, compression on the spinal cord, disability, and pain and/or numbness. Clinical criteria for single level fusion versus multiple level fusions are outlined under the indications section.

Isolated Low Back Pain: Pain isolated to the lumbar region of the spine and the surrounding paraspinal musculature. Also referred to 'mechanical low back pain' or 'discogenic pain.' No associated neurogenic claudication or radiculopathy.

*Conservative Treatment

Non-operative conservative treatment should include a multimodality approach consisting of at least one (1) active and one (1) inactive component targeting the affected spinal region.

- Active Modalities

- Physical therapy
- Physician-supervised home exercise program (HEP)**
- Chiropractic Care

- Inactive Modalities
  - Medications (e.g., NSAIDs, steroids, analgesics)
  - Injections (e.g., epidural steroid injection, selective nerve root block)
  - Medical devices (e.g., TENS unit, bracing)

**Home Exercise Program (HEP)

The following two elements are required to meet conservative therapy guidelines for HEP:

- Documentation of an exercise prescription/plan provided by a physician, physical therapist, or chiropractor; **AND**
- Follow-up documentation regarding completion of HEP after the required 6-week timeframe or inability to complete HEP due to a documented medical reason (i.e., increased pain or inability to physically perform exercises)

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 304 for Lumbar Spine Surgery • Updated guideline formatting to Evolent standard • The duration for indicating lumbar spine fusion as revision surgery following a failed operation modified from 6-12 to 9-12 months post-surgery • Removed the word ‘severe’ before osteoporosis as a Relative Contraindication • Edited language in the Relative Contraindications section for consistency across guidelines • Updated references
December 2023	• Added conservative tx language • Added legislative language for WA state • Removed endoscopic surgery as non-covered procedure
May 2023	• Updated references • Removed Claims Billing/Coding from background

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

REFERENCES

1. North American Spine Society. Diagnosis and Treatment of Lumbar Disc Herniation with Radiculopathy. NASS. 2012; https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/LumbarDiscHerniation.pdf.

2. Li Y, Fredrickson V, Resnick D. How should we grade lumbar disc herniation and nerve root compression? A systematic review. Clin Orthop Relat Res. 2015; 473: 1896-1902. 10.1007/s11999-014-3674-y.

3. Delitto A, Piva S, Moore C, Fritz J, Wisniewski S et al. Surgery Versus Nonsurgical Treatment for Lumbar Spinal Stenosis: A Comparative Effectiveness Randomized Trial with 2-Year Follow-up. Annals of Internal Medicine. 2015; 162: 465-473. 10.7326/M14-1420.

4. Weinstein J, Lurie J, Tosteson T, Hanscom B, Tosteson A et al. Surgical Versus Nonsurgical Treatment for Lumbar Degenerative Spondylolisthesis. N Engl J Med. 2007; 356: 2257-2270. 10.1056/NEJMoa070302.

5. Eck J, Sharan A, Ghogawala Z, Resnick D, Watters 3rd W et al. Guideline update for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 7: lumbar fusion for intractable low-back pain without stenosis or spondylolisthesis. J Neurosurg Spine. 2014; 21: 42-47. 10.3171/2014.4.Spine14270.

6. Gonzalez G, Porto G, Hines K, Franco D, Montenegro T et al. Clinical Outcomes with and without Adherence to Evidence-Based Medicine Guidelines for Lumbar Degenerative Spondylolisthesis Fusion Patients. J Clin Med. 2023; 12: 10.3390/jcm12031200.

7. Kang Y, Ho Y, Chu W, Chou W, Cheng S. Effects and Safety of Lumbar Fusion Techniques in Lumbar Spondylolisthesis: A Network Meta-Analysis of Randomized Controlled Trials. Global Spine J. 2022; 12: 493-502. 10.1177/2192568221997804.

8. North American Spine Society. Diagnosis and Treatment of Degenerative Lumbar Spondylolisthesis: 2nd Edition. NASS. 2014; https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/Spondylolisthesis.pdf.

9. Said E, Abdel-Wanis M, Ameen M, Sayed A, Mosallam K et al. Posterolateral Fusion Versus Posterior Lumbar Interbody Fusion: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. Global Spine J. 2022; 12: 990-1002. 10.1177/21925682211016426.

10. Puvanesarajah V, Shen F, Cancienne J, Novicoff W, Jain A et al. Risk factors for revision surgery following primary adult spinal deformity surgery in patients 65 years and older. J Neurosurg Spine. 2016; 25: 486-493. 10.3171/2016.2.Spine151345.

11. Varshneya K, Jokhai R, Fatemi P, Stienen M, Medress Z et al. Predictors of 2-year reoperation in Medicare patients undergoing primary thoracolumbar deformity surgery. J Neurosurg Spine. 2020; 1-5. 10.3171/2020.5.Spine191425.

12. Rajaee S, Kanim L, Bae H. National trends in revision spinal fusion in the USA: patient characteristics and complications. Bone Joint J. 2014; 96-b: 807-816. 10.1302/0301-620x.96b6.31149.

13. Jackson 2nd K, Devine J. The Effects of Smoking and Smoking Cessation on Spine Surgery: A Systematic Review of the Literature. Global Spine J. 2016; 6: 695-701. 10.1055/s-0036-1571285.

14. Nunna R, Ostrov P, Ansari D, Dettori J, Godolias P et al. The Risk of Nonunion in Smokers Revisited: A Systematic Review and Meta-Analysis. Global Spine J. 2022; 12: 526-539. 10.1177/21925682211046899.

15. Feeley A, McDonnell J, Feeley I, Butler J. Obesity: An Independent Risk Factor for Complications in Anterior Lumbar Interbody Fusion? A Systematic Review. Global Spine J. 2022; 12: 1894-1903. 10.1177/21925682211072849.

16. Cofano F, Perna G, Bongiovanni D, Roscigno V, Baldassarre B et al. Obesity and Spine Surgery: A Qualitative Review About Outcomes and Complications. Is It Time for New Perspectives on Future Researches?. Global Spine J. 2022; 12: 1214-1230. 10.1177/21925682211022313.

17. Washington State Health Care Authority. Lumbar Fusion for Degenerative Disc Disease [Adopted January 15, 2016]. Washington State Health Care Authority. 2007; Accessed: September 23, 2024. www.hca.wa.gov/assets/program/lumbar_fusion-rr_final_findings_decision_012016%5B1%5D.pdf.

18. Washington State Health Care Authority. Surgery for Lumbar Radiculopathy/Sciatica [Adopted July 13, 2018]. Washington State Health Care Authority. 2018; Accessed: September 23, 2024. www.hca.wa.gov/assets/program/surgery-lumbar-radiculopathy-sciatica-final-findings-decision-201800713.pdf.

Evolent Clinical Guideline 1761 for Hip Arthroplasty

Guideline Number: Evolent_CG_1761	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: November 2015	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

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.

Purpose

This guideline addresses elective, non-emergent hip arthroplasty (hip replacement) procedures, including total hip arthroplasty, resurfacing arthroplasty, and revision/conversion arthroplasty procedures.

Scope

Arthritis is the most common cause of chronic hip pain and disability. Degenerative, age-related osteoarthritis causes cartilage to wear away and eventually the bones within the joint rub against each other causing pain and stiffness.

Special Note

See legislative language for specific mandates for the State of Washington

GENERAL REQUIREMENTS

- Elective hip arthroplasty may be considered if the following general criteria are met:
  - Hip pain with documented loss of function, which may include painful weight bearing, painful or inadequate range of motion to accomplish age-appropriate activities of daily living (ADLs) and/or employment, and mechanical catching, locking
  - Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with a total joint replacement when comorbidities exist as it pertains to the increased risk of complications (1)
  - 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
  - Individual has good oral hygiene and does not have major dental work scheduled or anticipated (ideally, within one year of joint replacement), due to increased post-surgical infection risk
- Clinical notes should address:
  - Symptom onset, duration, and severity

- Loss of function and/or limitations
- Type and duration of non-operative management modalities
- Discussion with patient regarding decision making and timing

- Non-operative management must include at least **TWO** or more of the following unless otherwise specified in clinical indications below [(2)]:
  - Rest or activity modifications/limitations
  - Weight reduction for individual with elevated BMI
  - Protected weight-bearing with cane, walker, or crutches
  - Physical therapy modalities
  - Physician-supervised exercise program (including home exercise program)
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
  - Intra-articular injection(s)

INDICATIONS

Total Hip Arthroplasty (THA)

There is no medical necessity to perform THA in individuals with severe radiological disease and no symptoms, except in the case of malignancy.

THA may be considered medically necessary as indicated in either sections 1 or 2 [(1,3,4)]:

- **Section One**
  - There is persistent pain and documented loss of function with radiographic evidence of advanced disease from any of the following:
    - Rheumatoid arthritis
    - Femoral neck fracture
    - Malignancy
    - Dysplasia
    - Avascular necrosis confirmed by imaging (radiographs, MRI, or other advanced imaging)
    - Radiographs demonstrate bone-on-bone articulation
- **Section Two**
  - There is persistent pain and documented loss of function for at least 12 weeks and includes all the following:
    - Physical exam demonstrates findings of hip pathology as evidence by **one or more** of the following (**PE is not required if bone-on-bone narrowing is present on X-ray**):
      - Painful, limited range of motion or antalgic gait
      - Contracture
      - Crepitus

- Leg length difference

- Radiographic findings show evidence of advanced arthritic changes, described as Tönnis grade 2 or 3 [see **Grading Appendix**] or described as X-rays showing advanced changes (e.g., severe narrowing, bone-on-bone compartment collapse, subchondral sclerosis or cysts, osteophyte formation and/or bony deformity etc.)

  X-rays described only as showing 'severe', 'advanced' or 'end-stage' arthritis require more definitive descriptions as stated above (weightbearing X-rays are not required)

  NOTE: MRI should not be the primary radiographic test used to determine the presence or severity of arthritic changes in the joint.

- Failure of at least 12 weeks of non-operative treatment, including at least two of the following
  - Rest or inactivity modifications/limitations
  - Weight reduction for individual with elevated BMI
  - Protected weight-bearing with cane, walker, or crutches
  - Physical therapy modalities
  - Physician supervised exercise program (including home exercise program)
  - Pharmacological treatment: oral/topical NSAIDs, acetaminophen, or analgesics
  - Intra-articular corticosteroid injection
- No corticosteroid injection into the joint within 12 weeks of surgery [1,5,6,7]

Simultaneous Bilateral THA

- **ALL** Requests for simultaneous bilateral total hip replacements should clearly indicate why simultaneous THA is preferable to staged procedures. Associated risks with simultaneous bilateral total hip replacements should also be discussed with the individual and documented in the medical record [8,9]

Absolute Contraindications

- Active infection (local or remote). If a local or remote infection is documented in the patient's history, records should clearly demonstrate that the previous infection had been treated and symptoms have resolved or that the individual has no clinical signs or symptoms of the previous infection at the time of the operation [3]
- Any corticosteroid injection into the joint within 12 weeks of surgery [1,5,6,7]

Relative Contraindications [3,4]

- Prior infection at site (unless aspiration with cultures and serology [CBC with differential, ESR, CRP] demonstrates no infection). If prior infection at site, tissue biopsies should be sent intra-operatively to exclude latent/dormant infection
- Documented allergy to any proposed component
- BMI > 40kg/m^2; without discussion of increased risk conferred by BMI
- Compromised soft tissue envelope

- Uncontrolled comorbidities [10]

Hip Resurfacing Arthroplasty

Hip resurfacing procedures will be reviewed on a case-by-case basis.

Hip resurfacing arthroplasty may be considered medically necessary when **ALL** of the following criteria are met [11,12]:

- Pain and documented loss of function are present for at least 12 weeks
- 12 weeks of non-operative treatment have failed to improve symptoms
- Physical exam has typical findings of hip pathology as evidenced by **one or more** of the following:
  - Painful, limited range of motion or antalgic gait
  - Contracture
  - Crepitus
  - Leg length difference
- Imaging demonstrates advanced hip joint pathology of at least Tönnis grade 2 or 3, or avascular necrosis involving less than 50% of the femoral head [see **Grading Appendix**]
- Male patient is less than 65 years old or female patient is less than 55 years old [13]
- BMI < 40 [14]
- No corticosteroid injection into the joint within 12 weeks of surgery [1,5,6,7]

Absolute Contraindications [11,12,13,14]

- Any corticosteroid injection into the joint within 12 weeks of surgery [1,5,6,7]
- Osteoporosis or osteopenia (DEXA scan bone mineral density evaluation)
  - Osteoporosis or poor bone quality may increase the risk of fixation failure or femoral neck fracture after hip resurfacing
  - Other co-morbidities (including medications that contribute to decreased bone mineral density that may contribute to active bone demineralization (glucocorticoid steroids, anticoagulants, aromatase inhibitors, thiazolidinediones, proton pump inhibitors, loop diuretics, antiretrovirals, anti-psychotics, anti-seizures, certain breast cancer drugs, certain prostate cancer drugs, progestin's, aluminum containing antacids) [15]
- Cystic degeneration at the junction of the femoral head and neck on radiographs or MRI or CT
- Malignancy at the proximal femur
- Evidence of current, ongoing, or inadequately treated hip infection, or sepsis
- Female of child-bearing age (due to metal ions circulating in blood with potential risk to fetus)
- Chronic renal insufficiency (due to metal ions circulating and potential renal toxicity)
- Metal allergy

Revision/Conversion Arthroplasty

Hip revision/conversion arthroplasty for a prior hip arthroplasty, fracture ORIF, or **ANY** prior hip surgery may be considered medically necessary when the following criteria in either section one or section two are met [16,17]:

- **Section One**
  - Previous removal of infected hip prosthesis*
  - No evidence of current, ongoing, or inadequately treated hip infection (ruled out by normal inflammatory markers (ESR and CRP) or significant improvement in these markers. If these inflammatory markers are elevated, further evaluation is required including an aspiration with synovial fluid WBC count, gram stain and cultures, or an intraoperative frozen biopsy
  - A clear statement by the treating surgeon that infection has been adequately treated
  - Patient is off antibiotics
- **Section Two**
  - When all of the following criteria are met
    - Failed hip arthroplasty as defined by symptomatic or unstable joint upon physical examination with documented persistent, severe, or disabling pain with loss of function and/or instability. For symptomatic patients for conversion arthroplasty from prior ORIF or any prior hip surgery, radiographic evidence of advanced arthritis (Tönnis grade 2 or 3) is required
    - Physical exam and radiographic evidence support extensive disease or damage due to fracture, malignancy, osteolysis, other bone or soft-tissue reactive or destructive process, inappropriate positioning of components, recurrent instability, subluxation, dislocation, critical polyethylene wear, or other mechanical or hardware failure

      NOTE: MRI is used less often in these circumstances unless it is a metal-on-metal prosthesis and looking for soft-tissue lesions; x-ray, CT, nuclear studies are used more frequently
    - For implant loosening seen on routine X-rays or bone scan, documentation of no current, ongoing, or inadequately treated hip infection, ruled out by normal inflammatory markers (ESR and CRP). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection
    - If the revision is for obvious hardware failure or recurrent dislocations, inflammatory markers are not required
    - No corticosteroid injection into the joint within 12 weeks of surgery [1,5,6,7]

***NOTE**: Removal of infected hip prosthesis and subsequent insertion of antibiotic spacer is **NOT** considered to be a revision arthroplasty

LEGISLATIVE LANGUAGE

Washington

20131114B – Hip Resurfacing (Re-review) [18]

Washington State Health Care Authority Technology Assessment

Health Technology Clinical Committee

Final Findings and Decision

- **HTCC Coverage Determination**
  - Hip Resurfacing is not a covered benefit
- **HTCC Reimbursement Determination**
  - Limitations of Coverage
    - Not applicable
  - Non-Covered Indicators
    - All

CODING AND STANDARDS

Coding

CPT Codes

Total Hip Arthroplasty (THA): 27130, S2118

Revision/Conversion Hip Arthroplasty: 27132, 27134, 27137, 27138

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Grading Appendix [19]

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

POLICY HISTORY

Date	**Summary**
November 2024	• This guideline replaces Evolent Clinical Guideline 313 for Hip Arthroplasty • THA Indication sections: Section Two: added into the physical exam section that a PE (Physical Exam) is not required if bone-on-bone narrowing is present on X-ray • Hip Resurfacing Arthroplasty: absolute contraindications section: replaced specific names of drugs with classification of drugs • Revision/conversion Arthroplasty: clarification that if ANY prior hip surgery has been performed and there are now advanced arthritic changes that require replacement surgery in symptomatic patients, the request can be submitted as conversion total hip arthroplasty • Revision/Conversion Arthroplasty: Section Two: Added hardware failure to the other indications for revision/conversion hip arthroplasty • Non-infected revision sections: added a requirement for clear surgical plan to treat a potential infection if inflammatory markers are elevated • Removed background section on revision/conversion
December 2023	• Legislative Requirements added for the State of Washington • Relative contraindications: BMI – removed without attempts at weight loss • Added Table of Contents

Date	Summary
	● Reduced Background Section ● Updated References
May 2023	● Addition of references pertaining to the risk of infection following a cortisone injection within 3 months of surgery ● Deleted risk/benefit discussion requirement for revision hip arthroplasty ● Clarification of the definition of failed hip arthroplasty

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

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REFERENCES

1. Hannon C P, Goodman S M, Austin M S, Yates A J, Guyatt G et al. 2023 American College of Rheumatology and American Association of Hip and Knee Surgeons Clinical Practice Guideline for the Optimal Timing of Elective Hip or Knee Arthroplasty for Patients With Symptomatic Moderate-to-Severe Osteoarthritis or Advanced Symptomatic Osteonecrosis With Secondary Arthritis for Whom Nonoperative Therapy Is Ineffective. The Journal of arthroplasty. 2023; 38: 2193-2201. 10.1016/j.arth.2023.09.003.

2. AAOS. Management of Osteoarthritis of the Hip Evidence-Based Clinical Practice Guideline. AAOS. 2023; Accessed: 10/18/2024. https://www.aaos.org/globalassets/quality-and-practice-resources/osteoarthritis-of-the-hip/oah-cpg.pdf.

3. Lützner C, Deckert S, Günther K, Postler A E, Lützner J et al. Indication Criteria for Total Hip Arthroplasty in Patients with Hip Osteoarthritis-Recommendations from a German Consensus Initiative. Medicina. 2022; 58: 10.3390/medicina58050574.

4. Varacallo M, Luo T, Johanson N. Total Hip Arthroplasty Techniques. [Updated 2023 Aug 4]. StatPearls Publishing [Internet] Treasure Island (FL). 2023; Accessed: September 5, 2024. https://www.ncbi.nlm.nih.gov/books/NBK507864/.

5. Forlenza E M, Burnett R A, Korrapati A B, Yang J, Forsythe B. Preoperative Corticosteroid Injections Demonstrate a Temporal and Dose-Dependent Relationship with the Rate of Postoperative Infection Following Total Hip Arthroplasty. The Journal of arthroplasty. 2021; 36: 2033-2037.e1. 10.1016/j.arth.2021.01.076.

6. Saracco M, Ciriello V, D'Angelo F, Zagra L, Solarino G. Do prior intra-articular injections impact on the risk of periprosthetic joint infection in patients undergoing total hip arthroplasty? A meta-analysis of the current evidence with a focus on the timing of injection before surgery. EFORT open reviews. 2023; 8: 459-467. 10.1530/EOR-23-0028.

7. Werner B C, Cancienne J M, Browne J A. The Timing of Total Hip Arthroplasty After Intraarticular Hip Injection Affects Postoperative Infection Risk. The Journal of arthroplasty. 2016; 31: 820-3. 10.1016/j.arth.2015.08.032.

8. Guo S, Shao H, Huang Y, Yang D, Zheng H. Retrospective Cohort Study Comparing Complications, Readmission, Transfusion, and Length of Stay of Patients Undergoing Simultaneous and Staged Bilateral Total Hip Arthroplasty. Orthopaedic surgery. 2020; 12: 233-240. 10.1111/os.12617.

9. Ramezani A, Ghaseminejad Raeini A, Sharafi A, Sheikhvatan M, Mortazavi S M J. Simultaneous versus staged bilateral total hip arthroplasty: a systematic review and meta-analysis. Journal of orthopaedic surgery and research. 2022; 17: 392. 10.1186/s13018-022-03281-4.

10. Patel I, Nham F, Zalikha A K, El-Othmani M M. Epidemiology of total hip arthroplasty: demographics, comorbidities and outcomes. Arthroplasty. 2023; 5: 2. 10.1186/s42836-022-00156-1.

11. Al-Jabri T, Ridha M, McCulloch R A, Kayani B, Arif A et al. Hip Resurfacing Arthroplasty: Past, Present and Future. Orthopedic Reviews. 2023; 15: 10.52965/001c.77745.

12. Clough E J, Clough T M. Metal on metal hip resurfacing arthroplasty: Where are we now? Journal of orthopaedics. 2021; 23: 123-127. 0.1016/j.jor.2020.12.036.

13. Sershon R, Balkissoon R, Valle C J D. Current indications for hip resurfacing arthroplasty in 2016. Current Reviews in Musculoskeletal Medicine. 2016; 9: 84 - 92. 10.1007/s12178-016-9324-0.

14. U.S. Food and Drug Administration. Information for Orthopaedic Surgeons: General Recommendations for Orthopaedic Surgeons BEFORE Metal-on-Metal Hip Resurfacing Surgery. U.S. Food and Drug Administration. 2019; Accessed: September 6, 2024. https://www.fda.gov/medical-devices/metal-metal-hip-implants/information-orthopaedic-surgeons.

15. Panday K, Gona A, Humphrey M B. Medication-induced osteoporosis: Screening and treatment strategies. Therapeutic Advances in Musculoskeletal Disease. 2014; 6: 185-202. 10.1177/1759720X14546350.

16. Lee H D, Prashant K, Shon W Y. Management of Periprosthetic Hip Joint Infection. Hip Pelvis. 2015; 27: 63-71. 10.5371/hp.2015.27.2.63.

17. Kim S, Cho Y J. Current Guideline for Diagnosis of Periprosthetic Joint Infection: A Review Article. Hip & pelvis. 2021; 33: 11-17. 10.5371/hp.2021.33.1.11.

18. Washington State Health Care Authority. Hip Resurfacing. hca.wa.gov. 2014; Accessed: September 6, 2024. https://www.hca.wa.gov/assets/program/hip_final_findings_decision_032414%5B1%5D.pdf.

19. Kovalenko B, Bremjit P, Fernando N. Classifications in Brief: Tönnis Classification of Hip Osteoarthritis. Clinical orthopaedics and related research. 2018; 476: 1680-1684. 10.1097/01.blo.0000534679.75870.5f.

Evolent Clinical Guideline 1762 for Hip Arthroscopy

Guideline Number: Evolent_CG_1762	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc.		
Original Date: November 2015	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

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.

Purpose

This guideline addresses the following elective, non-emergent, arthroscopic hip repair procedures, including, diagnostic arthroscopy, femoroacetabular impingement (FAI), labral repair only; CAM, pincer, CAM & pincer combined; synovectomy, biopsy, or removal of loose or foreign body.

Scope

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.

Special Note

See legislative language for specific mandates for the State of Washington

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 and optimized for surgery and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with arthroscopic hip surgery when comorbidities exist as it pertains to the increased risk of complications.
  - 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
- 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) [1,2,3] **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.

However, on occasion, 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
- Indeterminate radiographs **AND** MRI findings
- No radiographic findings of any of the following:
  - Significant arthritis (joint space less than 2 mm on X-ray or subchondral edema on MRI) [3]
  - 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) [4]
  - 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 [1,3]
  - 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)

- 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
- No cortisone injection within 3 months of surgery [5,6]

Labral Tears and Femoroacetabular Impingement (FAI)

Labral Repair

Arthroscopic labral repair may be medically necessary when **ALL** of the following criteria are met [3,4,7]:

- 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
- No evidence of significant hip joint arthritis, defined as joint space narrowing 2 mm or less or Tönnis grade 3 or evidence of severe or advanced dysplasia [see **Grading Appendix**] unless combined with concomitant periacetabular osteotomy [3,4,7]
- Weight-bearing X-rays are not required
- 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 cortisone injection within 3 months of surgery [5,6]

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 [3,4,7,8]:

- Positional hip pain
- Skeletally mature patient [partial or complete closure of the proximal femoral physis]
- BMI < 40 [9]; Individuals with BMI > 40 will be reviewed on a case-by-case basis
- Positive impingement sign on physical exam (hip or groin pain with flexion, adduction, and internal rotation (FADIR test) [10]
- **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**]
  - 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 less or a Tönnis Grade 3 or evidence of severe or advanced hip dysplasia [see **Grading Appendix**] unless combined with concomitant periacetabular osteotomy (See Background **Additional Notes**) [11]
- Radiographic images show no evidence of severe or advanced hip dysplasia [see **Grading Appendix**] unless combined with concomitant periacetabular osteotomy**
- Failure of at least 6 weeks of non-operative treatment, including **at least two** of the following [12]:
  - 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 cortisone injection within 3 months of surgery [5,6]

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 in either section are met [3]:

Section One

- X-ray, MRI, or CT evidence of acute post-traumatic intra-articular foreign body or displaced fracture fragment

Section Two

- 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
  - Radiographs, CT, and/or MRI demonstrate synovial proliferation, calcifications, nodularity, inflammation, pannus, or a loose body
  - 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
- No cortisone within 3 months of surgery [5,6]

LEGISLATIVE LANGUAGE

Washington

20191122B – Hip Surgery for Femoroacetabular Impingement Syndrome [13]

Washington State Health Care Authority Technology Assessment

Health Technology Clinical Committee

Final Findings and Decision

- **HTCC Coverage Determination**
  - Hip surgery for femoroacetabular impingement syndrome is **not a covered benefit**
- **HTCC Reimbursement Determination**

- Limitations of Coverage
  - Not applicable
- **Non-Covered Indicators**
  - Hip surgery for femoroacetabular impingement syndrome

CODING AND STANDARDS

Coding

CPT Codes

Femoroacetabular Impingement (FAI) Hip Surgery: 29914, 29915, 29916

Hip Surgery - Other: 29860, 29861, 29862, 29863

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Additional Notes

There is no evidence to support hip arthroscopy for FAI and/or labral tear in an asymptomatic individual and there is a high prevalence of abnormal radiographs found in asymptomatic individuals [14]: 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. [2,4]

*****Even though hip dysplasia, as well as symptomatic FAI and labral tears are believed to be precursors to hip arthritis, arthroscopy is not indicated solely for the treatment of osteoarthritis of the hip and rarely indicated for severe dysplasia, unless combined with concomitant periacetabular osteotomy. However, individuals with borderline dysplasia (lateral center-edge angle [LCEA], 18° to 25°), that require arthroscopic procedures appear to do as well as those with no evidence of dysplasia. [1,4,7]

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. [15,16]

Grading Appendix

Tönnis Classification of Osteoarthritis by Radiographic Changes [17]

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 [1,4,7]:

- 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 Index [18]

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 Intrusion

- 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
November 2024	• This Guideline replaces Evolent Clinical Guideline 314 for Hip Arthroscopy • Added cortisone injections within 3 months of any hip arthroscopy as a contraindication • Removed descriptions of femoroacetabular impingement and CAM Pincer Combine Repair
December 2023	• Legislative Requirements added for the State of Washington • Added table of contents • Reduced background section • Updated references
May 2023	• Updated references for Femoroacetabular Impingement (FAI)

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

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REFERENCES

1. Barton C, Scott E, Khazi Z, Willey M, Westermann R. Outcomes of Surgical Management of Borderline Hip Dysplasia: A Systematic Review. The Iowa orthopaedic journal. 2019; 39: 40-48.

2. Jamil M, Dandachli W, Noordin S, Witt J. Hip arthroscopy: Indications, outcomes and complications. International Journal of Surgery. 2018; 54: 341-344. 10.1016/j.ijsu.2017.08.557.

3. Ross J, Larson C, Bedi A. Indications for Hip Arthroscopy. Sports Health. 2017; 9: 402-413. 10.1177/1941738117712675.

4. O'Rourke R J, El Bitar Y. Femoroacetabular Impingement. StatPearls Publishing. 2023 (June 26); Accessed: September 13, 2024. https://www.ncbi.nlm.nih.gov/books/NBK547699/.

5. Aamer S, Tokhi I, Asim M, Akhtar M, Razick D et al. Postoperative Infection Following Hip Arthroscopy in Patients Receiving Preoperative Intra-articular Injections: A Systematic Review and Meta-Analysis. Cureus. 2024; 10.7759/cureus.61649.

6. Wang D, Camp C, Ranawat A, Coleman S, Kelly B. The Timing of Hip Arthroscopy After Intra-articular Hip Injection Affects Postoperative Infection Risk. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2017; 33: 1988-1994.e1. 10.1016/j.arthro.2017.06.037.

7. Mella C, Villalón I, Núñez Á, Paccot D, DÍaz-Ledezma C. Hip arthroscopy and osteoarthritis: Where are the limits and indications? SICOT-J. 2015; 1: 10.1051/sicotj/2015027.

8. Lynch T, Minkara A, Aoki S, Bedi A, Bharam S et al. Best Practice Guidelines for Hip Arthroscopy in Femoroacetabular Impingement: Results of a Delphi Process. Journal of the American Academy of Orthopaedic Surgeons. 2020; 28: 81-89. 10.5435/JAAOS-D-18-00041.

9. Parvaresh K, Rasio J, Wichman D, Chahla J, Nho S. The Influence of Body Mass Index on Outcomes After Hip Arthroscopy for Femoroacetabular Impingement Syndrome: Five-Year Results in 140 Patients. American Journal of Sports Medicine. 2021; 49: 90-96. 10.1177/0363546520976357.

10. 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 Surgery, Sports Traumatology, Arthroscopy. 2020; 28: 3382-3392. 10.1007/s00167-020-06005-5.

11. Lei P, Conaway W, Martin S. Outcome of Surgical Treatment of Hip Femoroacetabular Impingement Patients with Radiographic Osteoarthritis: A Meta-analysis of Prospective Studies. Journal of the American Academy of Orthopaedic Surgeons. 2019; 27: E70-E76. 10.5435/JAAOS-D-17-00380.

12. Casartelli N, Bizzini M, Maffiuletti N, Sutter R, Pfirrmann C et al. Exercise Therapy for the Management of Femoroacetabular Impingement Syndrome: Preliminary Results of Clinical Responsiveness. Arthritis Care & Research. 2019; 71: 1074-1083. 10.1002/acr.23728.

13. Washington State Health Care Authority. Health Technology Assessment: Femoroacetabular Impingement Syndrome. Online. 2020; Accessed: September 13, 2024. https://www.hca.wa.gov/assets/program/fai-final%20findings-decision-20191122.pdf.

14. Lee A, Armour P, Thind D, Coates M, Kang A. The prevalence of acetabular labral tears and associated pathology in a young asymptomatic population. The Bone Joint Journal. 2015; 97-B: 623-627. 10.1302/0301-620X.97B5.35166.

15. Arakgi M, Degen R. Approach to a Failed Hip Arthroscopy. Current Reviews in Musculoskeletal Medicine. 2020; 13: 233-239. 10.1007/s12178-020-09629-9.

16. Bolia I, Briggs K, Philippon M. Superior Clinical Outcomes with Capsular Closure versus Non-Closure in Patients Undergoing Arthroscopic Hip Labral Repair. Orthopaedic Journal of Sports Medicine. 2018; 6: 2325967118S0000. 10.1177/2325967118s00009.

17. Kovalenko B, Bremjit P, Fernando N. Classifications in brief: Tönnis classification of hip osteoarthritis. Clinical Orthopaedics and Related Research. 2018; 476: 1680-1684. 10.1097/01.blo.0000534679.75870.5f.

18. Mannava S, Geeslin A, Frangiamore S, Cinque M, Geeslin M et al. Comprehensive Clinical Evaluation of Femoroacetabular Impingement: Part 2, Plain Radiography. Arthroscopy Techniques. 2017; 6: e2003-e2009. 10.1016/j.eats.2017.06.011.

Evolent Clinical Guideline 1763 for Knee Arthroplasty

Guideline Number: Evolent_CG_1763	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: November 2015	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

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

Purpose

This guideline addresses elective, non-emergent knee arthroplasty (knee replacement) procedures including total knee arthroplasty (TKA), unicompartmental/unicondylar knee arthroplasty (UKA) or hemiarthroplasty (partial knee replacement), and revision arthroplasty procedures.

Scope

Surgical indications are based on relevant subjective clinical symptoms, objective physical exam & radiologic findings, and response to previous non-operative treatments when medically appropriate.

Special Note

See legislative language for specific mandates in the State of Washington.

GENERAL REQUIREMENTS

- Elective knee arthroplasty may be considered if the following general criteria are met:
  - Knee pain with documented loss of function, which may include painful weight bearing, painful or inadequate range of motion to accomplish age appropriate activities of daily living (ADLs) and/or employment, and painful mechanical catching, locking, or popping
  - Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with a total joint replacement when comorbidities exist as it pertains to the increased risk of complications (1)
  - Individual does not have an active local or systemic infection (2)
  - Individual does not have active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in treatment program
  - Individual has good oral hygiene and does not have major dental work scheduled or anticipated (ideally within one year of joint replacement), due to increased post-surgical infection risk
- Clinical notes should address:
  - Symptom onset, duration, and severity

- Loss of function and/or limitations
- Type and duration of non-operative management modalities
- Discussion with patient regarding decision making and timing

- Non-operative management must include at least **TWO** or more of the following unless otherwise specified in clinical indications below [3,4]:
  - Rest or activity modifications/limitations
  - Weight reduction for individual with elevated BMI
  - Protected weight-bearing with cane, walker, or crutches
  - Brace/orthosis
  - Physical therapy modalities
  - Physician-supervised exercise program (including home exercise program)
  - Application of heat or ice
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
  - Intra-articular injection(s)

INDICATIONS

Total Knee Arthroplasty (TKA)

There is no medical necessity to perform TKA in individuals with severe radiological disease and no symptoms. If medical records indicate that possibly either a TKA or a UKA will be performed, based on the findings at the time of surgery, separate requests are to be submitted.

TKA may be considered medically necessary as indicated in either Section One or Section Two [2]:

- **Section One**
  - There is persistent pain and documented loss of function with radiographic evidence of advanced disease from any of the following
    - Rheumatoid arthritis
    - Post-traumatic arthritis (i.e., previous proximal tibia or distal femur fracture causing subsequent arthritis)
    - Fracture
    - Avascular necrosis [5] confirmed by imaging (radiographs, MRI, or other advanced imaging)
    - Radiographs (X-rays) demonstrate bone-on-bone articulation
- **Section Two**
  - There is persistent pain and documented loss of function for at least 12 weeks including all of the following [6]:
    - Physical exam (PE) findings demonstrate **one or more** of the following: tenderness, swelling/effusion, limited range of motion (decreased

from uninvolved side or as compared to a normal joint), flexion contracture, palpable or audible crepitus, instability and/or angular deformity (**PE is not required if bone-on-bone narrowing is present on X-ray**)

- Radiographic findings show evidence of advanced arthritic changes, described as Kellgren-Lawrence grade 3 or grade 4 degeneration or described as X-rays demonstrating advanced changes such as severe narrowing or bone-on-bone compartment collapse, subchondral sclerosis or cysts, osteophyte formation and/or bony deformity. [7] X-rays described only as showing 'severe', 'advanced' or 'end-stage' arthritis require more definitive descriptions as stated above. The severity of knee osteoarthritis is commonly determined with weight-bearing radiographs, however, if severe arthritic changes (e.g., bone on bone joint space narrowing) are noted on non-weightbearing images, further weight-bearing radiographs are not required.

  NOTE: MRI should not be the primary radiographic test used to determine the presence or severity of arthritic changes in the joint [7]; likewise, determinations as to the degree of arthritis should not routinely be determined by findings described from prior arthroscopic surgery of the knee

- Failure of **at least 12 weeks** of non-operative treatment, including at least **TWO** of the following [3,4]:
  - □ Rest or activity modifications/limitations
  - □ Weight reduction for individual with elevated BMI
  - □ Protected weight-bearing with cane, walker, or crutches
  - □ Brace/orthosis
  - □ Physical therapy modalities
  - □ Physician-supervised exercise program (including home exercise program)
  - □ Application of heat or ice
  - □ Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
  - □ Injections: corticosteroid or viscosupplementation
- No corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]
- No prior arthroscopic knee surgery within 6 months of surgery [12,13,14]

Simultaneous Bilateral TKA

- **ALL** requests for simultaneous bilateral total knee replacements should clearly indicate why simultaneous TKA is preferable to staged procedures. Associated risks with simultaneous bilateral total knee replacements should also be discussed with the patient and documented in the medical record [15,16]

Absolute Contraindication

- Active infection (local or remote). If a local or remote infection is documented in the patient's history, records should clearly demonstrate that the previous infection has been treated and symptoms have resolved or that the individual has no clinical signs or symptoms of the previous infection at the time of the operation [2]

- Any corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]
- Any prior arthroscopic knee surgery within 6 months of surgery [12,13,14]

Relative Contraindication [17]

- Prior infection at site (unless aspiration with cultures and serology [CBC with differential, ESR, CRP] demonstrates no infection). If prior infection at site, tissue biopsies should be sent intra-operatively to exclude latent/dormant infection
- Documented allergy to any proposed component
- BMI > 40 without discussion of increased risk [1]
- Severe peripheral vascular disease
- Compromised soft tissue envelope
- Uncontrolled comorbidities [18]

Unicompartmental Knee Arthroplasty (UKA)/Partial Knee Replacement (PKA)

All requests for UKA in individuals with chronic, painless effusion and extensive radiographic arthritis will be evaluated on a case-by-case basis.

Medial or lateral UKA/PKA may be medically necessary when **ALL** of the following criteria are met [19]:

- At least 12 weeks of pain localized to the medial or lateral compartment
- **Unless bone-on-bone articulation is present,** failure of at least 12 weeks of non-operative treatment, including at least **TWO** of the following [3,4]:
  - Rest or activity modifications/limitations
  - Weight reduction for individual with elevated BMI
  - Protected weight-bearing with cane, walker, or crutches
  - Brace/orthosis
  - Physical therapy modalities
  - Physician-supervised exercise program (including home exercise program)
  - Application of heat or ice
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
  - Injections: corticosteroid or viscosupplementation
- Total arc of motion (goniometer) > 90 degrees
- Normal ACL or stable reconstructed ACL per physical exam test [20,21]
- Contracture ≤ 10 degrees upon physical exam (goniometer) [22]
- Angular deformity ≤ 10 degrees, passively correctable to neutral upon physical exam (goniometer)
- Weight-bearing radiographs demonstrate ***only*** unicompartmental disease (with or without patellofemoral involvement), described as Kellgren-Lawrence grade 3 or

grade 4 degeneration

NOTE: MRI should not be the primary radiographic test used to determine the presence or severity of arthritic changes in the joint [7]

- No corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]
- No prior arthroscopic knee surgery within 6 months of surgery [12,13,14,23]
- **ALL** requests for simultaneous bilateral partial knee replacements should clearly indicate why simultaneous UKA is preferable to staged procedures. Associated risks with simultaneous bilateral partial knee replacements should also be discussed with the patient and documented in the medical record [15,16]

Contraindications for Medial or Lateral UKA/PKA [19]

- Any corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]
- Any prior arthroscopic knee surgery within 6 months of surgery [12,13,14]
- Local or systemic active infection
- Inflammatory arthritis
- Angular deformity or contracture greater than indicated range
- Significant arthritic involvement of opposite compartment
- ACL instability
- Poor bone quality or significant osteoporosis or osteopenia
- Meniscectomy of the opposite compartment, involving > 25% of meniscus
- Stiffness greater than indicated range of motion

Patellofemoral UKA/PKA

May be medically necessary when **ALL** of the criteria are met within **ONE** of the following two sections:

- **Section One** [24,25]**:**
  - Failure of prior patellofemoral unloading procedures (i.e., Maquet or Fulkerson)
  - **Unless patellofemoral bone-on-bone articulation is present**, failure of at least 12 weeks of non-operative treatment, including at least **TWO** of the following:
    - Rest or activity modifications/limitations
    - Weight reduction for individual with elevated BMI
    - Protected weight-bearing with cane, walker, or crutches
    - Brace/orthosis
    - Physical therapy modalities
    - Physician-supervised exercise program (including home exercise program)
    - Application of heat or ice
    - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
    - Injections: corticosteroid or viscosupplementation

- Standing, AP, or PA weight-bearing x-rays demonstrate only unicompartmental disease of the patellofemoral joint, described as Kellgren-Lawrence grade 3 or grade 4 degeneration (joint space narrowing, osteophyte formation, sclerosis and/or subchondral cystic changes), with no evidence of medial or lateral compartment arthritis.

- **Section Two** [24,25]**:**
  - At least 6 months of isolated patellar/anterior knee pain
  - Patellar/anterior knee pain that is exacerbated by stairs, inclines, transfers, or prolonged sitting
  - Reproducible patellofemoral pain upon physical exam
  - No ligamentous instability upon physical exam
  - Failure of **at least 12 weeks** of non-operative treatment, including at least **TWO** of the following:
    - Rest or activity modifications/limitations
    - Weight reduction for individual with elevated BMI
    - Protected weight-bearing with cane, walker, or crutches
    - Brace/orthosis
    - Physical therapy modalities
    - Physician-supervised exercise program (including home exercise program)
    - Application of heat or ice
    - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
    - Injections: corticosteroid or viscosupplementation
  - Standing, AP, or PA weight-bearing radiographs demonstrate only unicompartmental disease of the patellofemoral joint, described as Kellgren-Lawrence grade 3 or grade 4 degeneration, with no evidence of medial or lateral compartment arthritis
  - No cortisone injection into the joint within 12 weeks of surgery [1,8,9,10,11]

NOTE: MRI should not be the primary radiographic test used to determine the presence or severity of arthritic changes in the joint [7]

Contraindications for Patellofemoral UKA/PKA [24]

- Any corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]
- Local or systemic active infection
- Inflammatory arthritis
- Angular deformity or contracture greater than indicated range
- Significant arthritic involvement of the medial or lateral knee compartment(s)
- Ligament instability
- Poor bone quality or significant osteoporosis or osteopenia
- Stiffness greater than indicated range of motion

Revision Arthroplasty

Revision TKA may be considered medically necessary when the following criteria in either section one or section two are met [23,26]:

- **Section One**
  - Previous removal of infected knee prosthesis
  - No evidence of current, ongoing, or inadequately treated knee infection (ruled out by normal inflammatory markers (ESR and CRP) or significant improvement in these markers. If these inflammatory markers are elevated, further evaluation is required, including an aspiration with synovial fluid WBC count, gram stain and cultures, or an intraoperative frozen biopsy.
  - A clear statement by the treating surgeon that infection has been adequately treated)
  - Patient is off antibiotics
- **Section Two**
  - When **ALL** of the following criteria are met:
    - Symptomatic UKA/PKA or TKA as evidenced by persistent, severe, disabling pain, complaints of instability, mechanical abnormalities ('clunking' or audible crepitus), any of which result in a loss of function
    - Any of the following findings upon physical exam: tenderness to palpation objectively attributable to the implant, swelling or effusion, pain on weight-bearing or motion, instability on stress-testing, abnormal or limited motion (compared to usual function), palpable or audible crepitus or 'clunking' associated with reproducible pain
    - Aseptic loosening, instability, osteolysis, progressive bone loss, or mechanical failure confirmed on radiographic or advanced imaging (bone scan, CT scan, or MRI)
    - For implant loosening seen on routine X-rays or advanced imaging, documentation of no current, ongoing, or inadequately treated knee infection, ruled out by normal inflammatory markers (ESR and CRP). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
    - If the revision is for obvious radiographic evidence of hardware failure or there is a history of instability, inflammatory markers are not required
    - Cases that do not demonstrate any radiographic abnormalities yet show findings of gross instability on physical examination will be evaluated on a case-by-case basis
  - No corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]

Prosthesis Removal

- Removal of infected knee prosthesis and subsequent insertion of antibiotic spacer is not considered a revision knee arthroplasty

Absolute Contraindication

- Active infection (local or remote). If a local or remote infection is documented in the patient's history, records should clearly demonstrate that the previous infection has been treated and symptoms have resolved or that the individual has no clinical signs or symptoms of the previous infection at the time of the operation
- Any corticosteroid injection into the joint within 12 weeks of surgery [1,8,9,10,11]

Relative Contraindication

- Unstable or poorly controlled comorbidities
- Severe peripheral vascular disease
- Compromised soft-tissue envelope (revision may be performed in conjunction with plastic surgical consultation for soft tissue coverage via pedicle flaps or other acceptable procedure)

Manipulation Indications

- Manipulation following total knee arthroplasty:
  - See Evolent Clinical Guideline 1764 for Knee Arthroscopy for specific Manipulation indications

LEGISLATIVE LANGUAGE

Washington

20101022A – Total Knee Arthroplasty [27]

Washington State Health Care Authority Technology Assessment

Health Technology Clinical Committee

Final Findings and Decisions

- **HTTC Coverage Determination**
  - Computer navigated and unicompartmental knee arthroplasty is a covered benefit for treatment of osteoarthritis and rheumatoid arthritis of the knee
  - Multi-compartmental arthroplasty is not a covered benefit
- **HTTC Reimbursement Determination**
  - **Limitations of Coverage**
    - For Treatment of end stage osteoarthritis and rheumatoid arthritis of the knee
      - Total Knee Arthroplasty with Computer Navigation is a covered benefit

CODING AND STANDARDS

Coding

CPT Codes

Total Knee Arthroplasty (TKA): 27447

Partial-Unicompartmental Knee Arthroplasty (UKA): 27438, 27446

Revision Knee Arthroplasty: 27486, 27487

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Grading Appendix

Kellgren-Lawrence Grading System (Standing/weight-bearing X-rays) *(28)*

Grade	Description
0	No radiographic features of osteoarthritis
1	Possible joint space narrowing and osteophyte formation
2	Definite osteophyte formation with possible joint space narrowing
3	Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour (*some sclerosis and cyst formation)*
4	Large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity of bone contour.

POLICY HISTORY

Date	Summary
November 2024	• This policy replaces Evolent Clinical Guideline 315 for Knee

Date	Summary
	Arthroplasty • Added in PE was not required when bone-on-bone narrowing is present on X-ray • Non-infected revision sections: added a requirement for a clear surgical plan to treat a potential infection if inflammatory markers are elevated • Removed background sections on: Total, Partial & Revision Knee Replacement; Unicompartmental Knee Arthroplasty/Partial Knee Replacement; and Revision Arthroplasty
December 2023	• Legislative Requirements added for the State of Washington for Total Knee Arthroplasty 20101022A • Indications for TKA/UKA/PKA: added physical exam findings were not required if radiographs show bone-on bone articulation • Relative contraindications: BMI – removed attempts at weight loss and conferred by BMI • Revision Arthroplasty: added in language of radiographic evidence of hardware failure or history of instability, then inflammatory markers are not required • Added table of contents • Reduced background section • Updated references
May 2023	• Additional references pertaining to the risk of infection following a cortisone injection within 3 months of surgery • Deleted risk/benefit discussion requirement for revision knee arthroplasty

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

Evolent Clinical Guidelines do not constitute medical advice. Treating health care professionals are solely responsible for diagnosis, treatment, and medical advice. Evolent uses Clinical Guidelines in accordance with its contractual obligations to provide utilization

management. Coverage for services varies for individual members according to the terms of their health care coverage or government program. Individual members' health care coverage may not utilize some Evolent Clinical Guidelines. A list of procedure codes, services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

REFERENCES

1. Hannon C, Goodman S, Austin M, Yates A, Guyatt G et al. 2023 American College of Rheumatology and American Association of Hip and Knee Surgeons Clinical Practice Guideline for the Optimal Timing of Elective Hip or Knee Arthroplasty for Patients With Symptomatic Moderate-to-Severe Osteoarthritis or Advanced Symptomatic Osteonecrosis With Secondary Arthritis for Whom Nonoperative Therapy Is Ineffective. Arthritis Care and Research. 2023; 75: 2227-2238. 10.1002/acr.25175.

2. Hsu H, Siwiec R M. Knee Arthroplasty [2023 Jul 24]. Stat Pearls Publishing. 2023; Accessed: 9/18/2024. https://www.ncbi.nlm.nih.gov/books/NBK507914/.

3. American Academy of Orthopaedic Surgeons. Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline. American Academy of Orthopaedic Surgeons. 2021;

4. Kolasinski S L, Neogi T, Hochberg M C, Oatis C, Guyatt G et al. 2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee. Arthritis Care and Research. 2020; 72: 149-162. 10.1002/acr.24131.

5. Wilson C, Marappa-Ganeshan R. Secondary Osteonecrosis of the Knee [Updated 2023 Jul 24]. Stat Pearls Publishing. 2023; Accessed: 09/16/2024. https://www.ncbi.nlm.nih.gov/books/NBK562286/.

6. Rehman Y, Lindberg M, Arnljot K, Gay C, Lerdal A. More Severe Radiographic Osteoarthritis Is Associated With Increased Improvement in Patients' Health State Following a Total Knee Arthroplasty. Journal of Arthroplasty. 2020; 35: 3131-3137. 10.1016/j.arth.2020.06.025.

7. Newman S, Ahmed H, Rehmatullah N. Radiographic vs. MRI vs. arthroscopic assessment and grading of knee osteoarthritis - are we using appropriate imaging? Journal of Experimental Orthopaedics. 2022; 9: 10.1186/s40634-021-00442-y.

8. Baums M, Aquilina J, Pérez-Prieto D, Sleiman O, Geropoulos G. Risk analysis of periprosthetic knee joint infection (PJI) in total knee arthroplasty after preoperative corticosteroid injection: a systematic review : A study performed by the Early-Osteoarthritis group of ESSKA-European Knee Associates section. Archives of orthopaedic and trauma surgery. 2023; 143: 2683-2691. 10.1007/s00402-022-04532-z.

9. Cancienne J, Werner B, Luetkemeyer L, Browne J. Does Timing of Previous Intra-Articular Steroid Injection Affect the Post-Operative Rate of Infection in Total Knee Arthroplasty? Journal of Arthroplasty. 2015; 30: 1879-1882. 10.1016/j.arth.2015.05.027.

10. Kim Y, Joo Y, Song J. Preoperative intra-articular steroid injections within 3 months increase the risk of periprosthetic joint infection in total knee arthroplasty: a systematic review and meta-analysis. Journal of orthopaedic surgery and research. 2023; 18: 148. 10.1186/s13018-023-03637-4.

11. Lai Q, Cai K, Lin T, Zhou C, Chen Z. Prior Intra-articular Corticosteroid Injection Within 3 Months May Increase the Risk of Deep Infection in Subsequent Joint Arthroplasty: A Meta-analysis. Clinical Orthopaedics and Related Research. 2022; 480: 971-979. 10.1097/CORR.0000000000002055.

12. Liu Q, Tian Z, Pian K, Duan H, Wang Q et al. The influence of prior arthroscopy on outcomes of primary total lower extremity arthroplasty: A systematic review and meta-analysis. International Journal of Surgery. 2022; 98: 10.1016/j.ijsu.2021.106218.

13. Goyal T, Tripathy S, Schuh A, Paul S. Total knee arthroplasty after a prior knee arthroscopy has higher complication rates: a systematic review. Archives of orthopaedic and trauma surgery. 2022; 142: 3415-3425. 10.1007/s00402-021-04175-6.

14. Ma J, Li X, Liang P, Yu S. When can total knee arthroplasty be safely performed following prior arthroscopy? BMC Musculoskeletal Disorders. 2021; 22: 10.1186/s12891-020-03859-1.

15. Liu L, Liu H, Zhang H, Song J, Zhang L. Bilateral total knee arthroplasty Simultaneous or staged? A systematic review and meta-analysis. Medicine (United States). 2019; 98: 10.1097/MD.0000000000015931.

16. Richardson M, Liu K, Mayfield C, Kistler N, Christ A. Complications and Safety of Simultaneous Bilateral Total Knee Arthroplasty: A Patient Characteristic and Comorbidity-Matched Analysis. Journal of Bone and Joint Surgery. 2023; 105: 1072-1079. 10.2106/JBJS.23.00112.

17. Varacallo M, Luo T D, Mabrouk A, Johanson N A. Total Knee Arthroplasty Techniques [Updated 2024 May]. Stat Pearls Publishing. 2024; Accessed: 09/16/2024. https://www.ncbi.nlm.nih.gov/books/NBK499896/.

18. Dooley P, Secretan C. Total knee replacement: Understanding patient-related factors. BC Medical Journal. 2016; 58: 514-519.

19. Luo T D, Hubbard J B. Arthroplasty Knee Unicompartmental. Stat Pearls Publishing. 2023; Accessed: 09/16/2024. https://www.ncbi.nlm.nih.gov/books/NBK538267/.

20. Jaber A, Kim C, Barié A, Streit M, Schmitt H et al. Combined treatment with medial unicompartmental knee arthroplasty and anterior cruciate ligament reconstruction is effective on long-term follow-up. Knee Surgery, Sports Traumatology, Arthroscopy. 2023; 31: 1382-1387. 10.1007/s00167-022-07102-3.

21. Mancuso F, Dodd C, Murray D, Pandit H. Medial unicompartmental knee arthroplasty in the ACL-deficient knee. Journal of Orthopaedics and Traumatology. 2016; 17: 267-275. 10.1007/s10195-016-0402-2.

22. Purcell R, Cody J, Ammeen D, Goyal N, Engh G. Elimination of Preoperative Flexion Contracture as a Contraindication for Unicompartmental Knee Arthroplasty. Journal of the American Academy of Orthopaedic Surgeons. 2018; 26: e158-e163. 10.5435/JAAOS-D-16-00802.

23. Ayoade F, Li D D, Mabrouk A, Todd J R. Periprosthetic Joint Infection [Updated 2023 Oct 14]. Stat Pearls Publishing. 2023; Accessed: 09/16/2024. https://www.ncbi.nlm.nih.gov/books/NBK448131/.

24. Pisanu G, Rosso F, Bertolo C, Dettoni F, Blonna D et al. Patellofemoral arthroplasty: Current concepts and review of the literature. Joints. 2017; 5: 237-245. 10.1055/s-0037-1606618.

25. Vasso M, Antoniadis A, Helmy N. Update on unicompartmental knee arthroplasty: Current indications and failure modes. EFORT Open Reviews. 2018; 3: 442-448. 10.1302/2058-5241.3.170060.

26. Salari P, Baldini A. Revision knee surgery: the practical approach. EFORT Open Reviews. 2021; 6: 495-500. 10.1302/2058-5241.6.210018.

27. Washington State Health Care Authority. Total Knee Arthroplasty [Adopted December 10, 2010]. Washington State Health Care Authority. 2010; Accessed: 09/18/2024. https://www.hca.wa.gov/assets/program/findings_decision_tka_121010[1]_0.pdf.

28. Kellgren J, Lawrence J. Radiological Assessment of Osteo-Arthrosis. Annals of the Rheumatic Diseases. 1957; 16: 494-502. 10.1136/ard.16.4.494.

Evolent Clinical Guideline 1764 for Knee Arthroscopy

Guideline Number: Evolent_CG_1764	**Applicable Codes**	
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Original Date: November 2015	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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Purpose

This guideline addresses the following elective, non-emergent, arthroscopic knee repair procedures; diagnostic knee arthroscopy, debridement with or without chondroplasty, meniscectomy/meniscal repair/meniscal transplant, ligament reconstruction/repair, articular cartilage restoration/repair (marrow stimulating and restorative techniques) , synovectomy (major [2+ compartments], minor [1 compartment]), loose body removal, lateral release/patellar realignment, manipulation under anesthesia (MUA), and lysis of adhesions for arthrofibrosis of the knee.

Scope

Open, non-arthroplasty knee surgeries are performed instead of an arthroscopy as dictated by the type and severity of injury and/or disease.

Special Note

See legislative language for specific mandates in the State of Washington

GENERAL REQUIREMENTS

- Elective arthroscopic surgery of the knee 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)
    - Knee pain with documented loss of function: Deviation from normal knee function which may include painful weight bearing and/or inadequate range of motion (> 10 degrees flexion contracture or < 110 degrees flexion or both) to accomplish age-appropriate activities of daily living (ADLs), occupational or athletic requirements)
    - Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with knee surgery when comorbidities exist as it pertains to the increased risk of complications
    - 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, or muscle relaxants) unless engaged in a treatment program

- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

- Clinical notes should address:
  - Symptom onset, duration, and severity
  - Loss of function and/or limitations
  - Type and duration of non-operative management modalities (where applicable)
- Unless otherwise stated in the subsections below, non-operative management must include **at least TWO** or more of the following, unless otherwise specified [4]:
  - Rest or activity modifications/limitations
  - Ice/heat
  - Protected weight bearing
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol
  - Brace/orthosis
  - Physical therapy modalities
  - Supervised home exercise
  - Weight optimization
  - Injections: corticosteroid, NSAID, viscosupplementation

INDICATIONS

Diagnostic Knee Arthroscopy

Diagnostic knee arthroscopy should rarely be required however may be medically necessary when the following criteria are met:

- At least 12 weeks of knee pain with documented loss of function
- History of painful weight bearing and/or physical examination that shows joint line tenderness, effusion and/or limited motion compared to pre-symptomatic joint range
- Indeterminate radiographs **AND** MRI findings. Radiographs and/or MRI should not demonstrate any of the following: Kellgren-Lawrence Grade 3-4 changes (based on weight-bearing radiographs), meniscus tears, ligament tears, loose bodies, stress fractures (including insufficiency fractures) or patellofemoral instability (lateral patellar tilt or patellar subluxation)
- Failure of at least 12 weeks of non-operative treatment, including **at least TWO** of the following [4]:
  - Rest or activity modifications/limitations
  - Ice/heat
  - Protected weight bearing
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol

- Brace/orthosis
- Physical therapy modalities
- Supervised home exercise
- Weight optimization
- Corticosteroid injection

- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

NOTE: Subchondroplasty and In-office diagnostic arthroscopy (e.g., Mi-Eye, VisionScope) [5] are not managed by Evolent

Chondroplasty

Non-Patellofemoral chondroplasty (Femoral Condyle and Tibial Plateau)

Non-Patellofemoral (femoral condyle and tibial plateau) chondroplasty may be medically necessary when the following criteria are met [6]:

- At least 12 weeks of knee pain with documented loss of function
- Two or more or persistent effusion(s)
- MRI results demonstrate evidence of an area of localized articular cartilage damage or an unstable chondral flap
- Failure of **at least 12 weeks** of non-operative treatment, including **at least two** of the following [4]:
  - Rest or activity modifications/limitations
  - Ice/heat
  - Protected weight bearing
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol
  - Brace/orthosis
  - Physical therapy modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Patellofemoral chondroplasty

Patellofemoral chondroplasty may be medically necessary when the following criteria are met [7]:

- Anterior knee pain with documented loss of function, exacerbated by activities that load the patellofemoral joint such as ascending or descending stairs or being in seated position for extended periods of time with knee flexed
- Other extra-articular or intra-articular sources of pain or dysfunction have been

excluded (referred hip pain, radicular pain, tendinitis, bursitis, neuroma)

- Physical exam localizes tenderness to the patellofemoral joint
- No evidence of moderate to severe osteoarthritis (Kellgren-Lawrence Grade 3-4 based on weight-bearing radiographs and patellofemoral views [see **Grading Appendix**])
- Failure of **at least 12 weeks** of non-operative treatment, including **at least two** of the following [4]:
  - Rest or activity modifications/limitations
  - Ice/heat
  - Protected weight bearing
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol
  - Brace/orthosis
  - Physical therapy modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Meniscectomy/Meniscal Repair

Meniscectomy and/or meniscal repair may be medically necessary when the criteria in any of the following sections are met [8,9]:

- **Section One**
  - Symptomatic meniscal tear confirmed by MRI results that demonstrate a peripheral tear in the vascular zone, root tear, [10] or other tear that the requesting physician considers repairable and is associated with pain localized to the corresponding compartment upon physical examination
  - No Kellgren-Lawrence Grade 3-4 changes on standing X-rays
- **Section Two**
  - MRI demonstrate a meniscus tear in a patient age <21 years who complains of pain or mechanical symptoms or has **ANY** positive meniscal findings on physical examination
- **Section Three**
  - MRI demonstrates a bucket-handle tear of the meniscus and there is a history of acute injury/onset of symptoms with a locked knee and/or mechanical symptoms of locking
- **Section Four:** When a symptomatic meniscus tear is suspected and meets the following criteria:
  - When **at least two** of the following physical examination findings are present or there is at least one of the following physical examination findings and there is a

history of mechanical symptoms such as 'catching' or 'locking':

- Knee joint line pain with forced hyperextension upon physical exam
- Knee joint line pain with maximum flexion upon physical exam
- Knee pain, crepitus, or an audible or palpable click with the McMurray's test or Apley grind test
- Joint line tenderness to palpation upon physical exam

- Weight-bearing X-rays (standing X-rays, Rosenberg view, 45-degree flexed PA view, etc.) demonstrate no moderate or severe osteoarthritic changes defined as Kellgren-Lawrence Grade 3-4 [see **Grading Appendix**]; X-rays should be described as showing either no arthritis or mild/minimal arthritis only

OR

- MRI results confirm a frank meniscal tear (not simply degenerative changes, i.e., fraying) and the MRI **does not** demonstrate any of the following: moderate or severe articular cartilage thinning, full-thickness articular cartilage loss or defects, extrusion of the meniscus, subchondral edema, more than mild osteophytes, subchondral cysts, or an impression of 'moderate' or 'advanced/severe' arthritis (see absolute and relative contraindications). If the MRI demonstrates any of the above-described findings of more than mild arthritis, **weight-bearing X-rays are required** to confirm no moderate or severe articular cartilage loss * (see **background** section).
- Failure of at least 6 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 modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Absolute Contraindications Meniscectomy/Meniscal Repair

- Arthroscopic meniscectomy or meniscal repair is never medically necessary in the presence of Kellgren-Lawrence Grade 4 osteoarthritis [8] [see **Grading Appendix**]
- **ANY** intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Relative Contraindications Meniscectomy / Meniscal Repair

- Meniscectomy or repair is considered **NOT MEDICALLY NECESSARY** in the presence of Kellgren-Lawrence Grade 3 osteoarthritis [see **Grading Appendix**],

Unless [8]:

- There has been the acute onset of locking (does not include catching, popping, cracking, etc.); **AND**
- There is MRI evidence of a bucket-handle **or** displaced meniscal fragment that correlates with the correct compartment (i.e., medial tenderness and locking, for a medial meniscus tear)

- If grade 3 changes are present, only a meniscectomy may be indicated, not a repair. If there is evidence of meniscal extrusion on coronal MRI, with/without subchondral edema, arthroscopy is relatively contraindicated, even if a tear is present

Meniscal Transplant

Meniscal Transplants may be medically necessary when the following criteria are met [9,11]:

- Individual is < 40 years of age
- Individual has no evidence of arthritic changes
- Symptomatic meniscal deficiency confirmed by MRI results that show a meniscal deficient compartment, **OR** previous arthroscopy photographs or video showing subtotal or total meniscectomy
- Failure of at least 6 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 modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection

Absolute Contraindications: Meniscal Transplant [11]

- Uncorrected (staged or simultaneous) ligamentous insufficiency (ACL, PCL, MCL, LCL, PMC, PLC)
- Uncorrected (staged or simultaneous) malalignment greater than 5 degrees varus or 5 degrees valgus
- Uncorrected (staged or simultaneous) full-thickness articular cartilage isolated defects (International Cartilage Research Society Grade 3 or 4; Outerbridge Grade IV [see **Grading Appendix**])
- Kellgren-Lawrence Grade 3 or 4 osteoarthritis [see **Grading Appendix**]

- Intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Ligament Reconstruction or Repair

Anterior Cruciate Ligament (ACL) Repair or Reconstruction with Allograft or Autograft, With or Without Extraarticular Tenodesis *(12,13,14)*

ACL reconstruction or repair may be medically necessary when the criteria in any of the following sections are met and individual has no evidence of severe arthritis defined as Kellgren-Lawrence grade 3 or 4. (If the MRI results demonstrate an ACL tear and there is no mention of significant arthritis, especially in the younger individual, X-rays are not required. However, in others with significant MRI evidence of arthritis, standing X-rays are required to confirm that no Kellgren-Lawrence grade 3 or 4 changes are present).

- **Section One**
  - Acute ACL tear confirmed by MRI in high demand occupation or competitive athlete (as quantified by Marx activity score for athletics (any score > 4) and Tegner activity score for athletics and/or occupation ((score > 2) [see **Grading Appendix**]
- **Section Two**
  - MRI results confirm an ACL tear associated with other ligamentous instability or repairable meniscus
- **Section Three**
  - When the following criteria are met
    - Patient history of instability at the time of an acute injury or history of recurrent knee instability (as defined subjectively as 'giving way', 'giving out', 'buckling', two-fist sign)
    - Physical examination findings demonstrate a positive Lachman test, Lachman test 1A, 1B, 2A, 2B, 3A, 3B, anterior drawer, pivot shift test, or instrumented (KT-1000 or KT-2000) laxity of greater than 3 mm side-side difference
    - MRI results confirm complete ACL tear or substantial partial tear with a non-functioning ACL as demonstrated on physical examination

NOTE: Requests for ACL repair or reconstruction in individuals < age 13 will be reviewed on a case-by-case basis [15]

Posterior Cruciate Ligament (PCL) Reconstruction *(16,17)*

PCL reconstruction or repair may be medically necessary when the following criteria are met:

- Knee instability (as defined subjectively as 'giving way', 'giving out' or 'buckling') with clinical findings of any of the following signs/tests: positive posterior drawer, posterior sag, quadriceps active, dial test at 90 degrees knee flexion or reverse pivot shift test
- MRI results confirm complete PCL tear
- Failure of at least 12 weeks of non-operative treatment, including physical therapy emphasizing quadriceps strengthening

- Absence of medial and patellofemoral K-L grade 3-4 changes in chronic tears [see **Grading Appendix**]

The following clinical scenarios will be considered and decided on a case-by-case basis [18]:

- Pediatric and adolescent tears in individuals with open physis or growth plates
- Symptomatic partial tears with persistent instability despite non-operative treatment
- Incidental Kellgren-Lawrence grade 2-3 osteoarthritis [see **Grading Appendix**] in acute/subacute tears with unstable joint
- Acute PCL repair or reconstruction when surgery is also required for the ACL, MCL or LCL
- Tears in individuals < age 13

Collateral Ligament Repair or Reconstruction

Collateral ligament repair or reconstruction should rarely occur independent of additional ligament repair or reconstruction surgery (ACL, MCL, LCL).

All non-traumatic collateral ligament repair/reconstruction requests will be reviewed on a case-by-case basis.

Articular Cartilage Restoration/Repair

Skeletally Immature Indications

Articular cartilage reparative or stimulation procedures may be medically necessary when the following criteria in **ANY** of the following Sections are met [19,20,21]:

- **Section One**
  - Skeletally immature patient
  - Individual is symptomatic (pain, swelling, mechanical symptoms of popping, locking, catching, or limited range of motion)
  - Asymptomatic patients will be reviewed on a case-by-case basis
  - Radiographic findings (X-ray or MRI) of a displaced osteochondral lesion
- **Section Two**
  - Skeletally immature patient
  - Individual is symptomatic (pain, swelling, mechanical symptoms of popping, locking, catching, or limited range of motion)
  - Radiographic findings (X-ray or MRI) findings of a stable osteochondral lesion
  - 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 modalities
- Supervised home exercise
- Weight optimization
- Corticosteroid injection

Exclusion (applies to all criteria above)

- Exclude individuals with evidence of meniscal deficiency and/or malalignment if these are not being addressed (meniscal transplant and/or lateral release/patellar realignment procedure) at the same time as the cartilage restoration procedure

Skeletally Mature Indications

Articular cartilage reparative marrow stimulation procedures

Reparative marrow stimulation techniques such as microfracture & drilling [22,23] may be medically necessary when the following criteria are met [24,25,26]:

- Skeletally mature adult
- Individuals are symptomatic with anterior knee pain, swelling, mechanical symptoms of popping, locking, catching, or limited range of motion
- For trochlea or patellar lesions physical examination findings should be localized to the patellofemoral joint
- MRI confirms an isolated full-thickness chondral or osteochondral lesion of the femoral condyle, trochlea, or patella < 2.0 cm^2
- Physical exam findings and/or (imaging) results confirm no ligamentous instability
- For femoral condyle lesions, no evidence of prior meniscectomy in same compartment unless concurrent meniscal transplant performed
- 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 modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

NOTE: Abrasion arthroplasty is included in coding but is not indicated

Articular cartilage restorative procedures – femoral condyle and trochlea

Restorative procedures for articular cartilage loss may include the following: osteochondral autograft transfer (OAT), osteochondral allograft transplantation (OCA), autologous chondrocyte implantation (ACI), or matrix autologous chondrocyte implantation (MACI). The OAT or OCA procedures are preferable if the lesion involves subchondral bone. [22,23,27]

An articular cartilage restorative procedure may be medically necessary when the following criteria are met [24,25,26]:

- Skeletally mature adult
- Individual has been symptomatic (pain, swelling, mechanical symptoms of popping, locking, catching, or limited range of motion) for at least 6 months
- Individual is < 50 years of age
- BMI < 35 (optimal outcomes if patient BMI < 30)
- No prior meniscectomy in same compartment (unless concurrent or staged meniscal transplant performed)
- MRI results confirm an isolated full thickness chondral or osteochondral lesion of the femoral condyles or trochlea with stable surrounding articular cartilage:
  - < 2.0 cm^2 - OAT
  - > 2.0 cm^2 - ACI, MACI, OCA
- MRI and/or physical findings confirm knee has normal alignment as defined as +/- 3 degrees from neutral on full-length mechanical axis long-leg x-ray (unless concurrent or staged tibial or femoral osteotomy performed) and stability (unless concurrent ligamentous repair or reconstruction performed)
- MRI and/or X-rays shows no evidence of osteoarthritis (no greater than Kellgren-Lawrence Grade 2 changes on weight-bearing X-rays [see **Grading Appendix**])
- 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 modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection
- No prior meniscectomy in same compartment (unless concurrent or staged meniscal transplant performed)
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Articular cartilage restorative procedures - patella

Restorative procedures for articular cartilage loss of the patella may include the following: osteochondral autograft transfer (OAT), osteochondral allograft transplantation (OCA), autologous chondrocyte implantation (ACI), or matrix autologous chondrocyte implantation (MACI), with or without tibial tubercle osteotomy. * [22,28]

An articular cartilage restorative procedure may be medically necessary when the following criteria are met [24,25,26]:

- Anterior knee pain and loss of function
- Individual is < 50 years of age
- BMI < 35 (optimal outcomes if patient BMI < 30)
- Other extra-articular or intra-articular sources of pain or dysfunction have been excluded (referred pain, radicular pain, tendinitis, bursitis, neuroma)
- Physical exam localizes tenderness to the patellofemoral joint with pain aggravated by activities that load the joint (single leg squat, descending > ascending stairs or stair climbing, and being in seated position for extended periods of time with knee flexed)
- MRI results confirm an isolated full thickness chondral or osteochondral lesion of the patella:
  - < 2.0 cm^2 - OAT
  - > 2.0 cm^2 - ACI, MACI, OCA
- No evidence of associated osteoarthritis greater than Kellgren-Lawrence 2 of the patellofemoral joint or medial/lateral compartments on weight bearing X-rays [see **Grading Appendix**]
- 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 modalities
  - Supervised home exercise
  - Weight optimization
  - Corticosteroid injection
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

***Patellofemoral Chondrosis**

For isolated tibial tubercle osteotomy for patellofemoral chondrosis without articular cartilage restoration procedures, the same criteria above apply except patellofemoral X-rays should

document Kellgren-Lawrence grade 3 or 4 changes with no more than K-L 2 changes of the medial and lateral compartments on weight-bearing X-rays.

Articular Cartilage Restoration and Repair Exclusions

- **These requests are excluded from consideration under this guideline:**
  - Micronized cartilage extracellular matrix (BioCartilage)
  - Autologous Matrix-Induced Chondrogenesis (AMIC)
  - Bone marrow aspirate concentrate (BMAC) implantation
  - Hybrid ACI/OAT procedure
  - Particulated juvenile allograft cartilage (PJAC, DeNovo)
  - Particulated autologous cartilage implantation (PACI)
  - Viable cartilage allograft putty (CartiMax)
  - Decellularized Osteochondral Allograft Plugs (e.g., Chondrofix)
  - Cryopreserved viable osteochondral allograft (CVOCA; Cartiform and ProChondrix)
  - Aragonite biphasic osteochondral scaffolds (Agili-C™)
  - Human umbilical cord blood-derived mesenchymal stem cells (CARTISEM)

Synovectomy (Major [2+ compartments], Minor [1 compartment])

Synovectomy may be medically necessary when the criteria in **any** of the following sections are met [29,30]:

- **Section One**
  - Proliferative rheumatoid synovium (in individuals with established rheumatoid arthritis)
  - Non-responsive to disease modifying drug (DMARD) therapy for at least 6 months
  - At least one instance of aspiration of joint effusion and corticosteroid injection (if no evidence of infection)
  - Failure of **at least 6 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 modalities
    - Supervised home exercise

        - Weight optimization
        - Corticosteroid injection
- **Section Two**
    - Hemarthrosis from injury, coagulopathy or bleeding disorder confirmed by physical exam, joint aspiration, and/or MRI
- **Section Three**
    - Proliferative pigmented villonodular synovitis, synovial chondromatosis, sarcoid synovitis, or similar proliferative synovial disease, traumatic hypertrophic synovitis, cyclops lesion, or fat pad syndrome confirmed by history, MRI, or biopsy [31,32]
    - At least one instance of aspiration of joint effusion and injection of corticosteroid (if no evidence of infection)
    - Failure of **at least 6 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 modalities
        - Supervised home exercise
        - Weight optimization
        - Corticosteroid injection
- **Section Four**
    - Patient is symptomatic and there is detection of a painful plica confirmed by physical exam
    - MRI confirms the presence of a plica
    - 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 modalities
        - Supervised home exercise
        - Weight optimization

        - Corticosteroid injection
    - No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Loose Body Removal

Loose body removal may be medically necessary when the following criteria are met:

- Documentation of mechanical symptoms that cause limitation or loss of function
- X-ray, CT, or MRI documentation of a loose body
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Lateral Release/Patellar Realignment

This guideline describes indications for surgical procedures to address patellofemoral pain disorders and abnormal alignment of the extensor mechanism of the knee by arthroscopic and/or open surgical techniques.

Lateral Patellar Compression Syndrome

Surgical intervention for the treatment of lateral patellar compression syndrome is indicated when the following criteria are met [33,34,35]:

- No evidence of patellar dislocation
- Reproducible isolated lateral patellofemoral pain with patellar tilt test
- Evidence of lateral patellar tilt from radiologic images (patellofemoral view: Merchant (45 degrees flexion; and/or skyline (60-90 degrees flexion); and/or sunrise (60-90 degrees flexion)
- Associated lateral patella facet Kellgren-Lawrence changes grade 1, 2, or 3 [see **Grading Appendix**]
- No evidence of medial patellofemoral changes (Kellgren-Lawrence Grade 2 osteoarthritis or higher [see **Grading Appendix**])
- Failure of **at least 6 months** of non-operative treatment, including quadriceps strengthening and appropriate hamstring/IT band stretching and patellar mobilization techniques, and **at least one** 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 modalities
    - Supervised home exercise
    - Weight optimization
    - Corticosteroid injection
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

Patellar Malalignment and/or Patellar Instability

Surgical intervention for the treatment of patellar malalignment and/or patellar instability is indicated when the following criteria in any of the following sections are met [36,37,38,39]:

- **Section One**
  - Acute traumatic patellar dislocation is associated with an osteochondral fracture, loose body, vastus medialis obliquus/medial patellofemoral ligament muscle avulsion, or other intra-articular injury that requires urgent operative management
- **Section Two**
  - First time patellar dislocation (not subluxation)
  - Age < 25
  - Any of the following:
    - Imaging demonstrates a TT-TG distance of 15 mm or greater
    - Trochlear dysplasia
    - Patella alta
- **Section Three**
  - History of 2 or more patellar dislocations
  - Radiologic confirmation of MPFL (medial patellofemoral ligament) deficiency (including evidence of acute or remote injury, scarring, incomplete healing, etc.) and there is a TT-TG distance of 15 mm or greater, trochlear dysplasia, or patella alta
  - Physical examination demonstrates evidence of patellar instability (positive apprehension test, increased lateral patellar translation, etc.)
- **Section Four**
  - When **ALL** of the following criteria have been met:
    - Patient complains of patellar subluxation or has a history of only one patellar dislocation (see Section Two above)
    - Physical exam has patellofemoral tenderness and abnormal articulation of the patella in the femoral trochlear groove (patellar apprehension or positive J sign)
    - Radiologic and/or advanced images (CT or MRI) rule out fracture or loose body, and show abnormal articulation, trochlear dysplasia, abnormal TT-TG distance (tibial tubercle-trochlear groove) ***** or other abnormality related to malalignment
    - Failure of at least 6 months of non-operative treatment, including at least 3 months of physical therapy, and **ONE** of the following:
      - □ Rest or activity modifications/limitations
      - □ Ice/heat
      - □ Protected weight bearing
      - □ Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol

- □ Brace/orthosis
- □ Supervised home exercise
- □ Weight optimization
- □ Corticosteroid injection

- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

*****The tibial tubercle-trochlear groove (TT-TG) distance is normally @5-10 mm. Some authors use 13 mm as a cut-off and most agree that a TT-TG of 15 mm or over is abnormal. [40] TT-TG values over 17 mm indicate other possible bony abnormalities such as increased femoral anteversion that may cause patellar instability. [38,41]

Manipulation Under Anesthesia (MUA)

Manipulation under anesthesia (MUA) may be indicated when the following criteria are met [42,43]:

- Individual is less than 20 weeks after ligamentous or joint reconstruction
- Physical exam findings demonstrate inadequate range of motion of the knee defined as less than 110 degrees of flexion or lack of full extension
- Failure to improve range of motion of the knee despite 6 weeks (12 visits) of documented physical therapy

Lysis of Adhesions for Arthrofibrosis of the Knee

Surgical indications are based on relevant clinical symptoms, physical exam, radiologic findings, time from primary surgery, and response to conservative management when medically appropriate. Improved range of motion may be accomplished through arthroscopically assisted or open lysis of adhesions with general anesthesia, regional anesthesia, or sedation. [43,44]

Lysis of adhesions for arthrofibrosis of the knee may be indicated when all the following criteria are met:

- Individual is > 12 weeks post-surgery fracture or resolved infection
- Physical exam findings demonstrate inadequate range of motion of the knee, defined as < 110 degrees of flexion or lack of full extension
- Failure to improve range of motion of the knee despite 6 weeks (12 visits) of documented physical therapy
- No intra-articular cortisone injections within 4 weeks of surgery [1,2,3]

LEGISLATIVE LANGUAGE

Washington

20080815B – Knee Arthroscopy for Osteoarthritis of the knee [45]

Washington State Health Care Authority Technology Assessment

Health Technology Clinical Committee

Final Findings and Decisions

- **HTCC Coverage Determination**
  - Knee Arthroscopy for osteoarthritis of the knee is not a covered benefit. This decision does not apply to the use of knee arthroscopy for other diagnostic and therapeutic purposes.
- **HTCC Reimbursement Determination**
  - **Limitations of Coverage**
    - Not applicable
  - **Non-Covered Indicators**
    - Osteoarthritis of the Knee

20240920A – Treatment for chondral defects of the knee [46]

Washington State Health Care Authority Technology Assessment

Health Technology Clinical Committee

Final Findings and Decisions

- **HTCC Coverage Determination**
  - Treatments for chondral defects of the knee with matrix-induced autologous chondrocyte implantation (MACI) and other FDA-approved 3rd generation autologous chondrocyte implantation (ACI), osteochondral autologous transplantation (OATS), and osteochondral allograft transplantation (OCA) are **covered benefits with conditions**.
  - Treatments for chondral defects of the knee with cell-free implants and autologous matrix-induced chondrogenesis (AMIC) are **not covered benefits**.
- **HTCC Reimbursement Determination**
  - **Limitations of coverage:**
    - MACI, OATS, and OCA:
      - Symptomatic, single or multiple full-thickness (Outerbridge Classification of Grade III or IV) articular cartilage defects of the femoral condyle (medial, lateral, or trochlea) and/or patella;
      - Documented closure of growth plates in adolescent individuals;
      - Age <50, older at the discretion of the agency;
      - Body mass index <35; AND
      - Excluding malignancy, degenerative arthritis (Kellgren-Lawrence Grade 3 or 4), or inflammatory arthritis in the joint.
      - For MACI, articular cartilage lesions ≥3cm^2 in size;
      - For OATS, articular cartilage lesions 2cm^2 – 4cm^2 in size;
- **Non-covered indicators:**
  - Uncorrected malalignment or ligamentous deficiency, unless a corrective procedure is performed prior to or concomitantly.

- Cell-free implants and autologous matrix-induced chondrogenesis (AMIC) are not covered benefits.

CODING AND STANDARDS

Coding

CPT Codes

Knee Manipulation Under Anesthesia (MUA): 27570, 29884

Knee Ligament Reconstruction/Repair: 27405, 27407, 27409, 27427, 27428, 27429, 29888, 29889

Knee Meniscectomy/Meniscal Repair/Meniscal Transplant: 27332, 27333, 27403, 29868, 29880, 29881, 29882, 29883

Knee Surgery – Other: 27412, 27415, 27416, 27418, 27420, 27422, 27424, 27425, 29866, 29867, 29870, 29873, 29874, 29875, 29876, 29877, 29879, 29885, 29886, 29887, G0289

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☐	Medicare Advantage

BACKGROUND

Meniscectomy and Arthritis of the Knee

There is a high incidence of incidental meniscal findings on knee MRI in middle-aged and elderly individuals and several studies have indicated that there is no difference in outcome between operative and non-operative treatment of individuals with degenerative meniscus tears, especially when associated with an arthritic knee. [8,47] Arthroscopic debridement of degenerative meniscus tears in those with visible arthritis is generally not recommended and, in some cases, may worsen the symptoms and progression of the arthritis. [8,48] Studies have also demonstrated an increased incidence of revision arthroplasty, infection, loosening and stiffness in individuals who underwent a knee arthroscopy prior to a total knee arthroplasty.

The imaging evaluation of the knee for individuals with meniscus tears should be individualized, the goal of which is to recommend treatment for only those with no or minimal associated arthritis.

Although most individuals that have a request for arthroscopic meniscectomy will have had **BOTH** an MRI **AND** X-rays of the knee, only one of these tests is required for approval, provided all other criteria for meniscectomy have been met. For example, if there has been a failure to improve with 6 weeks of non-operative treatment and there are physical examination findings of a meniscus tear, an MRI is not required, only weight-bearing X-rays that demonstrate no more than mild arthritis. Likewise, if an MRI describes a frank meniscus tear and does not describe any significant associated arthritis, weight-bearing X-rays are not required. However, as noted above, if an MRI demonstrates findings of more than mild arthritis, **weight-bearing X-rays are required** to confirm no moderate or severe articular cartilage loss.

Grading Appendix

Kellgren-Lawrence Grading System (Standing/weight-bearing X-rays) *(49)*

Grade	Description
0	No radiographic features of osteoarthritis
1	Possible joint space narrowing and osteophyte formation
2	Definite osteophyte formation with possible joint space narrowing
3	Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour
4	Large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour

Outerbridge Arthroscopic Grading System *(50)*

Grade	Description
0	Normal cartilage
I	Softening and swelling/blistering
II	Partial thickness defect, fissures < 1.5cm diameter/wide
III	Fissures /defects down to subchondral bone with intact calcified cartilage layer, diameter > 1.5cm
IV	Exposed subchondral bone

Marx Scale [51]

For determination of activity level in acute ACL tears. Indicate how often you performed each activity in your healthiest and most active state, in the past year.

Activity/Movement	Less than one time in a month	One time in a month	One time in a week	2 or 3 times in a week	4 or more times in a week
Running: running while playing a sport or jogging	0	1	2	3	4
Cutting: changing directions while running	0	1	2	3	4
Deceleration: coming to a quick stop while running	0	1	2	3	4
Pivoting: turning your body with your foot planted while playing sport; For example: skiing, skating, kicking, throwing, hitting a ball (golf, tennis, squash), etc.	0	1	2	3	4

Tegner Scores [52]

For determination of activity level in acute ACL tears. Indicate in the spaces below the **HIGHEST** level of activity that you participated in **BEFORE YOUR INJURY** and the highest level you are able to participate in **CURRENTLY**.

Level	Activity Description
Level 10	Competitive sports- soccer, football, rugby (national elite)
Level 9	Competitive sports- soccer, football, rugby (lower divisions), ice hockey, wrestling, gymnastics, basketball
Level 8	Competitive sports- racquetball or bandy, squash or badminton, track and field athletics (jumping, etc.), down-hill skiing
Level 7	Competitive sports- tennis, running, motorcars speedway, handball Recreational sports- soccer, football, rugby, bandy, ice hockey, basketball, squash, racquetball, running
Level 6	Recreational sports- tennis and badminton, handball, racquetball, down-hill skiing, jogging at least 5 times per week
Level 5	Work- heavy labor (construction, etc.) Competitive sports- cycling, cross-country skiing; Recreational sports- jogging on uneven ground at least twice weekly

Level	Activity Description
Level 4	Work- moderately heavy labor (e.g., truck driving, etc.)
Level 3	Work- light labor (nursing, etc.)
Level 2	Work- light labor Walking on uneven ground possible, but impossible to backpack or hike
Level 1	Work- sedentary (secretarial, etc.)
Level 0	Sick leave or disability pension because of knee problems

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 316 for Knee Arthroscopy • For meniscectomy requirements in a younger population, 'pediatric or adolescent' was changed to patients < 21. • Added fat pad syndrome and cyclops lesions to list of indications for synovectomy • Added indications for first time patellar dislocations • Deleted the requirement for 6 months of physical therapy when there have been 2 or more patellar dislocations and there are significant anatomic abnormalities such as a TT-TG distance of 15 mm or greater, trochlear dysplasia, or patella alta • Deleted the requirement for a manipulation under anesthesia when lysis of adhesion surgery is performed • Legislative Requirements added for the State of Washington for 20240920A – Treatment for chondral defects of the knee
December 2023	• Legislative Requirements added for the State of Washington for Knee Arthroscopy 20080815B • Revised surgical optimization and physician/patient discussion language • Reorganized ACL Repair/Reconstruction Section • Added table of contents • Adjusted Background Section

Date	Summary
	• Updated References
June 2023	• Updated references pertaining to the relationship of meniscectomy and arthritis of the knee • Clarification of the requirement of X-rays for ACL reconstruction • Additional references for articular cartilage restorative procedures • Revision of the listing of articular cartilage restorative procedures • Clarification of the lesion size for articular cartilage restorative procedures of the knee: < 2.0 cm^2 - OAT; > 2.0 cm^2 - ACI, MACI, OCA • Non-operative treatment requirement for articular cartilage procedures changed from 6 months to 3 months • Listing of investigational/non-covered articular cartilage procedures • Added CPT codes: 29885, 29886. 29887

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

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REFERENCES

1. Belk J, Keeling L, Kraeutler M, Snow M, Mei-Dan O et al. Risk of Infection in Knee Arthroscopy Patients Undergoing Corticosteroid Injections in the Perioperative Period. Orthopaedic Journal of Sports Medicine. 2021; 9: 10.1177/23259671211032941.

2. Forsythe B, Forlenza E M, Agarwalla A, Cohn M R, Lavoie-Gagne O et al. Corticosteroid Injections 1 Month Before Arthroscopic Meniscectomy Increase the Risk of Surgical-Site Infection. Arthroscopy. 2021; 37: 2885-2890.e2. 10.1016/j.arthro.2021.02.047.

3. Lee W, Bhattacharjee S, Lee M, Ho S, Athiviraham A. A Safe Interval between Preoperative Intra-articular Corticosteroid Injections and Subsequent Knee Arthroscopy. Journal of Knee Surgery. 2022; 35: 47-53. 10.1055/s-0040-1712949.

4. American Academy of Orthopaedic Surgeons. Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline. American Academy of Orthopaedic Surgeons. 2021; Accessed: 09/23/2024. https://www.aaos.org/oak3cpg.

5. DeClouette B, Birnbaum A, Campbell H, Bi A, Lin C. Needle Arthroscopy Demonstrates High Sensitivity and Specificity for Diagnosing Intra-Articular Shoulder and Knee Pathology. Cureus. 2022; 14: e33189. 10.7759/cureus.33189.

6. Anderson D, Rose M, Wille A, Wiedrick J, Crawford D. Arthroscopic Mechanical Chondroplasty of the Knee Is Beneficial for Treatment of Focal Cartilage Lesions in the Absence of Concurrent Pathology. Orthopaedic Journal of Sports Medicine. 2017; 5: 232596711770721. 10.1177/2325967117707213.

7. Kiel J, Kaiser K. Patellofemoral Arthritis [Updated 2023 Jun 12]. Stat Pearls Publishing. 2023; Accessed: 09/23/2024. https://www.ncbi.nlm.nih.gov/books/NBK513242/.

8. Burgess C J, De Cicco F L. Meniscectomy [Updated 2023 May 23]. Stat Pearls Publishing. 2023; Accessed: 09/23/2024. https://www.ncbi.nlm.nih.gov/books/NBK559105/.

9. Raj M A, Bubnis M A. Knee Meniscal Tears [Updated 2023 Jul 17]. Stat Pearls Publishing. 2023; Accessed: 09/24/2024. https://www.ncbi.nlm.nih.gov/books/NBK431067/.

10. Krych A J, Lamba A, Wang A S, Boos A M, Camp C L et al. Nonoperative Management of Degenerative Medial Meniscus Posterior Root Tears: Poor Outcomes at a Minimum 10-Year Follow-up. American Journal of Sports Medicine. 2023; 51: 2603-2607. 10.1177/03635465231185132.

11. Getgood A, LaPrade R F, Verdonk P, Gersoff W, Cole B et al. International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus Statement on the Practice of Meniscal Allograft Transplantation. The American Journal of Sports Medicine. 2017; 45: 1195-1205. 10.1177/0363546516660064.

12. Bosco F, Giustra F, Masoni V, Capella M, Sciannameo V et al. Combining an Anterolateral Complex Procedure With Anterior Cruciate Ligament Reconstruction Reduces the Graft Reinjury Rate and Improves Clinical Outcomes: A Systematic Review and Meta-analysis of Randomized Controlled Trials. The American journal of sports medicine. 2024; 52: 2129-2147. 10.1177/03635465231198494.

13. Evans J, Mabrouk A, Nielson J I. Anterior Cruciate Ligament Knee Injury [Updated 2023 Nov 17]. Stat Pearls Publishing. 2023; Accessed: 09/24/2024. https://www.ncbi.nlm.nih.gov/books/NBK499848/.

14. Filbay S R, Grindem H. Evidence-based recommendations for the management of anterior cruciate ligament (ACL) rupture. Best Practice and Research Clinical Rheumatology. 2019; 33: 33-47. 10.1016/j.berh.2019.01.018.

15. Shultz S J, Cruz M R, Casey E, Dompier T P, Ford K R et al. Sex-Specific Changes in Physical Risk Factors for Anterior Cruciate Ligament Injury by Chronological Age and Stages of Growth and Maturation From 8 to 18 Years of Age. Journal of Athletic Training. 2022; 57: 830-876. 10.4085/1062-6050-0038.22.

16. Bedi A, Musahl V, Cowan J B. Management of Posterior Cruciate Ligament Injuries. Journal of the American Academy of Orthopaedic Surgeons. 2016; 24: 277-289. 10.5435/JAAOS-D-14-00326.

17. Raj M A, Mabrouk A, Varacallo M. Posterior Cruciate Ligament Knee Injuries [Updated 2023 Aug 8]. Stat Pearls Publishing. 2023; Accessed: 09/24/2024. https://www.ncbi.nlm.nih.gov/books/NBK430726/.

18. Scarcella M J, Yalcin S, Scarcella N R, Saluan P, Farrow L D. Outcomes of Pediatric Posterior Cruciate Ligament Reconstruction: A Systematic Review. Orthopaedic Journal of Sports Medicine. 2021; 9: 232596712110325. 10.1177/23259671211032539.

19. Chau M, Klimstra M, Wise K, Ellermann J, Tóth F et al. Osteochondritis Dissecans. Journal of Bone and Joint Surgery. 2021; 103: 1132-1151. 10.2106/JBJS.20.01399.

20. Salzmann G, Niemeyer P, Hochrein A, Stoddart M, Angele P. Articular Cartilage Repair of the Knee in Children and Adolescents. Orthopaedic Journal of Sports Medicine. 2018; 6: 232596711876019. 10.1177/2325967118760190.

21. Valtanen R, Arshi A, Kelley B, Fabricant P, Jones K. Articular Cartilage Repair of the Pediatric and Adolescent Knee with Regard to Minimal Clinically Important Difference: A Systematic Review. CARTILAGE. 2020; 11: 9-18. 10.1177/1947603518783503.

22. Cong B, Sun T, Zhao Y, Chen M. Current and Novel Therapeutics for Articular Cartilage Repair and Regeneration. Therapeutics and Clinical Risk Management. 2023; 19: 485-502. 10.2147/TCRM.S410277.

23. Niemeyer P, Laute V, Zinser W, Becher C, Kolombe T et al. A Prospective, Randomized, Open-Label, Multicenter, Phase III Noninferiority Trial to Compare the Clinical Efficacy of Matrix-Associated Autologous Chondrocyte Implantation With Spheroid Technology Versus Arthroscopic Microfracture for Cartilage Defects of the Knee. Orthopaedic Journal of Sports Medicine. 2019; 7: 10.1177/2325967119854442.

24. Filho J, Sousa E. Treatment of Chondral Lesions in the Knee. Rev Bras Ortop. 2023; 58: e551-e556. 10.1055/s-0043-1772196.

25. Hinckel B, Thomas D, Vellios E, Hancock K, Calcei J et al. Algorithm for Treatment of Focal Cartilage Defects of the Knee: Classic and New Procedures. CARTILAGE. 2021; 13: 473S-495S. 10.1177/1947603521993219.

26. Mall N, Harris J, Cole B. Clinical Evaluation and Preoperative Planning of Articular Cartilage Lesions of the Knee. Journal of the American Academy of Orthopaedic Surgeons. 2015; 23: 633-640. 10.5435/JAAOS-D-14-00241.

27. Weishorn J, Wiegand J, Zietzschmann S, Koch K, Rehnitz C et al. Factors Influencing Long-term Outcomes After Matrix-Induced Autologous Chondrocyte Implantation: Long-term Results at 10 Years. American Journal of Sports Medicine. 2024; 10.1177/03635465241270152.

28. Ginesin E, Chari N, Barnhart J, Wojnowski N, Patel R. Cartilage Restoration for Isolated Patellar Chondral Defects: An Updated Systematic Review. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231153422.

29. Badin D, Leland C R, Bronheim R S, Balmuri N, Lee R J. Synovectomy in juvenile idiopathic arthritis: A protocol for systematic review and meta-analysis. Medicine (United States). 2022; 101: E32278. 10.1097/MD.0000000000032278.

30. Chalmers P, Sherman S, Raphael B, Su E. Rheumatoid synovectomy: Does the surgical approach matter? Clinical Orthopaedics and Related Research. 2011; 469: 2062-2071. 10.1007/s11999-010-1744-3.

31. Chandra A, Agarwal S, Donahue A, Handorf E, Abraham J. Arthroscopic Versus Open Management of Diffuse-Type Tenosynovial Giant Cell Tumor of the Knee: A Meta-analysis of Retrospective Cohort Studies. Journal of the American Academy of Orthopaedic Surgeons Global Research and Reviews. 2021; 4: 10.5435/JAAOSGlobal-D-21-00217.

32. Fecek C, Carter K R. Pigmented Villonodular Synovitis [Updated 2023 Aug 7]. Stat Pearls Publishing. 2023; Accessed: 09/25/2024. https://www.ncbi.nlm.nih.gov/books/NBK549850

33. Bump J M, Lewis L. Patellofemoral Syndrome [Updated 2023 Feb 13]. Stat Pearls Publishing. 2023; Accessed: 09/25/2024. https://www.ncbi.nlm.nih.gov/books/NBK557657/.

34. Petersen W, Ellermann A, Gösele-Koppenburg A, Best R, Rembitzki I et al. Patellofemoral pain syndrome. Knee Surgery, Sports Traumatology, Arthroscopy. 2014; 22: 2264-2274. 10.1007/s00167-013-2759-6.

35. Saper M, Shneider D. Diagnosis and Treatment of Lateral Patellar Compression Syndrome. Arthroscopy Techniques. 2014; 3: e633-e638. 10.1016/j.eats.2014.07.004.

36. Arshi A, Cohen J, Wang J, Hame S, McAllister D. Operative Management of Patellar Instability in the United States: An Evaluation of National Practice Patterns, Surgical Trends, and Complications. Orthopaedic Journal of Sports Medicine. 2016; 4: 10.1177/2325967116662873.

37. Dennis E, Gruber S, Marmor W, Shubin Stein B. Evaluation and management of patellar instability. Annals of Joint. 2022; 7: 10.21037/aoj-2020-02.

38. Severino N R, Severino F R, De Camargo O P A, Guglielmetti L G B, De Oliveira V M. Update on Patellar Instability. Rev Bras Ortop. 2021; 56: 147-153. 10.1055/s-0040-1713389.

39. Wolfe S, Varacallo M, Thomas J D, Carroll J J, Kahwaji C I. Patellar Instability [Updated 2023 Feb 13]. Stat Pearls Publishing. 2023; Accessed: 09/25/2024. https://www.ncbi.nlm.nih.gov/books/NBK482427

40. Brady J, Rosencrans A, Shubin Stein B. Use of TT-PCL versus TT-TG. Current Reviews in Musculoskeletal Medicine. 2018; 11: 261-265. 10.1007/s12178-018-9481-4.

41. Barbosa R, da Silva M, Macedo C, Santos C. Imaging evaluation of patellofemoral joint instability: a review. Knee Surgery and Related Research. 2023; 35: 10.1186/s43019-023-00180-8.

42. Colacchio N, Abela D, Bono J, Shah V, Bono O. Efficacy of manipulation under anesthesia beyond three months following total knee arthroplasty. Arthroplasty Today. 2019; 5: 515-520. 10.1016/j.artd.2019.08.002.

43. Fackler N, Chin G, Karasavvidis T, Bohlen H, Smith E et al. Outcomes of Arthroscopic Lysis of Adhesions for the Treatment of Postoperative Knee Arthrofibrosis: A Systematic Review. Orthopaedic Journal of Sports Medicine. 2022; 10: 10.1177/23259671221124911.

44. Eggeling L, Klepsch L, Akoto R, Frosch K. Clinical results after very early, early and late arthroscopic arthrolysis of the knee. International Orthopaedics. 2022; 46: 265-271. 10.1007/s00264-021-05193-0.

45. Washington State Health Care Authority. Knee Arthroscopy for Osteoarthritis of the Knee [Adopted October 17, 2008]. Washington State Health Care Authority. 2008; Accessed: 09/25/2024. https://www.hca.wa.gov/assets/program/decision_finding_knee_final%5B1%5D.pdf.

46. Washington State Health Care Authority. Treatments for chondral defects of the knee [Adopted January 31, 2025]. Washington State Health Care Authority. 2025; Accessed: 02/05/2025. https://www.hca.wa.gov/assets/program/chondral-defects-final-findings-and-decision.pdf

47. Kise N, Risberg M, Stensrud S, Ranstam J, Engebretsen L. Exercise therapy versus arthroscopic partial meniscectomy for degenerative meniscal tear in middle aged patients: randomised controlled trial with two year follow-up. BMJ. 2016; i3740. 10.1136/bmj.i3740.

48. Migliorini F, Oliva F, Eschweiler J, Cuozzo F, Hildebrand F. No evidence in support of arthroscopic partial meniscectomy in adults with degenerative and nonobstructive meniscal symptoms: a level I evidence-based systematic review. Knee Surgery. 2023; 31: 1733-1743. 10.1007/s00167-022-07040-0.

49. Kellgren J, Lawrence J. Radiological Assessment of Osteo-Arthrosis. Annals of the Rheumatic Diseases. 1957; 16: 494-502. 10.1136/ard.16.4.494.

50. Slattery C, Kweon C. Classifications in Brief: Outerbridge Classification of Chondral Lesions. Clinical Orthopaedics and Related Research. 2018; 476: 2101-2104. 10.1007/s11999.0000000000000255.

51. Marx R, Stump T, Jones E, Wickiewicz T, Warren R. Development and Evaluation of an Activity Rating Scale for Disorders of the Knee. The American Journal of Sports Medicine. 2001; 29: 213-218. 10.1177/03635465010290021601.

52. Tegner Y, Lysholm J. Rating systems in the evaluation of knee ligament injuries. Clinical Orthopaedics and Related Research. 1985; 198: 43-49. 10.1097/00003086-198509000-00007.

Evolent Clinical Guideline 1769 for Shoulder Arthroplasty

Guideline Number: Evolent_CG_1769	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: August 2016	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

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.

Purpose

This guideline addresses elective, non-emergent shoulder arthroplasty (shoulder replacement) procedures, including total shoulder arthroplasty, reverse shoulder arthroplasty, resurfacing arthroplasty, partial shoulder replacement or hemiarthroplasty, and revision arthroplasty procedures.

Scope

Arthroplasty procedures are reserved for end stage arthritis of the shoulder joint, including functional loss of motion, pain, and disability. The choice of arthroplasty is dependent upon surgeon philosophy, experience, and skill. Successful outcome, regardless of procedure, is more likely with high volume (> 20 per year) shoulder specialists.

GENERAL REQUIREMENTS

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

- Clinical correlation of individual's subjective complaints with objective exam findings and/or imaging (when applicable)
- Individual has limited function (age-appropriate activities of active daily livings (ADLs), occupational, or athletic)
- 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
- Individual has good oral hygiene and does not have major dental work scheduled or anticipated (ideally within one year of joint replacement; due to increased post-surgical infection risk)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with a total joint replacement when comorbidities exist as it pertains to the added risk of complications [1,2]

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations
- Type and duration of non-operative management modalities

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
- Corticosteroid injections

INDICATIONS

Total Shoulder Arthroplasty (TSA)

Total Shoulder Arthroplasty may be necessary when the following criteria are met [1,3,4]:

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations such as ADLs, employment, or recreation
- Functional and intact rotator cuff and deltoid (adequate abduction strength); confirmed by physical examination, MRI, or CT scan
- Complete or near-complete loss of joint space***** on axillary or AP X-rays (internal rotation and/or external rotation)*****

  ***NOTE**: In those with bone-on-bone articulation on axillary or true AP X-rays, non-operative treatment is not required

  NOTE: MRI should not be the primary imaging study to determine the extent of disease
- Failure of at least 12 weeks of non-operative treatment that includes at least **ONE** of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Application of heat or ice
  - Pharmacologic treatment (oral/topical NSAIDS, acetaminophen, analgesics)
  - Corticosteroid injections
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Contraindications

- Neurological disease resulting in complex regional pain syndrome (CRPS or its variants), Charcot arthropathy, or loss of deltoid or rotator cuff function
- Active infection or any infection within 12 weeks of surgery:
  - History of prior shoulder joint infection without documentation that indolent infection has been eliminated (individual has been off antibiotics for a minimum of 6 weeks). Evidence of resolved infection should include laboratory work

(serologies, including CBC with differential, ESR (erythrocyte sedimentation rate), CRP (C-reactive protein), with or without blood cultures, soft tissue biopsy cultures, or synovial fluid aspiration (cultures, gram stain, cell count, differential, crystals). Cultures should be for aerobic and anaerobic bacteria (AFB, fungal), with special attention to the possibility of *Cutibacterium acnes* (*C. acnes*) formerly *Propionibacterium acnes* (*P. acnes*). [6,11]

- Poor dental hygiene (e.g., tooth extraction should be performed prior to arthroplasty). Major dental work within 2 years after a joint replacement **MAY** lead to seeding of the implant and possible revision surgery. If possible, all dental work must be completed prior to shoulder arthroplasty as these procedures increase risk for infection
- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Hemiarthroplasty

Hemiarthroplasty may be necessary when the following criteria are met [3,4]:

- Acute 3 or 4-part fracture of the proximal humerus

  OR

- Individual meets all of the criteria for a Total Shoulder Arthroplasty, as detailed above, or has avascular necrosis or osteonecrosis of the humeral head without advanced glenoid disease
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- Neurologic disease resulting in CRPS or Charcot shoulder
- Active infection within 12 weeks of surgery

Reverse Total Shoulder Arthroplasty (RTSA)

For the treatment of arthritis, irreparable rotator cuff tears or proximal humeral fractures [12,13]:

Arthritis

RTSA may be indicated for the treatment of arthritis when **ALL** of the following criteria are met [12]:

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations (such as activities of daily living or employment or simple recreation)
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis*****
- Complete or near-complete loss of joint space on axillary or AP x-rays (internal

rotation and/or external rotation) **OR** radiographic evidence of advanced glenoid bone loss or excessive retroversion*

*In those with bone-on-bone articulation on axillary or true AP X-rays, **non-operative treatment is not required.**

NOTE: MRI should not be the primary imaging study to determine the extent of disease

- Non-repairable massive tears involving at least two tendons, substantial partial, **OR** focal full thickness rotator cuff tear with significant rotator cuff dysfunction (weakness, impingement signs on exam) **AND** intact deltoid
- Requests for reverse TSA for advanced glenohumeral arthritis with an intact rotator cuff will be reviewed on a case-by-case basis [14,15]
- Failure of **at least 12** weeks of non-operative treatment that includes **at least ONE** of the following:
  - Physical therapy or properly instructed home exercise program
  - Rest or activity modification
  - Application of heat or ice
  - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics
  - Corticosteroid injections
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- No prior arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

***NOTE**: RTSA has been found to be a reliable operation in younger individuals with improvement in pain, range of motion and strength, without a large number of early failures [12,16,17]

Contraindications [12]

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Active infection within 12 weeks of surgery
- Neurologic disease resulting in CRPS or Charcot shoulder
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

Proximal Humeral Fractures

RTSA may be indicated for the treatment of fractures when **ALL** of the following criteria are met:

- Acute 2, 3, or 4-part fractures of proximal humerus with or without concomitant tuberosity as evidence by radiographic findings **OR** painful malunion of proximal humerus fracture with rotator cuff dysfunction (weakness, impingement signs on exam) [12]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis

Rotator Cuff Tears

RTSA may be indicated for the treatment of irreparable rotator cuff tears in the absence of arthritis when **ALL** of the following criteria are met:

- Non-repairable massive rotator cuff tear
- Intact deltoid
- Inability to actively elevate the arm above the level of the shoulder (90 degrees) (i.e., pseudoparalysis); **OR** history of previous failed rotator cuff repair with severe pain and functional disability [12,18]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis
- Failure of **at least 12** weeks of attempted physical therapy or properly instructed home exercise program unless there is worsening of symptoms [19,20,21]
- No arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- No cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]
- Active infection within 12 weeks of surgery
- Neurologic disease resulting in CRPS or Charcot shoulder
- Arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]

NOTE: RTSA is a reasonable surgical option for irreparable rotator cuff repair without arthritis. However, caution should be exercised when offering RTSA to individuals without pseudoparalysis because they can have a higher complication and dissatisfaction rate [22,23]

Revision Arthroplasty (See Contraindications*) [24,25]

There are six primary indications for revision shoulder arthroplasty:

1. Conversion of a hemiarthroplasty to a total shoulder arthroplasty
2. Conversion of a hemiarthroplasty to a reverse shoulder arthroplasty
3. Revision of a total shoulder arthroplasty to another total shoulder arthroplasty
4. Revision of a total shoulder arthroplasty to a reverse shoulder arthroplasty
5. Revision of a reverse total shoulder arthroplasty to another reverse shoulder arthroplasty
6. Revision of a total shoulder or reverse shoulder arthroplasty to a hemiarthroplasty

Conversion of a Hemiarthroplasty to a Total Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative

infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.

- Clinical and radiographic evidence of intact rotator cuff (or repairable rotator cuff tear), including **ONE** of the following two options:
  - Radiographic evidence of failed humeral component, including aseptic loosening or periprosthetic fracture (documentation should include radiolucencies around cemented or uncemented components) **OR**
  - Clinical and radiographic evidence of glenoid articular cartilage disease (including progressive arthritis)

Conversion of a Hemiarthroplasty to a Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
- Intact deltoid and intact axillary nerve
- Age > 60; requests for individuals < 60 will be reviewed on a case-by-case basis
- Evidence of pseudoparalysis (inability to elevate arm) **OR** severe pain with elevation

Revision of a Total Shoulder Arthroplasty to Another Total Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
- Intact deltoid and intact axillary nerve
- Clinical and radiographic evidence of intact rotator cuff (or repairable rotator cuff tear)
- Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture

Revision of a Total Shoulder Arthroplasty to a Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent pain and functional loss
- Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
- Intact deltoid function
- Age > 60 (requests in individuals < 60 will be reviewed on a case-by-case basis)
- Evidence of pseudoparalysis (inability to elevate arm) **OR** severe pain with elevation

Revision of a Reverse Shoulder Arthroplasty to Another Reverse Shoulder Arthroplasty

May be necessary when **ALL** of the following criteria are met:

- All cases should be reviewed on a case-by-case basis and include the following:
  - Evidence of prior reverse shoulder arthroplasty
  - Persistent pain and functional loss
  - Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
  - Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture
  - Intact deltoid

Revision of a Total Shoulder or Reverse Shoulder Arthroplasty to a Hemiarthroplasty

May be necessary when **ALL** of the following criteria are met

- All cases should be reviewed on a case-by-case basis and include the following:
  - Evidence of prior total shoulder or reverse shoulder arthroplasty
  - Persistent pain and functional loss
  - Documentation of mechanical failure, or component failure/malposition **OR** negative infection evaluation (including CRP, ESR, with or without negative aspiration). If these markers are elevated, a clear statement by the treating surgeon is required regarding the surgical plan to rule out infection.
  - Radiographic evidence of failed humeral and/or glenoid component, including aseptic loosening or periprosthetic fracture
  - Intact deltoid and intact axillary nerve
  - Insufficient glenoid bone to support a revision glenoid component

**Contraindications for Revision Arthroplasty*

- Active or recent history of infection
- Neurogenic pain syndrome
- Acromial fracture **OR** overly thin acromion from prior subacromial decompression
- Severe osteoporosis as evidenced by radiographic osteopenia, osteomalacia or severe osteoporosis on DXA scan
- Non-functioning deltoid or axillary nerve injury/palsy
- Any arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- Any cortisone injection into the joint within 12 weeks of surgery [1,5,6,7,8]

CODING AND STANDARDS

Coding

CPT Codes

Total/Reverse Shoulder Arthroplasty or Resurfacing: 23472

Partial Shoulder Arthroplasty/Hemiarthroplasty: 23470

Revision Shoulder Arthroplasty: 23473, 23474

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 317 for Shoulder Arthroplasty • For revision arthroplasty, added the requirement for a surgical plan to rule out infection, if inflammation markers are elevated • Reduced/cut background section

Date	Summary
December 2023	• No content changes • Added table of contents • Reduced Background section • Updated references
May 2023	• Added statement that non-operative treatment is not required in those with X-rays showing bone-on-bone articulation • Additional references to contraindications for cortisone injections within 12 weeks of an arthroplasty. • Added no cortisone injections or arthroscopic surgery within 12 weeks of surgery for a revision arthroplasty

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

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REFERENCES

1. Razmjou H, Christakis M, Nam D, Drosdowech D, Sheth U et al. Assessing Appropriateness for Shoulder Arthroplasty Using a Shared Decision-Making Process. Journal of Shoulder and Elbow Arthroplasty. 2023; 7: 247154922311671. 10.1177/24715492231167104.

2. Seok H, Park J, Park S. Risk Factors for Periprosthetic Joint Infection after Shoulder Arthroplasty: Systematic Review and Meta-Analysis. Journal of Clinical Medicine. 2022; 11: 10.3390/jcm11144245.

3. Hughes J, Athwal G, Aibinder W, Wiater J. Shoulder Joint Replacement. American Academy of Orthopaedic Surgeons. 2024; Accessed: 09/26/2024. https://orthoinfo.aaos.org/en/treatment/shoulder-joint-replacement/#:~:text=Shoulder%20replacement%20surgery%20was%20first%20performed%20in%20the.

4. Mattei L, Mortera S, Arrigoni C, Castoldi F. Anatomic shoulder arthroplasty: an update on indications, technique, results and complication rates. Joints. 2015; 3: 72-7. 10.11138/jts/2015.3.2.072.

5. Lucenti L, Panvini F, de Cristo C, Rapisarda D, Sapienza M et al. Do Preoperative Corticosteroid Injections Increase the Risk of Infection after Shoulder Arthroscopy or Shoulder Arthroplasty? A Systematic Review. Healthcare (Switzerland). 2024; 12: 10.3390/healthcare12050543.

6. Markes A, Bigham J, Ma C, Iyengar J, Feeley B. Preventing and Treating Infection in Reverse Total Shoulder Arthroplasty. Current Reviews in Musculoskeletal Medicine. 2023; 16: 371-380. 10.1007/s12178-023-09843-1.

7. Stadecker M, Gu A, Ramamurti P, Fassihi S, Wei C et al. Risk of revision based on timing of corticosteroid injection prior to shoulder arthroplasty. The bone & joint journal. 2022; 104-B: 620-626. 10.1302/0301-620X.104B5.BJJ-2021-0024.R3.

8. Werner B, Cancienne J, Burrus M, Griffin J, Gwathmey F. The timing of elective shoulder surgery after shoulder injection affects postoperative infection risk in Medicare patients. Journal of Shoulder and Elbow Surgery. 2016; 25: 390-397. 10.1016/j.jse.2015.08.039.

9. Malik A, Morris J, Bishop J, Neviaser A, Khan S. Undergoing an Arthroscopic Procedure Prior to Shoulder Arthroplasty is Associated With Greater Risk of Prosthetic Joint Infection. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2021; 37: 1748-1754.e1. 10.1016/j.arthro.2021.01.013.

10. Wright-Chisem J, Apostolakos J, Dines J, Dines D, Gulotta L et al. The impact of prior ipsilateral arthroscopy on infection rates after shoulder arthroplasty. Journal of Shoulder and Elbow Surgery. 2021; 30: 1596-1602. 10.1016/j.jse.2020.09.019.

11. Elston M, Dupaix J, Opanova M, Atkinson R. Cutibacterium acnes (formerly Proprionibacterium acnes) and Shoulder Surgery. Hawai'i journal of health & social welfare. 2019; 78: 3-5.

12. Familiari F, Rojas J, Doral M, Huri G, McFarland E. Reverse total shoulder arthroplasty. EFORT Open Reviews. 2018; 3: 58-69. 10.1302/2058-5241.3.170044.

13. Hermana S, Rednam M. Reverse Shoulder Arthroplasty [Updated 2024 Mar 13. Stat Pearls Publishing. 2024; Accessed: 09/26/2024. https://www.ncbi.nlm.nih.gov/books/NBK574545.

14. Heifner J, Kumar A, Wagner E. Glenohumeral osteoarthritis with intact rotator cuff treated with reverse shoulder arthroplasty: a systematic review. Journal of Shoulder and Elbow Surgery. 2021; 30: 2895-2903. 10.1016/j.jse.2021.06.010.

15. Nazzal E, Reddy R, Como M, Rai A, Greiner J et al. Reverse shoulder arthroplasty with preservation of the rotator cuff for primary glenohumeral osteoarthritis has similar outcomes to anatomic total shoulder arthroplasty and reverse shoulder arthroplasty for cuff arthropathy. Journal of Shoulder and Elbow Surgery. 2023; 32: S60-S68. 10.1016/j.jse.2023.02.005.

16. Goldenberg B, Samuelsen B, Spratt J, Dornan G, Millett P. Complications and implant survivorship following primary reverse total shoulder arthroplasty in patients younger than 65 years: a systematic review. Journal of Shoulder and Elbow Surgery. 2020; 29: 1703-1711. 10.1016/j.jse.2020.02.004.

17. Otto R, Clark R, Frankle M. Reverse shoulder arthroplasty in patients younger than 55 years: 2- to 12-year follow-up. Journal of Shoulder and Elbow Surgery. 2017; 26: 792-797. 10.1016/j.jse.2016.09.051.

18. Weber S, Chahal J. Management of Rotator Cuff Injuries. Journal of the American Academy of Orthopaedic Surgeons. 2020; 28: E193-E201. 10.5435/JAAOS-D-19-00463.

19. Christensen B, Andersen K, Rasmussen S, Andreasen E, Nielsen L. Enhanced function and quality of life following 5 months of exercise therapy for patients with irreparable rotator cuff tears - An intervention study. BMC Musculoskeletal Disorders. 2016; 17: 10.1186/s12891-016-1116-6.

20. Juhan T, Stone M, Jalali O, Curtis W, Prodromo J et al. Irreparable rotator cuff tears: Current treatment options. Orthopedic Reviews. 2019; 11: 123-128. 10.4081/or.2019.8146.

21. Shepet K, Liechti D, Kuhn J. Nonoperative treatment of chronic, massive irreparable rotator cuff tears: a systematic review with synthesis of a standardized rehabilitation protocol. Journal of Shoulder and Elbow Surgery. 2021; 30: 1431-1444. 10.1016/j.jse.2020.11.002.

22. Monir J, Tams C, Wright T, Parsons M, King J. Preoperative factors associated with loss of range of motion after reverse shoulder arthroplasty. Journal of Shoulder and Elbow Surgery. 2021; 30: e621-e628. 10.1016/j.jse.2021.02.010.

23. Virk M, Nicholson G, Romeo A. Irreparable Rotator Cuff Tears Without Arthritis Treated With Reverse Total Shoulder Arthroplasty. The Open Orthopaedics Journal. 2018; 10: 296-308. 10.2174/1874325001610010296.

24. Harrison A, Knudsen M, Braman J. Hemiarthroplasty and Total Shoulder Arthroplasty Conversion to Reverse Total Shoulder Arthroplasty. Current Reviews in Musculoskeletal Medicine. 2020; 13: 501-508. 10.1007/s12178-020-09649-5.

25. Mauch F, Huth J. Revision of anatomic shoulder arthroplasty. Orthopadie. 2023; 52: 137-143. 10.1007/s00132-022-04337-3.

Evolent Clinical Guideline 1770 for Shoulder Arthroscopy

Guideline Number: Evolent_CG_1770	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: August 2016	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

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.

Purpose

This guideline addresses elective, non-emergent, arthroscopic shoulder repair procedures, including Rotator Cuff Repair, Labral Repairs, Lysis of Adhesions (Capsulotomy), Distal Clavicle Excision (DCE), Long Head Biceps (LHB) Tenotomy or Tenodesis, Loose body removal, Synovectomy, and Subacromial Decompression (SAD).

Scope

Surgical indications are based on relevant subjective clinical symptoms, objective physical exam & radiologic findings, and response to previous non-operative treatments when medically appropriate.

Open, non-arthroplasty shoulder repair surgeries are performed as dictated by the type and severity of injury and/or disease.

GENERAL REQUIREMENTS

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

- Clinical correlation of 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, or athletic)
- Individual is medically stable and optimized for surgery, and any treatable comorbidities are adequately medically managed such as diabetes, nicotine addiction, or an excessively high BMI. There should also be a shared decision between the patient and physician to proceed with shoulder surgery when comorbidities exist as it pertains to the increased risk of complications.
- 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 a treatment program

  *A smoking cessation program is highly recommended and should be instituted pre-operatively for all actively smoking patients [1,2]

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations

- Type and duration of non-operative management modalities (where applicable)

Non-operative management, when required, will be specified within the clinical indications below and may include one or more of the following:

- Physical therapy or properly instructed home exercise program
- Rest or activity modification
- Application of heat or ice
- Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Single injection of corticosteroid and local anesthetic into subacromial, intra-articular space, or bicipital groove

INDICATIONS

Diagnostic Shoulder Arthroscopy

Diagnostic arthroscopy is considered medically necessary when the following criteria in either section have been met [3,4]:

- **Section One**
  - For the evaluation of a painful total shoulder arthroplasty
- **Section Two**
  - Severe, disabling pain and/or a documented loss of shoulder function which interferes with the ability to carry out age-appropriate activities of daily living and/or demands of employment
  - Individual demonstrates **any** of the following abnormal, shoulder physical examination findings, as compared to the non-involved side:
    - Functionally limited range of motion (active or passive)
    - Measurable loss in strength
    - Positive impingement signs
  - Individual has undergone an appropriate radiographic work-up that includes both routine x-rays and an MRI evaluation which are determined to be inconclusive for a specific diagnosis
  - Other potential diagnostic conditions have been excluded, including, but not limited to, fracture, thoracic outlet syndrome, brachial plexus disorders, referred neck pain and arthritis
  - Failure of non-surgical management for at least 12 weeks duration to include **TWO** of the following:
    - Rest or activity modifications/limitations
    - Ice/heat
    - Use of a sling/immobilizer/brace
    - Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, analgesics, tramadol

- Physical therapy modalities
- Supervised home exercise program

NOTE: In-office diagnostic arthroscopy (e.g., Mi-Eye, VisionScope) [5] is not managed by Evolent.

Rotator Cuff Repair (RCR)

Surgical treatment of a rotator cuff tear (RCT) should only be performed when there is a clinical correlation of symptoms, clinical exam findings, imaging, and failed non-operative management (where required). [6,7]

NOTE: There is a separate section for **subscapularis tears**

Partial-Thickness Rotator Cuff Tear or Calcific Tendinitis

Surgical repair of a partially torn rotator cuff or excision of an area of calcific tendinopathy may be necessary when **all** the following criteria are met [8]:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADL), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) [9]
- MRI or ultrasound (if an MRI cannot be performed) that demonstrates a partial thickness tear (articular-sided, concealed, or bursal-sided) or evidence of calcific tendinitis [10,11]
- Unless worsening symptoms develop, failure of at least 12 weeks of non-operative treatment, including at least 6 weeks of physical therapy or a properly instructed home exercise program that includes exercises for scapular dyskinesis when present **AND** one of the following:
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Small (< 1 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a small full-thickness rotator cuff tear may be necessary when **all** the following criteria are met:

- Reproducible rotator cuff pain patterns (lateral arm, deltoid pain not radiating past the elbow, night pain, or pain with overhead motions)
- Functional loss (age-appropriate activities of daily living (ADLs), occupational, or athletic)
- Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe test or

reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder) [9]

- Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
- MRI or Ultrasound that demonstrates a small, full thickness tear (< 1 cm) [10,15]
- Unless worsening symptoms develop, failure of at least 6 weeks of non-operative treatment*, including physical therapy or a properly instructed home exercise program (that includes exercises for scapular dyskinesis when present) **AND** one of the following:
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

*__NOTE__: The requirement for conservative, non-operative treatment is waived in individuals < age 55 with an acute traumatic tear (onset of shoulder pain attributed to a specific traumatic event with no prior history of significant shoulder pain). For ages > 55, non-operative treatment may be waived on a case-by-case basis.

Medium (1-3 cm) or Large (3-5 cm), Full-Thickness Rotator Cuff Tear

Surgical repair of a medium or large full-thickness rotator cuff tear may be necessary when the following criteria are met:

- Significant progression of a full-thickness tear on serial imaging performed at least 12 weeks apart (at least 50% increase in tear size) **OR**
- When the following criteria are met:
  - Reproducible rotator cuff pain patterns (lateral arm, deltoid pain rarely not radiating past the elbow, night pain, or pain with overhead motions)
  - Functional loss (age-appropriate activities of daily living (ADLs), occupational or athletic)
  - Positive impingement signs and/or tests on exam (Hawkins, Neer, Jobe, empty can or drop-arm test or reproducible pain when arm is positioned overhead (above plane of shoulder) with relief of pain when arm is repositioned below the plane of the shoulder [9]
  - Rotator cuff weakness or severe pain with rotator cuff testing on physical exam
  - MRI or ultrasound results demonstrates a medium (1-3 cm) or large (3-5 cm), full-thickness tear (tear must be a complete single tendon or greater) [10,15]
  - MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,16]
  - Warner classification of atrophy ‘none’ or ‘mild’ [16,17]
  - No cortisone injection within 12 weeks prior to surgery [12,13,14]

Massive (> 5 cm and ≥ 2 tendons involved), Full-Thickness Rotator Cuff Tear

Surgical repair of a massive torn rotator cuff **WITH OR WITHOUT** a superior capsular reconstruction may be necessary when **all** the following criteria are met [7,18]:

- MRI or ultrasound demonstrates massive (> 5 cm), full-thickness tears (with intact or reparable subscapularis tendon for superior capsular reconstruction) [10,15]
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,16]
- Warner classification of atrophy 'none' or 'mild' [16,17]
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on- bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

NOTE: AAOS consensus guidelines state that partial repair and superior capsular reconstruction, can improve patient reported outcomes [7]

Subscapularis Tears

Surgical repair of a subscapularis rotator cuff tear may be necessary when the following criteria are met [19]:

- History of an acute injury or chronic complaints of anterior shoulder pain, weakness, or functional impairment
- Positive physical examination findings of subscapularis deficiency – lift-off, bear-hug, belly press test, etc.
- MRI demonstrates a significant partial thickness tear (at least 50% of tendon), full-thickness tear, or any tear associated with subluxation of the biceps tendon
- No cortisone injection within 12 weeks prior to surgery [12,13,14]

Isolated Superior Capsular Reconstruction

A Superior Capsular Reconstruction may be necessary when **all** the following criteria are met [18,20,21]:

- MRI or ultrasound demonstrates massive (> 5 cm), full-thickness tears with an intact or reparable subscapularis tendon
- No x-ray evidence of chronic subacromial articulation of the humeral head, defined as an acromiohumeral space less than 5 mm (Hamada grade 2)
- No advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)

NOTE: A Concomitant Rotator Cuff Repair is **NOT** allowable with advanced Goutallier or Warner muscle atrophy changes as noted in the previous section

Rotator Cuff Repair Revision

Surgical revision within 1 year of a previously repaired small, medium, large or massive torn rotator cuff will be reviewed on a case-by-case basis and must include an MRI (with or

without arthrogram) or CT arthrogram that demonstrate failure of healing (Sugaya type 4-5, see **Background** section) or recurrent tear > 12 weeks after index surgery. [22,23]

All RCR revision cases greater than 1 year following an initial repair must again meet indications as specified by tear size listed in Background section.

Contraindications (applies to all rotator cuff repair) [23]:

- Active infection (local or remote)
- Treatment of asymptomatic, full thickness rotator cuff tear
- Active systemic bacteremia
- Deltoid or rotator cuff paralysis
- Advanced or severe arthritis (severe narrowing of glenohumeral space or bone-on-bone articulation, large osteophytes, subchondral sclerosis, or cysts, etc.)
- Any cortisone injection within 12 weeks prior to surgery [12,13,14]

Labral Repairs

Repair of Superior Labral Anterior-Posterior (SLAP) Tear

Surgical indications should be focused on clinical symptoms and failure to respond to non-operative treatments, rather than imaging (due to a higher percentage of tears being missed on images and significant over-diagnosing of tears based on imaging-alone). [6]

Repair *(not debridement of a SLAP lesion)* may be necessary when **all** the following criteria are met [24]:

- History compatible with tear (acute onset in thrower or overhead athlete, fall, traction injury, shear injury (MVA), lifting injury
- Pain localized to the glenohumeral joint (often only associated with certain reaching or lifting activities and at night) or painful catching/popping/locking sensations
- Inability to perform desired tasks without pain (age-appropriate ADLs, sports, or occupation)
- Age < 40; requests for SLAP repair in an individual age > 40 will be reviewed on a case-by-case basis [25]
- Physical examination demonstrates findings of a SLAP tear (active compression test (O'Brien test), compression rotation test, clunk, or crank test, etc.) [6,26]
- MRI demonstrates Type II, IV SLAP tear - see the classifications of tears below [27]:
    - **Primary SLAP tear classification:**
        - I - Labral and biceps fraying, anchor intact
        - II - Labral tearing with detached biceps tendon anchor
        - III - Bucket handle tear, intact biceps tendon anchor (uncommon)
        - IV - Bucket handle tear with detached biceps tendon anchor, often seen with anterior instability and anterior labral tears
    - **Subclassification for SLAP tears:**
        - V – Type II SLAP tear with Bankart lesion/anterior shoulder instability

        - VI –Superior labral flap, intact biceps anchor
        - VII – Type II SLAP tear with extension to MGHL/IGHL and instability
        - VIII – Type II SLAP with cartilage injury at bicipital footplate
            - (Type V, VII, and VIII are variants of repairable Type II tears and would usually include additional stabilization procedures or biceps tenodesis) (see note* below)
- Failure of at least 12 weeks of non-operative treatment, including activity modification/avoidance of painful activities and one of the following:
    - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
    - Physical therapy or a properly instructed home exercise program

Contraindications [24]:

- **ANY** evidence of degenerative disease upon imaging
    - Smoker and age > 40
    - Diabetics with poor control HgBA1c > 7
    - MRI findings not attributable to normal common variants (for example, labral overhang)

***NOTE**: In cases where a true SLAP tear exists, but the individual has one or more contraindications or findings at the time of surgery that indicates a repair is not feasible, a SLAP debridement (limited, extensive debridement), biceps tenotomy or tenodesis may be an alternative. In addition, for some repairable SLAP tears, biceps tenodesis is a viable alternative to repair (see Tenotomy and Tenodesis Indications). [27,28]

Anterior-Inferior Labral Tear (Bankart Lesion) [29]

- Bankart repair of an **acute labral tear** may be necessary when **all** the following criteria are met:
    - History of an acute event of instability (subluxation or dislocation) or acute onset of pain following activity
    - Age < 30
    - Clinical exam findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain
    - Range of motion is not limited by stiffness upon physical exam (PE is not required if there has been a recent episode of instability)
    - Labral tear/Bankart lesion on MRI or CT imaging
- Bankart repair for **recurrent instability,** with or without a Remplissage or Latarjet procedure, may be necessary when **all** the following criteria are met:
    - Recurrent instability (two or more episodes of subluxation or dislocation)
    - Physical examination findings demonstrate positive apprehension test, positive relocation test, positive labral grind test, or objective laxity with pain (PE is not required if there has been a recent episode of instability or there is a radiographic evidence of any prior dislocation)
    - Range of motion is not limited by stiffness upon physical exam (not required with

a history of a recent dislocation)

- MRI evidence of a labral tear with or without bony Bankart fracture of the glenoid upon imaging

Anterior-Inferior Labral Tear (Bankart Lesion) – Contraindications (29)

- Radiographic findings of an engaging Hill Sachs humeral head defect or glenoid bone loss (if surgery only includes Bankart repair). Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging ("off-track")* Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by x-ray, CT, or MRI [30,31,32]
- Pain only (no documented recurrent instability events) in individuals over 40
- X-ray, MRI, or CT documentation of significant degenerative arthritis of the glenohumeral joint

***See <u>Background</u> section**

Posterior Labral Tear [33,34]

Surgical repair of a posterior labral tear may be necessary when **ALL** of the following criteria are met:

- Symptoms of pain, catching/popping, or instability
- MRI findings of posterior labral tear
- Exam findings demonstrate positive load-and-shift test, jerk test, glenohumeral grind test, or objective laxity with pain or profound weakness
- Failure of at least 12 weeks of non-operative treatment (unless presenting as a traumatic tear in a competitive athlete at any level) that includes any **TWO** of the following**:**
  - Physical therapy or a properly instructed home exercise program
  - Rest or activity modification
  - Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)
- Age < 40
- No radiographic evidence of degenerative disease (e.g., posterior glenoid cartilage loss, subchondral glenoid cysts, mucoid degeneration of labrum, narrowing of joint space with posterior humeral head subluxation on axillary x-ray or axial MRI images)

Combined Labral Tears

(E.g., Anterior / Posterior, SLAP / Anterior, SLAP / Posterior, SLAP / Ant. / Post.) [35]

- Surgical repair of an **acute combination tear** may be necessary when **all** the following criteria are met:
  - History of an acute event of instability (subluxation or dislocation)
  - Acute labral tear on MRI/CT imaging with/without bony Bankart fracture not > 25% of glenoid width upon imaging

- Age < 30
- Range of motion not limited by stiffness upon physical exam
- Clinical exam findings demonstrate positive apprehension test and positive relocation test, **OR** positive labral grind test **OR** objective laxity with pain
- Minimal to no evidence of degenerative changes on imaging

- Surgical repair of **recurrent combination tear** may be necessary when **all** the following criteria are met:
  - Recurrent instability (subluxation or dislocation) with at least 2 instability events
  - Labral tear on MRI or CT, with/without bony Bankart fracture not > 25% of glenoid width upon imaging
  - Range of motion not limited by stiffness upon physical exam
  - Clinical exam findings demonstrate positive apprehension test and positive relocation test, or positive labral grind test, or objective laxity with pain
  - Minimal to no evidence of degenerative changes on imaging

Multidirectional Instability of the Shoulder (MDI)

Open or Arthroscopic Capsulorrhaphy for MDI

Surgical repair for MDI may be necessary when **all** the following criteria are met [36,37]:

- Individual has pain and limited function (age-appropriate ADLs, occupation, or sports)
- Individual has recurrent instability due to hyperlaxity or mobility and no traumatic dislocation
- Physical exam supports repeatable increased glenohumeral joint translation (greater than 1 cm of movement during the sulcus test)
- Imaging (x-ray and MRI) rules out fracture and/or other soft-tissue injury
- Failure of at least 6 months of formal physical therapy and activity modification

Adhesive Capsulitis [38,39]

(Lysis of Adhesions, Capsulotomy/Capsular Release or Manipulation under Anesthesia)

Surgery for adhesive capsulitis may be necessary when **all** of the following criteria are met:

- Individual has pain, loss of motion, and limited function (age-appropriate ADLs, occupation, or sports)
- Physical exam demonstrates loss of motion of at least 50% in 2 planes, as compared to the contralateral shoulder
- Co-morbidities (such as diabetes, thyroid disease, lung disease, etc.), and other causes of loss of shoulder motion have been ruled out
- Failure of at least 12 weeks of non-operative treatment that includes physical therapy or a properly instructed home exercise program and documentation of **ONE** of the following:
  - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)

- Rest or activity modification
- Heat/Ice
- Corticosteroid injection

Distal Clavicle Excision (DCE)

Distal Clavicle Excision may be necessary when **all** the following criteria are met [40,41]:

- Positive clinical exam findings as evidenced by pain upon palpation over AC joint and/or pain with cross-body adduction test
- Positive findings on X-ray **OR** MRI:
  - Radiographic (X-ray) demonstrates narrowed joint space, distal clavicle or medial acromial sclerosis, and/or osteophytes or cystic degeneration of distal clavicle or medial acromion correlating with the clinical findings, patient symptoms and diagnosis; **OR** MRI findings with edema in the distal clavicle and/or inflammatory change within the joint space correlating with the clinical findings, patient symptoms and diagnosis
- Failure of at least 12 weeks of non-operative treatment that includes **at least two** of the following:
  - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
  - Rest or activity modification
  - AC joint corticosteroid injection (if DCE is to be performed as a standalone procedure, AC injection must be performed*****)
  - Physical therapy or a properly instructed home exercise program

***NOTE:** If DCE is to be performed in isolation of other shoulder procedures, an AC joint injection is required for diagnostic purposes and documentation should support pain relief from injection. If no response to injection, this is a strong negative predictor to surgical outcome for isolated DCE.

Long Head Biceps (LHB) Tenotomy/Tenodesis

The indications and outcomes for tenodesis and tenotomy are the same [42,43,44] with the exception that tenodesis is typically better for more active, muscular individuals that are performing higher-demand activities for work or sport. Tenotomy is often preferred in individuals that smoke (this is a relative indication of tenotomy over tenodesis) due to healing problems in tenodesis. An actual primary repair of a proximal long head of the biceps tear is rare and poorly understood. [42]

Biceps tenotomy or tenodesis may be necessary when the following criteria in any of the following sections are met [45,46]:

- **Section One**
  - Any of the following:
    - When performed in conjunction with a total shoulder arthroplasty (a separate request for Shoulder Surgery - Other is required)
    - When performed in conjunction with a subscapularis tendon repair
    - Type II (or subcategories) or type IV tear, any age, in lieu of a labral repair

        - Age > 50 with SLAP tear
        - Smoker with SLAP labral tear (regardless of age, more significant with increasing age)
        - Failed SLAP repair
        - SLAP tear in diabetic or individual with loss of motion or predisposition to stiff shoulder
        - LHB hypertrophy/tearing/subluxation in association with RCR
- **Section Two**
    - Patient complains of pain localized to the bicipital groove
    - Physical examination findings localized to the bicipital groove (tenderness to palpation, Speed's test, etc.)
    - Failure of at least 12 weeks of non-operative treatment to include **TWO** of the following:
        - Minimum of 4 weeks of oral or topical NSAIDs (if not medically contraindicated)
        - Rest or activity modification
        - Bicipital groove corticosteroid injection
        - Physical therapy or a properly instructed home exercise program
- **Section Three - Tenodesis for long head of the biceps tendon rupture** (42,43,44,47)
    - Age < 50. Requests for tenodesis for long head of the biceps rupture in those over 50 will be reviewed on a case-by-case basis
    - Patient complains of loss of strength, pain, fatigue, or concern for cosmetic deformity
    - Physical examination demonstrates a complete long head of the biceps rupture (Popeye deformity, distally located biceps muscle belly, etc.)
    - Unless symptoms worsen, failure of at least 6 weeks of non-operative treatment to include **TWO** of the following*
        - Oral or topical NSAIDS (if not medically contraindicated)
        - Rest or activity modification
        - Physical therapy or properly instructed home exercise program

*** NOTE:** Request for acute tenodesis without attempts of non-operative treatment will be reviewed on a case-by-case basis

NOTE: US-guided percutaneous debridement or tenotomy (e.g., Tenex, TenJet) is not managed by Evolent

Loose Body Removal

Loose body removal may be medically necessary when the following criteria are met:

- Documentation of pain, mechanical symptoms (catching or locking), stiffness, loss of motion, feelings of instability or loss of function
- X-ray, CT, or MRI documentation of a loose body

Synovectomy

Synovectomy as an isolated procedure is usually reserved for primary synovial disease or in cases where secondary hypertrophic synovitis is documented during arthroscopy (these include adhesive capsulitis, osteoarthritis, chronic rotator cuff tear). These should be evident on arthroscopic photographs taken at surgery but may be missed on preoperative images. (48)

Subacromial Decompression (SAD) (49,50)

See Background Section

Subacromial decompression may be necessary **in conjunction with** other shoulder procedures (listed below) if there is radiographic (x-ray) evidence of mechanical outlet impingement as evidenced by a Bigliani type 3 morphology. Subacromial decompression should not be performed in isolation.

- Rotator cuff repair
- Labral repair
- Capsulorrhaphy
- Loose body removal
- Synovectomy
- Debridement
- Distal clavicle excision
- Lysis of adhesions
- Biceps tenodesis/tenotomy

Contraindications:

- Type 1 or Type 2 or a thinned acromion. Subacromial bursectomy may be a reasonable option.
- If individual has received an injection in the subacromial space and there is failure to adequately respond—significant relief (> 50%) for minimum of 1 week—to injection in the subacromial space (pain should respond temporarily if impingement)
- Prior subacromial decompression with either a Type 1 or a thinned acromion or no evidence of overhang on x-ray (unnecessary revision can thin the acromion and lead to deltoid avulsion and/or acromial fracture)
- Open SAD procedures should rarely be performed given the increased morbidity due to deltoid disruption.

CODING AND STANDARDS

Coding

CPT Codes

Shoulder Rotator Cuff Repair: 23410, 23412, 23420, 29827

Shoulder Labral Repair: 23450, 23455, 23460, 23462, 23465, 23466, 29806, 29807

Frozen Shoulder Repair/Adhesive Capsulitis: 29825

Shoulder Surgery Other: 23120, 23125, 23130, 23405, 23415, 23430, 23700, 29805, 29819, 29820, 29821, 29822, 29823, 29824, 29825, +29826, 29828

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Rotator Cuff Repair

Traditional open rotator cuff repair (RCR) with deltoid take-down should be rare given increased morbidity when compared to arthroscopic or mini-open surgery.

Rotator Cuff Classification and Grades

Goutallier classification of fatty infiltration of rotator cuff musculature *(11)*

Grade 0 – Normal

Grade 1 – Mild - muscle contains some fatty streaks

Grade 2 – Moderate – more muscle than fat

Grade 3 – Severe – equal amounts of fat and muscle

Grade 4 – More fat than muscle

Hamada classification of rotator cuff arthropathy *(51)*

Acromiohumeral interval (AHI)

- Grade 1 – AHI over 6 mm
- Grade 2 – AHI < 5mm
- Grade 3 – Acetabulization
- Grade 4 – Acetabulization and narrowed GH joint
- Grade 5 - Acetabulization with humeral head collapse

Sugaya classification [52]

Revision rotator cuff repair

The Sugaya classification for evaluation in revision rotator cuff repair is as follows:

- Type I - Sufficient thickness, homogeneous tendon (low signal on T2 images)
- Type II - Sufficient thickness, partial high-intensity from within the tendon
- Type III - Insufficient thickness without discontinuity
- Type IV - Minor discontinuity on more than one slice, suggesting a small tear
- Type V - Major discontinuity suggesting a moderate or large tear

On-Track/Off-Track Instability of the Shoulder [30,31,32,53,54]

Latarjet or Remplissage procedures should be considered for anterior dislocations of the shoulder when there is evidence of an engaging 'off-track' Hill-Sachs lesion of the humerus, or if there is greater than 20% glenoid bone loss by X-ray, CT, or MRI.

The glenoid track, a zone of dynamic contact during arm elevation, is a unique biomechanical model that uses both glenoid and humeral head bone loss to predict subsequent risk of humeral head engagement and possible dislocation. An ***engaging*** Hill-Sachs bony defect, or ‘off-track’ lesion, is one in which the width of the bony defect is greater than the width of the glenoid track. Off-track engagement occurs when the medial margin of the Hill-Sachs defect engages the glenoid track. If there is bony loss of the glenoid as well, the glenoid track will proportionately be less, causing greater risk of engagement. A ***nonengaging***, or ‘on-track’ Hill-Sachs lesion is one in which the width of the bony defect is less than the width of the glenoid track. Using preoperative CT or MR imaging, the glenoid track can identify individuals who are more likely to fail only a primary capsuloligamentous Bankart repair. Glenoid track evaluation shows that restoring the track (glenoid) to its normal width should be the first priority in restoring shoulder stability.

Subacromial Decompression (SAD)

There are 3 types of acromion anatomy according to Bigliani classification: type 1, flat (20%), type 2, curved (40%) and type 3, hooked, (40%). Acromioplasty involves removing bone from the undersurface of the acromion to change a type 3 (hooked) acromion to a type 1 (flat) acromion. Although debated for decades, current evidence concludes that there is no role for isolated acromioplasty (subacromial decompression), which prompted conversion of CPT code 29826 (acromioplasty, subacromial decompression) from an index, primary, "stand-alone" code to an "add-on" code only.

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 318 for Shoulder Arthroscopy • Added indications for biceps tenodesis for long head of the biceps ruptures

Date	Summary
	• Removed background sections for: labral repairs, adhesive capsulitis, DCE, LHB, Loose body removal, synovectomy and added on-track/off-track instability to background section
December 2023	• Partial thickness Rotator Cuff Tear or Calcific Tendinitis: in surgical repair of the partially torn rotator cuff added in “or excision of an area of calcific tendinopathy” • Modified criteria for failure of non-operative treatment to include “unless worsening symptoms develop” • Labral Repairs: SLAP tear – updated the classification of SLAP I-VIII • Anterior-Inferior Labral Teal (Bankart lesion): added in under clinical exam findings demonstration of positive test were not required if recent or prior documented dislocation • LHB Tenotomy/Tenodesis: added in Type II (or subcategories) or type IV tear, any age, in lieu of repair as a criteria • Added table of contents • Reduced Background Section • Updated references
May 2023	• Added the requirement of 6 weeks of physical therapy for partial rotator cuff repairs • Added the requirement for no significant muscle atrophy or fatty infiltration for medium or large rotator cuff repairs • Clarification of the indications for Latarjet or Remplissage procedures • Added requirement for 50% decreased ROM in 2 planes, as compared to the opposite shoulder, for frozen shoulder surgery • Added requirement for a chest X-ray in the past 12 months for frozen shoulder surgery

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

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REFERENCES

1. Kashanchi K, Nazemi A, Komatsu D, Wang E. Smoking as a risk factor for complications following arthroscopic rotator cuff repair. JSES International. 2021; 5: 83-87. 10.1016/j.jseint.2020.10.002.

2. Zabrzyński J, Huri G, Gagat M, Łapaj Ł, Yataganbaba A et al. The impact of smoking on clinical results following the rotator cuff and biceps tendon complex arthroscopic surgery. Journal of Clinical Medicine. 2021; 10: 1-12. 10.3390/jcm10040599.

3. Akgün D, Maziak N, Plachel F, Minkus M, Scheibel M et al. Diagnostic Arthroscopy for Detection of Periprosthetic Infection in Painful Shoulder Arthroplasty. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2019; 35: 2571-2577. 10.1016/j.arthro.2019.03.058.

4. Guild T, Kuhn G, Rivers M, Cheski R, Trenhaile S. The Role of Arthroscopy in Painful Shoulder Arthroplasty: Is Revision Always Necessary? Arthroscopy - Journal of Arthroscopic and Related Surgery. 2020; 36: 1508-1514. 10.1016/j.arthro.2020.01.045.

5. Zhang K, Crum R, Samuelsson K, Cadet E, Ayeni O. In-Office Needle Arthroscopy: A Systematic Review of Indications and Clinical Utility. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2019; 35: 2709-2721. 10.1016/j.arthro.2019.03.045.

6. Thiagarajan A, Nagaraj R, Marathe K. Correlation Between Clinical Diagnosis, MRI, and Arthroscopy in Diagnosing Shoulder Pathology. Cureus. 2021; 10.7759/cureus.20654.

7. Weber S, Chahal J. Management of Rotator Cuff Injuries. Journal of the American Academy of Orthopaedic Surgeons. 2020; 28: E193-E201. 10.5435/JAAOS-D-19-00463.

8. Thangarajah T, Lo I. Optimal Management of Partial Thickness Rotator Cuff Tears: Clinical Considerations and Practical Management. Orthopedic research and reviews. 2022; 14: 59-70. 10.2147/ORR.S348726.

9. Gismervik S, Drogset J O, Granviken F, Rø M, Leivseth G. Physical examination tests of the shoulder: A systematic review and meta-analysis of diagnostic test performance. BMC Musculoskeletal Disorders. 2017; 18: 10.1186/s12891-017-1400-0.

10. Apostolopoulos A P, Angelis S, Yellapragada R K, Khan S, Nadjafi J et al. The Sensitivity of Magnetic Resonance Imaging and Ultrasonography in Detecting Rotator Cuff Tears. Cureus. 2019; 10.7759/cureus.4581.

11. Yubran A, Pesquera L, Juan E, Saralegui F, Canga A et al. Rotator cuff tear patterns: MRI appearance and its surgical relevance. Insights into Imaging. 2024; 15: 10.1186/s13244-024-01607-w.

12. Darbandi A, Cohn M, Credille K, Hevesi M, Dandu N et al. A Systematic Review and Meta-analysis of Risk Factors for the Increased Incidence of Revision Surgery After Arthroscopic Rotator Cuff Repair. American Journal of Sports Medicine. 2024; 52: 1374-1383. 10.1177/03635465231182993.

13. Traven S A, Brinton D, Simpson K N, Adkins Z, Althoff A et al. Preoperative Shoulder Injections Are Associated With Increased Risk of Revision Rotator Cuff Repair. Arthroscopy. 2019; 35: 706-713. 10.1016/j.arthro.2018.10.107.

14. Werner B, Cancienne J, Burrus M, Griffin J, Gwathmey F. The timing of elective shoulder surgery after shoulder injection affects postoperative infection risk in Medicare patients. Journal of Shoulder and Elbow Surgery. 2016; 25: 390-397. 10.1016/j.jse.2015.08.039.

15. Katepun S, Boonsun P, Boonsaeng W S, Apivatgaroon A. Reliability of the Single-Arm and Double-Arm Jobe Test for the Diagnosis of Full-Thickness Supraspinatus Tendon Tear. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231187631.

16. Kuzel B, Grindel S, Papandrea R, Ziegler D. Fatty infiltration and rotator cuff atrophy. Journal of the American Academy of Orthopaedic Surgeons. 2013; 21: 613-623. 10.5435/JAAOS-21-10-613.

17. Naimark M, Trinh T, Robbins C, Rodoni B, Carpenter J et al. Effect of Muscle Quality on Operative and Nonoperative Treatment of Rotator Cuff Tears. Orthopaedic Journal of Sports Medicine. 2019; 7: 10.1177/2325967119863010.

18. Sheth M, Shah A. Massive and Irreparable Rotator Cuff Tears: A Review of Current Definitions and Concepts. Orthopaedic Journal of Sports Medicine. 2023; 11: 10.1177/23259671231154452.

19. Ghasemi S, McCahon J, Yoo J, Toussaint B, McFarland E et al. Subscapularis tear classification implications regarding treatment and outcomes: consensus decision-making. JSES Reviews, Reports, and Techniques. 2023; 3: 201-208. 10.1016/j.xrrt.2022.12.004.

20. Claro R, Fonte H. Superior capsular reconstruction: current evidence and limits. EFORT Open Reviews. 2023; 8: 340-350. 10.1530/EOR-23-0027.

21. Mahatme R, Modrak M, Wilhelm C, Lee M, Owens J et al. Glenohumeral Superior Translation and Subacromial Contract Pressure Are Both Improved With Superior Capsular Reconstruction: A Systematic Review and Meta-analysis of Biomechanical Investigations. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2024; 40: 1279-1287. 10.1016/j.arthro.2023.08.025.

22. Mandaleson A. Re-tears after rotator cuff repair: Current concepts review. Journal of Clinical Orthopaedics and Trauma. 2021; 19: 168-174. 10.1016/j.jcot.2021.05.019.

23. Strauss E, McCormack R, Onyekwelu I, Rokito A. Management of failed arthroscopic rotator cuff repair. Journal of the American Academy of Orthopaedic Surgeons. 2012; 20: 301-309. 10.5435/JAAOS-20-05-301.

24. Varacallo M, Tapscott D C, Mair S D. Superior Labrum Anterior Posterior Lesions [2023 Aug 4]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK538284/.

25. Erickson J, Lavery K, Monica J, Gatt C, Dhawan A. Surgical treatment of symptomatic superior labrum anterior-posterior tears in patients older than 40 years: A systematic review. American Journal of Sports Medicine. 2015; 43: 1274-1282. 10.1177/0363546514536874.

26. Dean R, Onsen L, Lima J, Hutchinson M. Physical Examination Maneuvers for SLAP Lesions: A Systematic Review and Meta-analysis of Individual and Combinations of Maneuvers. American Journal of Sports Medicine. 2023; 51: 3042-3052. 10.1177/03635465221100977.

27. Familiari F, Huri G, Simonetta R, McFarland E. SLAP lesions: Current controversies. EFORT Open Reviews. 2019; 4: 25-32. 10.1302/2058-5241.4.180033.

28. Hester W, O'Brien M, Heard W, Savoie F. Current Concepts in the Evaluation and Management of Type II Superior Labral Lesions of the Shoulder. The Open Orthopaedics Journal. 2018; 12: 331-341. 10.2174/1874325001812010331.

29. Tupe R N, Tiwari V. Anteroinferior Glenoid Labrum Lesion (Bankart Lesion) [Updated 2023 Aug 3]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK587359/.

30. Min K, Horng J, Cruz C, Ahn H, Patzkowski J. Glenoid Bone Loss in Recurrent Shoulder Instability after Arthroscopic Bankart Repair: A Systematic Review. Journal of Bone and Joint Surgery. 2023; 105: 1815-1821. 10.2106/JBJS.23.00388.

31. Momaya A, Tokish J. Applying the Glenoid Track Concept in the Management of Patients with Anterior Shoulder Instability. Current Reviews in Musculoskeletal Medicine. 2017; 10: 463-468. 10.1007/s12178-017-9436-1.

32. Woodmass J, McRae S, Lapner P, Kamikovski I, Jong B et al. Arthroscopic Bankart Repair With Remplissage in Anterior Shoulder Instability Results in Fewer Redislocations Than Bankart Repair Alone at Medium-term Follow-up of a Randomized Controlled Trial. American Journal of Sports Medicine. 2024; 52: 2055-2062. 10.1177/03635465241254063.

33. Doehrmann R, Frush T. Posterior Shoulder Instability. [Updated 2023 Jul 10]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK557648/.

34. Hurley E, Aman Z, Doyle T, Levin J, Jazrawi L et al. Posterior Shoulder Instability, Part I—Diagnosis, Nonoperative Management, and Labral Repair for Posterior Shoulder Instability—An

International Expert Delphi Consensus Statement. Arthroscopy - Journal of Arthroscopic and Related Surgery. 2024; 10.1016/j.arthro.2024.04.035.

35. Ireland M L, Hatzenbuehler J R. Superior labrum anterior to posterior (SLAP) tears [Updated 11 May 2023]. Wolters Kluwer UpToDate. 2023; Accessed: 10/2/2024. https://www.uptodate.com/contents/superior-labrum-anterior-to-posterior-slap-tears.

36. Johnson D J, Tadi P. Multidirectional Shoulder Instability [Updated 2023 Jul 3]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK557726/.

37. Gerber C, Nyffeler R. Classification of glenohumeral joint instability. Clinical orthopaedics and related research. 2002; 65-76. 10.1097/00003086-200207000-00009.

38. Pandey V, Madi S. Clinical Guidelines in the Management of Frozen Shoulder: An Update! Indian Journal of Orthopaedics. 2021; 55: 299-309. 10.1007/s43465-021-00351-3.

39. St Angelo J M, Taqi M, Fabiano S E. Adhesive Capsulitis [Updated 2023 Aug 4]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK532955/.

40. Docimo S, Kornitsky D, Futterman B, Elkowitz D. Surgical treatment for acromioclavicular joint osteoarthritis: patient selection, surgical options, complications, and outcome. Current Reviews in Musculoskeletal Medicine. 2008; 1: 154-160. 10.1007/s12178-008-9024-5.

41. Flores D, Goes P, Gómez C, Umpire D, Pathria M. Imaging of the acromioclavicular joint: Anatomy, function, pathologic features, and treatment. Radiographics. 2020; 40: 1355-1382. 10.1148/rg.2020200039.

42. Chen R, Voloshin I. Long Head of Biceps Injury: Treatment Options and Decision Making. Sports medicine and arthroscopy review. 2018; 26: 139-144. 10.1097/JSA.0000000000000206.

43. Hsu D, Anand P, Mabrouk A, Chang K. Biceps Tendon Rupture [Updated 2023 Jul 15]. Stat Pearls Publishing. 2023; Accessed: October 14, 2024. https://www.ncbi.nlm.nih.gov/books/NBK513235/

44. Panico L, Roy T, Namdari S. Long Head of the Biceps Tendon Ruptures Biomechanics, Clinical Ramifications, and Management. JBJS Reviews. 2021; 9: 10.2106/JBJS.RVW.21.00092.

45. Franceschetti E, Giovannetti de Sanctis E, Palumbo A, Paciotti M, La Verde L et al. The management of the long head of the biceps in rotator cuff repair: A comparative study of high vs. subpectoral tenodesis. Journal of Sport and Health Science. 2023; 12: 613-618. 10.1016/j.jshs.2020.08.004.

46. Ranieri R, Nabergoj M, Xu L, Coz P, Mohd Don A et al. Complications of Long Head of the Biceps Tenotomy in Association with Arthroscopic Rotator Cuff Repair: Risk Factors and Influence on Outcomes. Journal of Clinical Medicine. 2022; 11: 10.3390/jcm11195657.

47. Frank R, Cotter E, Strauss E, Jazrawi L, Romeo A. Management of Biceps Tendon Pathology: From the Glenoid to the Radial Tuberosity. Journal of the American Academy of Orthopaedic Surgeons. 2018; 26: e77-e89. 10.5435/JAAOS-D-17-00085.

48. Habusta S F, Mabrouk A, Tuck J A. Synovial Chondromatosis [Updated 2023 Apr 22]. Stat Pearls Publishing. 2023; Accessed: 10/2/2024. https://www.ncbi.nlm.nih.gov/books/NBK470463/.

49. Beard D, Rees J, Cook J, Rombach I, Cooper C et al. Arthroscopic subacromial decompression for subacromial shoulder pain (CSAW): a multicentre, pragmatic, parallel group, placebo-controlled, three-group, randomised surgical trial. Lancet (London, England). 2018; 391: 329-338. 10.1016/S0140-6736(17)32457-1.

50. Paavola M, Kanto K, Ranstam J, Malmivaara A, Inkinen J et al. Subacromial decompression versus diagnostic arthroscopy for shoulder impingement: a 5-year follow-up of a randomised, placebo surgery controlled clinical trial. British journal of sports medicine. 2021; 55: 99-107. 10.1136/bjsports-2020-102216.

51. Brolin T, Updegrove G, Horneff J. Classifications in Brief: Hamada Classification of Massive Rotator Cuff Tears. Clinical Orthopaedics and Related Research. 2017; 475: 2819-2823. 10.1007/s11999-017-5340-7.

52. Sugaya H, Maeda K, Matsuki K, Moriishi J. Functional and structural outcome after arthroscopic full-thickness rotator cuff repair: single-row versus dual-row fixation. Arthroscopy : the journal of arthroscopic & related surgery : official publication of the Arthroscopy Association of North America and the International Arthroscopy Association. 2005; 21: 1307-16. 10.1016/j.arthro.2005.08.011.

53. Pécora J, Neves Junior A, Roesler C, Fancello E, Malavolta E et al. Glenoid track evaluation by a validated finite-element shoulder numerical model. Orthopaedics and Traumatology: Surgery and Research. 2020; 106: 735-742. 10.1016/j.otsr.2020.03.004.

54. Trivedi S, Pomerantz M, Gross D, Golijanan P, Provencher M. Shoulder instability in the setting of bipolar (glenoid and humeral head) bone loss: The glenoid track concept. Clinical Orthopaedics and Related Research. 2014; 472: 2352-2362. 10.1007/s11999-014-3589-7.

Evolent Clinical Guideline 1760 for Deformity Surgery

Guideline Number:	Applicable Codes	
Evolent_CG_1760		
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc.		
Original Date:	**Last Revised Date:**	**Implementation Date:**
July 2015	November 2024	July 2025

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STATEMENT

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.

Purpose

This guideline covers the surgical indications for adult spinal deformity. Whenever possible, spinal deformity in adults is treated non-operatively.

Scope

Spinal surgeries should be performed only by those with extensive surgical training (neurosurgery, orthopedic surgery). Choice of surgical approach is based on anatomy, pathology, and the surgeon's experience and preference.

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon's discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

All surgery requests to treat adult deformity will be reviewed on a case-by-case basis. Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

INDICATIONS

Thoracic Deformity (Minimal/Secondary/Flexible Lumbar Involvement) in Adults

- When **ALL the following** criteria are met [1,2,3]:
  - Individual has significant pain or symptoms that impairs daily activities for ≥ 6 months
  - Failure of symptom or pain improvement upon completion of at least 12 weeks of focused **non-operative therapy/rehabilitation*** in the past year
  - Imaging studies confirm spinal curvature and demonstrate at least one of the following:
    - Spinal curvature > 75 degrees (kyphosis)
    - Severe kyphosis (chin-brow vertical angle greater than 35 degrees)

Lumbar Deformity (With or Without Secondary Thoracic Involvement) in Adults

- When **ALL the following** criteria are met [1,2,3]:
  - Lumbar back pain, neurogenic claudication, and/or radicular leg pain without significant motor deficit (0-3/5) that impairs daily activities for **at least 6 months**
  - Failure of symptom or pain improvement upon completion of at least 12 weeks of focused **non-operative therapy/rehabilitation*** in the past year
  - Imaging studies that correspond to clinical findings and show at least one of the following:
    - Sagittal or coronal imbalance of at least 5 cm measured on long plate standing x-rays of the entire spine
    - A fixed scoliosis of at least 40 degrees

*Non-Operative Care [1,2,4,5,6]

- Documented failure of **at least twelve (12)** consecutive weeks in the past year of **any 2** of the following physician-directed conservative treatments:
  - Analgesics, steroids, and/or NSAIDs
  - Structured program of physical therapy aimed at increasing core muscle strength
  - Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
  - Epidural steroid injections and or facet injections/selective nerve root block

Relative Contraindications for Spine Surgery

NOTE: Cases may not be approved if the below contraindications exist:

- **Medical contraindications to surgery.** (e.g., osteoporosis; infection of soft tissue adjacent to the spine, whether or not it has spread to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection) [7,8,9]
- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [8,10] Individuals with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be reviewed on a case-by-case basis and the surgery may be denied for risk of failure.
- **Active Tobacco or Nicotine use prior to fusion surgery.** Individuals must be free from smoking and/or nicotine use for at least six weeks prior to surgery and during the entire period of fusion healing. [11,12]
- **Morbid Obesity.** Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation. [13,14] These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure.

CODING AND STANDARDS

Coding

CPT Codes

Deformity Surgery: 22206, 22207, +22208, 22210, 22212, 22214, +22216, 22220, 22222, 22224, +22226, 22558, +22614, 22630, +22632, 22633, 22800, 22802, 22804, 22808, 22810, 22812, 22830

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

POLICY HISTORY

Date	Summary

November 2024	• This guideline replaces Evolent Clinical Guideline 311 for Deformity Surgery
	• The following CPT Codes were edited for alignment with the Evolent Matrix
	  ○ Added - 22558, 22633, +22614
	  ○ Added the '+' sign before the code - +22632, +22208, +22216, +22226
	• Updated language in Relative Contraindications for Spine Surgery for consistency across guidelines
	  ○ Also removed the word 'severe' before osteoporosis
	• Removed bullet point for spinal curvature >50 degrees from the Indications in Thoracic Deformity
	• Removed bullet point for documented progression of 10 degrees in one year in a coronal plane x-ray from the Indications in Lumbar Deformity

December 2023	• Reconciled CPT code discrepancies
May 2023	• Added references

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

Disclaimer

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REFERENCES

1. Charles Y, Ntilikina Y. Scoliosis surgery in adulthood: what challenges for what outcome?. Annals of Translational Medicine. 2020; 8: 34-34. 10.21037/atm.2019.10.67.

2. North American Spine Society. Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care: Diagnosis and Treatment of Low Back Pain. NASS. 2021; 2022: https://www.spine.org/Portals/0/assets/downloads/ResearchClinicalCare/Guidelines/LowBackPain.pdf .

3. Ghandhari H, Ameri E, Nikouei F, Mahdavi S, Chehrassan M. Selective Thoracolumbar/Lumbar Fusion in Adolescent Idiopathic Scoliosis: A Comprehensive Review of the Literature. The Archives of Bone and Joint Surgery. 2023; 11: 313-320. 10.22038/abjs.2022.61439.3014.

4. Glassman S, Berven S, Shaffrey C, Mummaneni P, Polly D. Commentary: Appropriate Use Criteria for Lumbar Degenerative Scoliosis: Developing Evidence-based Guidance for Complex Treatment Decisions. Neurosurgery. 2017; 80: E205-E212. 10.1093/neuros/nyw094.

5. Laverdière C, Georgiopoulos M, Ames C, Corban J, Ahangar P et al. Adult Spinal Deformity Surgery and Frailty: A Systematic Review. Global Spine Journal. 2022; 12: 689-699. 10.1177/21925682211004250.

6. Neuman B, Baldus C, Zebala L, Kelly M, Shaffrey C et al. Patient Factors That Influence Decision Making. SPINE. 2016; 41: E349-E358. 10.1097/BRS.0000000000001222.

7. Puvanesarajah V, Shen F, Cancienne J, Novicoff W, Jain A et al. Risk factors for revision surgery following primary adult spinal deformity surgery in patients 65 years and older. J Neurosurg Spine. 2016; 25: 486-493. 10.3171/2016.2.Spine151345.

8. Rajaee S, Kanim L, Bae H. National trends in revision spinal fusion in the USA: patient characteristics and complications. Bone Joint J. 2014; 96-b: 807-816. 10.1302/0301-620x.96b6.31149.

9. Varshneya K, Jokhai R T, Fatemi P, Stienen M N, Medress Z A et al. Predictors of 2-year reoperation in Medicare patients undergoing primary thoracolumbar deformity surgery. J Neurosurg Spine. 2020; 1-5. 10.3171/2020.5.Spine191425.

10. North American Spine Society. Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care: Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis. NASS. 2011; https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/LumbarStenosis.pdf.

11. Jackson 2nd K, Devine J. The Effects of Smoking and Smoking Cessation on Spine Surgery: A Systematic Review of the Literature. Global Spine J. 2016; 6: 695-701. 10.1055/s-0036-1571285.

12. Nunna R, Ostrov P, Ansari D, Dettori J, Godolias P et al. The Risk of Nonunion in Smokers Revisited: A Systematic Review and Meta-Analysis. Global Spine J. 2022; 12: 526-539. 10.1177/21925682211046899.

13. Feeley A, McDonnell J, Feeley I, Butler J. Obesity: An Independent Risk Factor for Complications in Anterior Lumbar Interbody Fusion? A Systematic Review. Global Spine J. 2022; 12: 1894-1903. 10.1177/21925682211072849.

14. Cofano F, Perna G, Bongiovanni D, Roscigno V, Baldassarre B et al. Obesity and Spine Surgery: A Qualitative Review About Outcomes and Complications. Is It Time for New Perspectives on Future Researches?. Global Spine J. 2022; 12: 1214-1230. 10.1177/21925682211022313.

Evolent Clinical Guideline 1772 for Thoracic Spine Surgery

Guideline Number: Evolent_CG_1772	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: July 2015	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

Aggressive surgical approaches to fusion may be an indication for denial of cases (when such techniques have not been demonstrated to be superior to less morbid techniques) or recommendation for alternative procedure. Because of variable outcomes with fusion surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

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.

Purpose

This guideline outlines the key surgical treatments and indications for common thoracic spinal disorders and is a consensus document based upon the best available evidence. Spine surgery is a complex area of medicine, and this document breaks out the clinical indications by surgical type.

This guideline does not address spinal deformity surgeries or the clinical indications for spinal deformity surgery.

Scope

Spinal surgeries should be performed only by those with extensive and specialized surgical training (neurosurgery, orthopedic surgery). Choice of surgical approach is based on anatomy, pathology, and the surgeon's experience and preference.

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon’s discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

INDICATIONS

All requests for thoracic spine surgery will be reviewed on a **case-by-case** basis. The following criteria **must** be met for consideration.

Decompression Surgery Only

- Positive clinical findings of myelopathy with evidence of progressive neurologic

deficits consistent with worsening spinal cord compression – immediate surgical evaluation is indicated. Symptoms may include any of the following [1,2]:

  - Lower extremity weakness
  - Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - Disturbance with coordination
  - Hyperreflexia
  - Positive Babinski sign
  - Clonus; **OR**

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) or lower extremity weakness or paralysis with corresponding evidence of spinal cord compression on a magnetic resonance imaging (MRI) or computed tomography (CT) scan images – immediate surgical evaluation is indicated; **OR**
- When **All** of the following criteria are met:
  - Persistent or recurrent symptoms/pain with functional limitations that are unresponsive to at least 6 consecutive weeks in the last 6 months of documented, physician-directed appropriate conservative treatment to include at least 2 of the following:
    - Analgesics, steroids, and/or NSAIDs
    - Structured program of physical therapy
    - Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
    - Epidural steroid injections and/or selective nerve root block; **AND**
  - Imaging studies confirm the presence of spinal cord or spinal nerve root compression at the level corresponding with the clinical findings (MRI or CT)

Thoracic Decompression with Fusion Surgery

- Deformity cases – please refer to our Evolent Clinical Guideline 1760 for Deformity Surgery; **OR**
- For myelopathy or radiculopathy secondary to cord or root compression (see criteria described above) satisfying the indications for decompressive surgery requiring extensive decompression that results in destabilization of the thoracic spine

NOTE: There is no current evidence base to support fusion in the thoracic spine for degenerative disease without significant neurological compression or significant deformity as outlined above.

Relative Contraindications for Spine Surgery

NOTE: Cases may not be approved if the below contraindications exist:

- **Medical contraindications to surgery** (e.g., osteoporosis; infection of soft tissue adjacent to the spine, whether or not it has spread to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection) [3,4,5]
- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of

pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [5,6] Individuals with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be reviewed on a case-by-case basis and the surgery may be denied for risk of failure.

- **Active Tobacco or Nicotine use prior to fusion surgery.** Individuals must be free from smoking and/or nicotine use for at least six weeks prior to surgery and during the entire period of fusion healing. [7,8]
- **Morbid obesity**. Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation. [9,10] These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure.

NOTE: Cases of severe myelopathy and progressive neurological dysfunction may require surgery despite these general contraindications.

CODING AND STANDARDS

Coding

CPT Codes

Thoracic Spine Surgery: 22532, +22534, 22556, 22585, 22610, +22614, 22830, 63003, 63016, 63046, +63048, 63055, +63057, 63064, +63066, 63077, +63078

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

Thoracic Decompression with or without fusion

Thoracic disc herniation with or without nerve root compression is usually treated conservatively (non-surgically). A back brace may be worn to provide support and limit back motion. Injection of local anesthetic and steroids around the spinal nerve (spinal nerve blocks) may be effective in relieving radicular pain. As symptoms subside, activity is

gradually increased. This may include physical therapy and/or a home exercise program. Preventive and maintenance measures (e.g., exercise, proper body mechanics) should be continued indefinitely. Job modification may be necessary to avoid aggravating activities.

Simple laminectomy is rarely used in the treatment of thoracic disc herniation because of the high risk of neurologic deterioration and paralysis. Excision of the disc (discectomy) may be performed via several different surgical approaches –anteriorly, laterally, or transpedicular. Fusion should be performed only if surgery causes instability in the spinal column. Many newer techniques do not usually destabilize the thoracic spine.

POLICY HISTORY

Date	Summary
November 2024	● This guideline replaces Evolent Clinical Guideline 308 for Thoracic Spine Surgery ● Updated guideline formatting to Evolent standard ● Added the '+' sign before CPT codes +22534, +22614, +63048, +63057, +63066, and +63078 for alignment with the Evolent Matrix ● Removed the word ‘severe’ before osteoporosis as a Relative Contraindication ● Edited language in the Relative Contraindications section for consistency across guidelines ● Updated references
December 2023	● Reconciled CPT code discrepancies
May 2023	● Added references

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

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services or drugs may not be all inclusive and does not imply that a service or drug is a covered or non-covered service or drug. Evolent reserves the right to review and update this Clinical Guideline in its sole discretion. Notice of any changes shall be provided as required by applicable provider agreements and laws or regulations. Members should contact their Plan customer service representative for specific coverage information.

REFERENCES

1. Li Z, Ren D, Zhao Y, Hou S, Li L et al. Clinical characteristics and surgical outcome of thoracic myelopathy caused by ossification of the ligamentum flavum: a retrospective analysis of 85 cases. Spinal Cord. 2016; 54: 188-196. 10.1038/sc.2015.139.

2. Wang H, Ma L, Xue R, Yang D, Wang T et al. The incidence and risk factors of postoperative neurological deterioration after posterior decompression with or without instrumented fusion for thoracic myelopathy. Medicine. 2016; 95: e5519. 10.1097/MD.0000000000005519.

3. Puvanesarajah V, Shen F, Cancienne J, Novicoff W, Jain A et al. Risk factors for revision surgery following primary adult spinal deformity surgery in patients 65 years and older. J Neurosurg Spine. 2016; 25: 486-493. 10.3171/2016.2.Spine151345.

4. Varshneya K, Jokhai R, Fatemi P, Stienen M, Medress Z et al. Predictors of 2-year reoperation in Medicare patients undergoing primary thoracolumbar deformity surgery. J Neurosurg Spine. 2020; 1-5. 10.3171/2020.5.Spine191425.

5. Rajaee S, Kanim L, Bae H. National trends in revision spinal fusion in the USA: patient characteristics and complications. Bone Joint J. 2014; 96-b: 807-816. 10.1302/0301-620x.96b6.31149.

6. North American Spine Society. Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis. NASS. 2011; https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/LumbarStenosis.pdf.

7. Jackson 2nd K, Devine J. The Effects of Smoking and Smoking Cessation on Spine Surgery: A Systematic Review of the Literature. Global Spine J. 2016; 6: 695-701. 10.1055/s-0036-1571285.

8. Nunna R, Ostrov P, Ansari D, Dettori J, Godolias P et al. The Risk of Nonunion in Smokers Revisited: A Systematic Review and Meta-Analysis. Global Spine J. 2022; 12: 526-539. 10.1177/21925682211046899.

9. Feeley A, McDonnell J, Feeley I, Butler J. Obesity: An Independent Risk Factor for Complications in Anterior Lumbar Interbody Fusion? A Systematic Review. Global Spine J. 2022; 12: 1894-1903. 10.1177/21925682211072849.

10. Cofano F, Perna G, Bongiovanni D, Roscigno V, Baldassarre B et al. Obesity and Spine Surgery: A Qualitative Review About Outcomes and Complications. Is It Time for New Perspectives on Future Researches?. Global Spine J. 2022; 12: 1214-1230. 10.1177/21925682211022313.

Evolent Clinical Guideline 1771 for Spine Surgery Other

Guideline Number:	Applicable Codes	
Evolent_CG_1771		
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc.		
Original Date:	**Last Revised Date:**	**Implementation Date:**
July 2015	November 2024	July 2025

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STATEMENT

Significant spinal cord or nerve root compression due to tumor, lesion or infection may require surgical intervention. Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

Aggressive surgical approaches to fusion may be an indication for denial of cases (when such techniques have not been demonstrated to be superior to less morbid techniques) or recommendation for alternative procedure. Because of variable outcomes with fusion surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

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.

Scope

Spinal surgeries should be performed only by those with extensive and specialized surgical training (neurosurgery, orthopedic surgery). Choice of surgical approach is based on anatomy, pathology, and the surgeon's experience and preference.

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon’s discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

INDICATIONS

Fusion Surgery (Any Region) for the Treatment of Spinal Neoplasm, Lesion, or Infection

One of the following criteria must be met for urgent intervention:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression due to tumor or infection** — immediate surgical evaluation is indicated. Signs or symptoms may include any of the following [1,2]:
    - Upper extremity weakness
    - Unsteady gait related to myelopathy/balance or generalized
    - Lower extremity weakness

- Disturbance with coordination
- Hyperreflexia
- Hoffmann sign
- Positive Babinski sign
- Clonus

- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with evidence of spinal cord or nerve root compression due to tumor or infection on magnetic resonance imaging (MRI) or computed tomography (CT) imaging—immediate surgical evaluation is indicated
- When **ALL** of the following criteria are met:
  - Evidence of gross biomechanical instability resulting in acute neurological risk requiring surgical reconstruction/fusion
  - Imaging studies demonstrate evidence of infection or neoplasm of the spine. Findings must align with corresponding clinical findings. Imaging studies may include:
    - Magnetic resonance imaging (MRI); preferred study for assessing spine soft tissue (including the spinal cord and roots)
    - Computed tomography (CT) - with or without myelography - indicated in individuals who have a contraindication to MRI; preferred for examining the spine's bony structures

Decompression Surgery (Any Region) for the Treatment of Spinal Neoplasm, Lesion, or Infection [3,4,5]

One of the following criteria must be met:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with worsening **spinal cord compression due to tumor or infection**— immediate surgical evaluation is indicated. Signs or symptoms may include any of the following:
  - Upper extremity weakness
  - Unsteady gait related to myelopathy/balance or generalized lower extremity weakness
  - Lower extremity weakness
  - Disturbance with coordination
  - Hyperreflexia
  - Hoffmann sign
  - Positive Babinski sign
  - Clonus
- Progressive neurological deficit (motor deficit, bowel or bladder dysfunction) with evidence of spinal cord or nerve root compression due to tumor or infection on MRI or CT imaging—immediate surgical evaluation is indicated
- When **ALL** of the following criteria are met:

- Clinical exam findings confirm significant radiculopathy or severe axial pain
- Imaging studies demonstrate evidence of infection or neoplasm of the spine that align with corresponding clinical findings. Imaging studies may include:
  - Magnetic resonance imaging (MRI); preferred study for assessing spine soft tissue (including cord and roots)
  - Computed tomography (CT) - with or without myelography - indicated in individuals who have a contraindication to MRI; preferred for examining the spine's bony structures

CODING AND STANDARDS

Coding

CPT Codes

Spine Surgery Other: Neoplasm, Lesion, Infection (All Regions): 22532, 22533, 22534, 22554, 22556, 22558, 22585, 22590, 22595, 22600, 22610, 22612, 22614,22630, 22632, 22633, 22634, 63265, 63266, 63267, 63268, 63270, 63271, 63272, 63273, 63275, 63276, 63277, 63278, 63280, 63281, 63282, 63283, 63285, 63286, 63287, 63290, 63295

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 309 for Spine Surgery Other • Updated guideline formatting to Evolent standard • Removed duplicates of the following CPT codes: ○ 63290 and 63295
December 2023	• No content changes

Date	Summary
May 2023	• Updated references

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

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REFERENCES

1. Schwake M, Maragno E, Gallus M, Schipmann S, Spille D et al. Minimally Invasive Facetectomy and Fusion for Resection of Extensive Dumbbell Tumors in the Lumbar Spine. Medicina. 2022; 58: 10.3390/medicina58111613.

2. MacLean M, Touchette C, Georgiopoulos M, Brunette-Clément T, Abduljabbar F et al. Systemic considerations for the surgical treatment of spinal metastatic disease: a scoping literature review. The Lancet Oncology. 2022; 23: e321-e333. 10.1016/S1470-2045(22)00126-7.

3. Al Farii H, Aoude A, Al Shammasi A, Reynolds J, Weber M. Surgical Management of the Metastatic Spine Disease: A Review of the Literature and Proposed Algorithm. Global Spine J. 2023; 13: 486-498. 10.1177/21925682221146741.

4. Rispoli R, Reverberi C, Targato G, D'Agostini S, Fasola G et al. Multidisciplinary Approach to Patients with Metastatic Spinal Cord Compression: A Diagnostic Therapeutic Algorithm to Improve the Neurological Outcome. Front Oncol. 2022; 12: 902928. 10.3389/fonc.2022.902928.

5. Zaveri G, Jain R, Mehta N, Garg B. An Overview of Decision Making in the Management of Metastatic Spinal Tumors. Indian J Orthop. 2021; 55: 799-814. 10.1007/s43465-021-00368-8.

Evolent Clinical Guideline 1765 for Lumbar Artificial Disc Replacement

Guideline Number: Evolent_CG_1765	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: June 2021	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

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STATEMENT

Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

Because of variable outcomes with surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

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.

Scope

Spinal surgeries should be performed only by those with extensive and specialized surgical training (neurosurgery, orthopedic surgery). Choice of surgical approach is based on anatomy, pathology, and the surgeon's experience and preference.

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon’s discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

Special Note

See Legislative Language for specific mandates in the State of Washington

INDICATIONS

Lumbar total disc arthroplasty (artificial disc replacement) may be considered **medically necessary** when **ALL** of the following indications are met [1,2]:

- The individual is between the ages of 18 to 60
- Degenerative disc disease or significant discogenic back pain with disc degeneration, is confirmed by documented patient history, physical examination, and key radiographic studies, with no more than Grade 1 (low level) spondylolisthesis demonstrated on x-ray at the operative levels
- Imaging confirms absence of significant facet arthropathy at operative levels
- At least six months of non-operative (conservative) treatment have failed to resolve symptoms
    - **Conservative care is focused multi-modal nonoperative treatment that must include a physical therapy/rehabilitation program with cognitive-behavioral**

components. Treatment may also include pain management injections and active exercise programs. This must be clearly outlined in the medical record.

- In general, if the program of non-operative treatment fails, operative treatment is indicated when:
  - Improvement of the symptoms has plateaued or failed to occur, and the residual symptoms of pain and functional disability are unacceptable at the end of 6 months of active treatment, or at the end of longer duration of non-operative programs for debilitated individuals with complex problems; and/or
  - Frequent recurrences of symptoms cause serious functional limitations even if a non-operative active treatment program provides satisfactory relief of symptoms, and restoration of function on each recurrence

- Disc reconstruction with the device is performed at one or two consecutive levels in the lumbar spine from L3-S1 using an anterior retroperitoneal approach
- The device used as the disc replacement device is FDA-approved for lumbar disc replacement and is used in accordance with FDA labelling

CONTRAINDICATIONS [3]

- Disease above L3-4
- Active systemic or local infection
- Osteoporosis or osteopenia (DXA bone mineral density T-score less than or equal to -1.0), or vertebral bodies compromised by disease or prior trauma
- Allergy or sensitivity to implant materials
- Isolated lumbar radiculopathy (especially due to herniated disc), or chronic radiculopathy (unremitting especially leg symptoms lasting over 1 year)
- Spinal stenosis, or spinal deformity (scoliosis)
- Spondylolisthesis greater than Grade 1
- Disc degeneration requiring treatment at more than two levels
- Severe facet arthrosis or joint degeneration
- Presence of free disc fragment
- Poorly managed psychiatric disorder

Artificial lumbar disc replacement is considered **not medically necessary** in all other circumstances, including artificial disc arthroplasty done at more than two spinal levels, and hybrid (combination artificial disc and fusion) procedures.

Relative Contraindications for Spine Surgery

NOTE: Cases may not be approved if the below contraindications exist:

- **Medical contraindications to surgery** (e.g., osteoporosis; infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection) [4,5,6]

- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [6,7] Individuals with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be reviewed on a case-by-case basis and the surgery may be denied for risk of failure.
- **Active Tobacco or Nicotine use.** Nicotine inhibits spinal fusion, and although spinal fusion is not performed during lumbar disc replacement, nicotine use is associated with increased rates of axial low back pain. [8,9] Accordingly, individuals must be free from smoking and/or nicotine use for at least six weeks prior to surgery and during the entire period of fusion healing. [10,11]
- **Morbid Obesity**. Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation. [12,13] These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure.

LEGISLATIVE LANGUAGE

Washington

20170120B – Artificial Disc Replacement – Re-review [14]

Washington State Health Care Authority

Health Technology Clinical Committee

Final Findings and Decision

HTCC coverage determination:

Lumbar artificial disc replacement is **not a covered benefit.**

Cervical artificial disc replacement is a covered benefit with conditions, consistent with the criteria identified in the reimbursement determination.

HTCC reimbursement determination:

Limitations of coverage:

Patients must meet FDA approved indications for use and not have any contraindications. FDA approval is device specific but includes:

- Skeletally mature patients
- Disc replacement following one- or two-level discectomy for intractable symptomatic radiculopathy or myelopathy confirmed by patient findings and imaging.

Patients must have advanced imaging and clinical evidence of corresponding nerve root or spinal cord compression and have failed or be inappropriate for non-operative care. For

two-level procedures, objective evidence of radiculopathy, myelopathy or spinal cord compression at two consecutive levels is required.

Non-covered indicators: NA

CODING AND STANDARDS

Coding

CPT Codes

- **Lumbar Artificial Disc Replacement - Single Level:** 22857, 22862, 22865
- **Lumbar Artificial Disc Replacement - Multiple Levels:** 22860, +0164T, +0165T

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 304-1 for Lumbar Artificial Disc Replacement • Updated guideline formatting to Evolent standard • Added the '+' sign before CPT codes +0164T and +0165T for alignment with the Evolent Matrix • Removed the word 'severe' before osteoporosis as a relative contraindication • Clarified language regarding nicotine use prior to lumbar artificial disc replacement in the Relative Contraindications section • Updated references
December 2023	• Added legislative language for WA state

Date	Summary
May 2023	• Updated references

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

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REFERENCES

1. Zigler J, Delamarter R. Five-year results of the prospective, randomized, multicenter, Food and Drug Administration investigational device exemption study of the ProDisc-L total disc replacement versus circumferential arthrodesis for the treatment of single-level degenerative disc disease. J Neurosurg Spine. 2012; 17: 493-501. 10.3171/2012.9.Spine11498.

2. Zigler J, Gornet M, Ferko N, Cameron C, Schranck F. Comparison of Lumbar Total Disc Replacement With Surgical Spinal Fusion for the Treatment of Single-Level Degenerative Disc Disease: A Meta-Analysis of 5-Year Outcomes From Randomized Controlled Trials. Global Spine J. 2018; 8: 413-423. 10.1177/2192568217737317.

3. Büttner-Janz K, Guyer R D, Ohnmeiss D D. Indications for Lumbar Total Disc Replacement: Selecting the Right Patient with the Right Indication for the Right Total Disc. International Journal of Spine Surgery. 2014; 8: 12. 10.14444/1012.

4. Puvanesarajah V, Shen F, Cancienne J, Novicoff W, Jain A et al. Risk factors for revision surgery following primary adult spinal deformity surgery in patients 65 years and older. J Neurosurg Spine. 2016; 25: 486-493. 10.3171/2016.2.Spine151345.

5. Varshneya K, Jokhai R, Fatemi P, Stienen M, Medress Z et al. Predictors of 2-year reoperation in Medicare patients undergoing primary thoracolumbar deformity surgery. J Neurosurg Spine. 2020; 1-5. 10.3171/2020.5.Spine191425.

6. Rajaee S, Kanim L, Bae H. National trends in revision spinal fusion in the USA: patient characteristics and complications. Bone Joint J. 2014; 96-b: 807-816. 10.1302/0301-620x.96b6.31149.

7. North American Spine Society. Diagnosis and Treatment of Lumbar Disc Herniation with Radiculopathy. NASS. 2012; https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/LumbarDiscHerniation.pdf.

8. Ferreira P, Beckenkamp P, Maher C, Hopper J, Ferreira M. Nature or nurture in low back pain? Results of a systematic review of studies based on twin samples. European Journal of Pain. 2013; 17: 957-971. 10.1002/j.1532-2149.2012.00277.x.

9. Parreira P, Maher C, Steffens D, Hancock M, Ferreira M. Risk factors for low back pain and sciatica: an umbrella review. The Spine Journal. 2018; 18: 1715-1721. 10.1016/j.spinee.2018.05.018.

10. Jackson 2nd K, Devine J. The Effects of Smoking and Smoking Cessation on Spine Surgery: A Systematic Review of the Literature. Global Spine J. 2016; 6: 695-701. 10.1055/s-0036-1571285.

11. Nunna R, Ostrov P, Ansari D, Dettori J, Godolias P et al. The Risk of Nonunion in Smokers Revisited: A Systematic Review and Meta-Analysis. Global Spine J. 2022; 12: 526-539. 10.1177/21925682211046899.

12. Cofano F, Perna G, Bongiovanni D, Roscigno V, Baldassarre B et al. Obesity and Spine Surgery: A Qualitative Review About Outcomes and Complications. Is It Time for New Perspectives on Future Researches?. Global Spine J. 2022; 12: 1214-1230. 10.1177/21925682211022313.

13. Feeley A, McDonnell J, Feeley I, Butler J. Obesity: An Independent Risk Factor for Complications in Anterior Lumbar Interbody Fusion? A Systematic Review. Global Spine J. 2022; 12: 1894-1903. 10.1177/21925682211072849.

14. Washington State Health Care Authority. Artificial disc replacement-Re-review [Adopted March 17, 2017]. Washington State Health Care Authority. 2008; Accessed: September 23, 2024. www.hca.wa.gov/assets/program/adr-rr-final-findings-decision-20170317.pdf.

Evolent Clinical Guideline 1767 for Percutaneous Sacroiliac Joint Fusion

Guideline Number: Evolent_CG_1767	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: June 2021	**Last Revised Date:** November 2024	**Implementation Date:** July 2025

TABLE OF CONTENTS

STATEMENT

All sacroiliac joint (SIJ) fusion surgeries will be reviewed on a case-by-case basis.

Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions. All operative interventions must be based on a positive correlation with clinical findings, the natural history of the disease, the clinical course, and diagnostic tests or imaging results. All individuals being considered for surgical intervention should receive a comprehensive neuromusculoskeletal examination to identify pain generators that may either respond to non-surgical techniques or may be refractory to surgical intervention.

Aggressive surgical approaches to fusion may be an indication for denial of cases (when such techniques have not been demonstrated to be superior to less morbid techniques) or recommendation for alternative procedure. Because of variable outcomes with fusion surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

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.

Scope

Spinal surgeries should be performed only by those with extensive and specialized surgical training (neurosurgery, orthopedic surgery).

Instrumentation, bone formation or grafting materials, including biologics, should be used at the surgeon's discretion; however, use should be limited to FDA approved indications regarding the specific devices or biologics.

See Legislative Language for specific mandates in the State of Washington

PERCUTANEOUS SACROILIAC JOINT (SIJ) FUSION

- **Surgical indications (when ALL of the following are present) [1,2,3]:**
  - Low back/buttock pain that is typically unilateral and caudal to the lumbar spine localized over the SIJ that impairs daily activities for **at least 6 months**
  - Failure to improve with at least 6 months of appropriate active non-operative treatment (see **Background**) that must include medications, PT, and a home exercise program
  - Physical exam demonstrating pain to palpation over the sacral sulcus in the absence of tenderness of similar severity elsewhere
  - Absence of generalized pain behavior
  - Positive pain response to a cluster of 3 provocative tests (e.g., thigh thrust, compression test, Gaenslen's test, distraction test, Faber test)

- Diagnostic imaging studies that include **ALL** of the following:
  - Imaging (plain radiographs and a CT or MRI) of the sacroiliac (SI) joint that excludes the presence of destructive lesions (e.g., tumor, infection) or inflammatory arthropathy that would not be properly addressed by percutaneous SIJ fusion
  - Imaging of the pelvis (AP plain radiograph) to rule out concomitant hip pathology
  - Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain
  - Imaging of the SI joint that indicates evidence of injury and/or degeneration
- At least 75% reduction of pain for the expected duration of the anesthetic used following an image-guided, contrast -enhanced intra-articular SIJ injection on 2 separate occasions
- A trial of at least one therapeutic intra-articular SIJ injection (i.e., corticosteroid injection)

RELATIVE CONTRAINDICATIONS FOR SPINE SURGERY

NOTE: Cases may not be approved if the below contraindications exist:

- **Medical contraindications to surgery** (e.g., osteoporosis; infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection) [4,5,6]
- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions (see **Background**) mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [6,7] Individuals with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be reviewed on a case-by-case basis and the surgery may be denied for risk of failure.
- **Active Tobacco or Nicotine use prior to fusion surgery**. Individuals must be free from smoking and/or nicotine use for at least six weeks prior to surgery and during the entire period of fusion healing. [8,9]
- **Morbid Obesity**. Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation. [10,11] These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure.

LEGISLATIVE LANGUAGE

Washington

20210618A – Sacroiliac joint fusion – rereview [12]

Washington State Health Care Authority

Health Technology Clinical Committee

Findings and Decision

HTCC coverage determination:

In adults, 18 years old and older, with chronic sacroiliac joint pain related to degenerative sacroiliitis and/or sacroiliac joint dysfunction, minimally invasive and open sacroiliac joint fusion procedures are **not covered benefits.**

Note - The scope of this decision does not apply to the following:

- Low back pain of other etiology (e.g., radiculopathy, neurogenic claudication), sacroiliac joint pain related to recent major trauma or fracture, infection, cancer, or sacroiliitis associated with inflammatory arthropathies
- Sacroiliac joint fusion revision surgery

HTCC reimbursement determination:

Limitations of coverage: N/A

Non-covered indicators: N/A

CODING AND STANDARDS

Coding

CPT Codes

Percutaneous Sacroiliac Joint (SIJ) Fusion: 27279

Applicable Lines of Business

☒	CHIP (Children's Health Insurance Program)
☒	Commercial
☒	Exchange/Marketplace
☒	Medicaid
☒	Medicare Advantage

BACKGROUND

- While sufficient time allowances for non-operative treatment are required to determine the natural cause and response to non-operative treatment of low back pain disorders, timely decision making for operative intervention is critical to avoid de-conditioning and increased disability
- In general, if the program of non-operative treatment fails, operative treatment is indicated when:
    - Improvement of the symptoms has plateaued or failed to occur, and the residual symptoms of pain and functional disability are unacceptable at the end of 6 months of active treatment, or at the end of longer duration of non-operative programs for debilitated individuals with complex problems; and/or
    - Frequent recurrences of symptoms cause serious functional limitations even if a non-operative active treatment program provides satisfactory relief of symptoms, and restoration of function on each recurrence

POLICY HISTORY

Date	Summary
November 2024	• This guideline replaces Evolent Clinical Guideline 407 for Percutaneous Sacroiliac Joint Fusion • Updated guideline formatting to Evolent standard • Removed the word ‘severe’ before osteoporosis as a Relative Contraindication • Edited language in the Relative Contraindications section for consistency across guidelines • Updated references
December 2023	• Added legislative language for WA state
May 2023	• Updated references

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Clinical Guideline Review Committee

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REFERENCES

1. Himstead A, Brown N, Shahrestani S, Tran K, Davies J. Trends in Diagnosis and Treatment of Sacroiliac Joint Pathology Over the Past 10 Years: Review of Scientific Evidence for New Devices for Sacroiliac Joint Fusion. Cureus. 2021; 13: e15415. 10.7759/cureus.15415.

2. Polly D, Swofford J, Whang P, Frank C, Glaser J et al. Two-Year Outcomes from a Randomized Controlled Trial of Minimally Invasive Sacroiliac Joint Fusion vs. Non-Surgical Management for Sacroiliac Joint Dysfunction. Int J Spine Surg. 2016; 10: 28. 10.14444/3028.

3. Whang P G, Darr E, Meyer S C, Kovalsky D, Frank C et al. Long-Term Prospective Clinical And Radiographic Outcomes After Minimally Invasive Lateral Transiliac Sacroiliac Joint Fusion Using Triangular Titanium Implants. Med Devices (Auckl). 2019; 12: 411-422. 10.2147/mder.S219862.

4. Puvanesarajah V, Shen F, Cancienne J, Novicoff W, Jain A et al. Risk factors for revision surgery following primary adult spinal deformity surgery in patients 65 years and older. J Neurosurg Spine. 2016; 25: 486-493. 10.3171/2016.2.Spine151345.

5. Varshneya K, Jokhai R, Fatemi P, Stienen M, Medress Z et al. Predictors of 2-year reoperation in Medicare patients undergoing primary thoracolumbar deformity surgery. J Neurosurg Spine. 2020; 1-5. 10.3171/2020.5.Spine191425.

6. Rajaee S, Kanim L, Bae H. National trends in revision spinal fusion in the USA: patient characteristics and complications. Bone Joint J. 2014; 96-b: 807-816. 10.1302/0301-620x.96b6.31149.

7. North American Spine Society. Diagnosis and Treatment of Lumbar Disc Herniation with Radiculopathy. NASS. 2012; https://www.spine.org/Portals/0/Assets/Downloads/ResearchClinicalCare/Guidelines/LumbarDiscHerniation.pdf.

8. Jackson 2nd K, Devine J. The Effects of Smoking and Smoking Cessation on Spine Surgery: A Systematic Review of the Literature. Global Spine J. 2016; 6: 695-701. 10.1055/s-0036-1571285.

9. Nunna R, Ostrov P, Ansari D, Dettori J, Godolias P et al. The Risk of Nonunion in Smokers Revisited: A Systematic Review and Meta-Analysis. Global Spine J. 2022; 12: 526-539. 10.1177/21925682211046899.

10. Cofano F, Perna G, Bongiovanni D, Roscigno V, Baldassarre B et al. Obesity and Spine Surgery: A Qualitative Review About Outcomes and Complications. Is It Time for New Perspectives on Future Researches?. Global Spine J. 2022; 12: 1214-1230. 10.1177/21925682211022313.

11. Feeley A, McDonnell J, Feeley I, Butler J. Obesity: An Independent Risk Factor for Complications in Anterior Lumbar Interbody Fusion? A Systematic Review. Global Spine J. 2022; 12: 1894-1903. 10.1177/21925682211072849.

12. Washington State Health Care Authority. Sacroiliac joint fusion - rereview [Adopted July 9, 2021]. Washington State Health Care Authority. 2019; Accessed: September 23, 2024. www.hca.wa.gov/assets/program/si-joint-fusion-final-findings-20210709.pdf.