2026 Evolent Clinical Guidelines for Medical Necessity Review

MUSCULOSKELETAL SURGERY GUIDELINES

Effective July 1, 2026 – July 1, 2027

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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TABLE OF CONTENTS

Evolent Clinical Guideline 1759 for Cervical Spine Surgery

Guideline Number: Evolent_CG_1759	**Applicable Codes**	
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Original Date: July 2008	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

INDICATIONS

Anterior Cervical Discectomy with Fusion (ACDF) - Single Level

When one of the two following criteria are met [1–8]:

- Positive clinical findings of myelopathy with evidence of progressive neurologic deficits consistent with **spinal cord compression** - immediate surgical evaluation is indicated. Symptoms may include [7]:
  - 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 [6–8]:

- 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 [1,2,6,9]**:**

- 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 3.5 mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3 mm in an adult and 5 mm 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 [1–8]**:**

- 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 [6–8]**:**

- 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 [1,2,6,9]**:**

- 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 3.5 mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3 mm in an adult and 5 mm 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 (CPDF) - Single Level

When one of the two following criteria are met [1–8,11]**:**

- 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 [8,12,13]**:**

- Cervical radiculopathy or myelopathy from ruptured disc, spondylosis, spinal instability, or deformity **OR** documented pseudarthrosis of prior ACDF/Cervical Artificial Disc Replacement (CADR) - one of the most common indications for a Single Level or Multi Levels CPDF is a failed anterior procedure
- 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 [1,2,6,9,11]**:**

- 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 3.5 mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3 mm in an adult and 5 mm 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 (CPDF) – Multiple Levels

When one of the two following criteria are met [1–8,11]**:**

- 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 [8,12,13]**:**

- Cervical radiculopathy or myelopathy from ruptured disc, spondylosis, spinal instability, or deformity **OR** documented pseudarthrosis of prior anterior ACDF/CADR surgery
- 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 [1,2,6,9,11]**:**

- 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 3.5 mm anterior subluxation in association with radicular/cord dysfunction
  - Subluxation at the (C1) level of the atlantodental interval of more than 3 mm in an adult and 5 mm 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 [14,15]:

- 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* [1,2,4–8,16]**:**

- 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 [1,2,6,16]**:**

- 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) [8,17,18]

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) or a failed Cervical Disc Arthroplasty Implant as evidenced by a post-operative image showing a previously placed cervical disc arthroplasty noted to have implant malposition or failure as evidenced by one or more of the following [19,20]:
  - Subsidence
  - Loosening
  - Infection
  - Dislocation
  - Subluxation
  - Vertebral body fracture
  - Dislodgement
- 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 3 mm 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**. A traumatic 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)

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

RISK FACTORS AND CONSIDERATIONS (21–24)

- 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 kg/m^2. 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**. Cessation must be confirmed by a negative cotinine test prior to surgery approval.
- 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.

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Anterior Cervical Discectomy with Fusion (ACDF) - Single Level	
22548	Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), with or without excision of odontoid process
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2
22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2
Anterior Cervical Discectomy with Fusion (ACDF) - Multiple Levels	
+22552	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2, each additional interspace (List separately in addition to code for separate procedure)

CPT	
Code	**Description**
+22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)
Cervical Anterior Decompression (without fusion)	
63075	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, single interspace
+63076	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, each additional interspace (List separately in addition to code for primary procedure)
Cervical Artificial Disc Replacement - Single Level	
22856	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection); single interspace, cervical
22861	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical
22864	Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical
Cervical Artificial Disc Replacement - Two Levels	
+22858	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection); second level, cervical (List separately in addition to code for primary procedure)
+0095T	Removal of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure)
+0098T	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure)
Cervical Posterior Decompression with Fusion - Single Level	
22590	Arthrodesis, posterior technique, craniocervical (occiput-C2)

CPT	
Code	**Description**
22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)
22600	Arthrodesis, posterior or posterolateral technique, single interspace; cervical below C2 segment
Cervical Posterior Decompression with Fusion - Multiple Levels	
22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)
+22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)
Cervical Posterior Decompression (without fusion)	
63001	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; cervical
63015	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; cervical
63020	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical
63040	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; cervical
63045	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; cervical
63050	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments
63051	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; with reconstruction of the posterior bony elements (including the application of bridging bone graft and non-segmental fixation devices [eg, wire, suture, mini-plates], when performed)

CPT	
Code	**Description**
+63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure)
+63043	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional cervical interspace (List separately in addition to code for primary procedure)
+63048	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; each additional vertebral segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure)

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)

SUMMARY OF EVIDENCE

Comparison of anterior and posterior approaches for functional improvement in cervical myelopathy: A systematic review and meta-analysis of 33,025 patients [11]

Study Design: Systematic review and meta-analysis.

Target Population: 33,025 patients with cervical myelopathy.

Key Factors:

- Objective: To compare the risks and benefits of anterior and posterior surgical techniques for cervical myelopathy.
- Methods: Systematic search across databases including PubMed, Scopus, and Web of Science. Studies were selected based on predefined inclusion criteria and assessed using NOS and Rob-2 tools.
- Results: The anterior approach was associated with better neurological recovery, greater improvement in Cobb's angle, and statistically significant decreases in VAS and NDI scales compared to the posterior approach. It also led to fewer complications, less pain, reduced blood loss, and shorter hospital stays.
- Conclusions: The anterior approach for cervical myelopathy may improve nerve function, correct spinal curvature more effectively, and lead to fewer complications compared to the posterior approach.

Comparison of Anterior Surgery Versus Posterior Surgery for the Treatment of Multilevel Cervical Spondylotic Myelopathy: A Meta-Analysis [4]

Study Design: Meta-analysis.

Target Population: 2,712 patients with multilevel cervical spondylotic myelopathy (MCSM).

Key Factors:

- Objective: To evaluate the impact of anterior versus posterior surgical approaches on outcomes in MCSM.
- Methods: Comprehensive search across electronic databases including MEDLINE, EMBASE, and the Cochrane Central Register of Controlled Trials. Studies were assessed using the Newcastle-Ottawa Scale score.
- Results: No significant difference between the two groups in preoperative and postoperative JOA scores, JOA recovery rate, or neck VAS score. However, the anterior surgery group had significantly lower NDI scores, blood loss, and shorter length of stay, but higher rates of complications. The anterior surgery group also had better recovery of cervical lordosis but limited postoperative mobility.
- Conclusion: No clear advantage of one surgical approach over the other for MCSM in terms of neurological function recovery. The anterior approach was associated with improved NDI scores, lower blood loss, shorter length of stay, and better recovery of cervical lordosis.

The Essence of Clinical Practice Guidelines for Cervical Spondylotic Myelopathy, 2020 [7]

Study Design: Clinical practice guidelines.

Target Population: Patients with cervical spondylotic myelopathy (CSM).

Key Factors:

- Objective: To provide guidelines for the management of CSM.
- Epidemiology: CSM is common in men aged 50 years and older, with an incidence of several people per 100,000 population.
- Natural History: Patients with severe and progressive symptoms need surgery. Mild cases require appropriate care and monitoring.
- Pathology: CSM arises from static and dynamic compression factors affecting the spinal cord, with circulatory disturbances also involved.
- Diagnosis: Sensory disturbance of the upper limbs and motor dysfunction of the upper and lower limbs are common. Imaging studies and neurological examination are important for proper diagnosis.
- Treatment: Conservative treatment is primarily for mild cases. Surgery is suitable for progressive myelopathy. Surgical methods include anterior decompression and fusion (ADF), laminoplasty, and posterior decompression with fusion (PDF).
- Prognosis: Good postoperative recovery of lower limb motor function leads to a sufficient prognosis

ANALYSIS OF EVIDENCE

Shared Findings [4,7,11]:

- Both Aleid et al. 2025 and Bao et al. 2025 agree that the anterior approach generally results in lower blood loss and shorter hospital stays.

- All three studies acknowledge that both anterior and posterior approaches have their own sets of advantages and disadvantages, and the choice of approach should be tailored to the individual patient's condition

Differing Findings [4,7,11]:

- Aleid et al. 2025 emphasizes the superiority of the anterior approach in terms of neurological recovery and functional improvement.
- Bao et al. 2025 highlights that there is no clear advantage of one approach over the other in terms of neurological function recovery, but the anterior approach has better outcomes in terms of NDI scores and cervical lordosis.
- Nagoshi 2024 provides a more balanced view, recommending that the choice of surgical method should be based on the specific pathology and patient condition, without favoring one approach over the other.

In summary, while there are some differences in the conclusions drawn by these studies, they all highlight the importance of tailoring the surgical approach to the individual patient's condition and the specific pathology involved. The anterior approach generally shows better outcomes in terms of blood loss, hospital stay, and cervical lordosis, but it also has higher complication rates compared to the posterior approach. The guidelines emphasize the need for a balanced and patient-specific approach to treatment.

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • Added documentation of failed prior anterior cervical surgeries to indication for CPDF (single/multiple levels) • Added negative cotinine lab test requirement for smokers prior to spine surgery approval • Removed Washington State Regulatory Language • Added technical description to codes • Updated references • Added a Summary of Evidence and Analysis of Evidence

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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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Evolent Clinical Guideline 1766 for Lumbar Spine Surgery

Guideline Number: Evolent_CG_1766	**Applicable Codes**	
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Original Date: June 2013	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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 [1–4]

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 [1,3–8]

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 [9]

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) [7,10]

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 with neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for **at least 6 months**
    - **NOTE:** Axial low back pain **alone** is a **contraindication** for multi-level lumbar fusion with or without decompression
  - 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
- For surgery for pseudarthrosis in the lumbar spine, **ALL** of the following criteria must be met [11–13]:
    - Mechanical low back pain that is approximately at the level of the pseudarthrosis, qualified as pain that can be somewhat positionally abated
    - A period of time following the index surgery during which the patient had symptomatic relief
    - Presence of symptoms for at least 6 months
    - Failure of nonoperative treatment for at least 3 months
        - The medical record must clearly reflect which conservative treatments the patient has tried or is not a candidate for and why, including medical therapies, physical and exercise therapies and injections
    - CT or plain films that are highly suggestive of nonunion at a lumbar segment at which a fusion had been previously attempted. These criteria can include 1 or more of the following:
        - Lack of bridging bone after 12 months from the index surgery
        - Dynamic motion noted on flexion-extension radiographs
        - Pedicle screw breakage
        - Screw loosening
        - Curve/correction decompensation

Relative Contraindications for Spine Surgery [14–18]

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

- **Medical contraindications to surgery:** Such as infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition, systemic infection, and elevated blood sugar [19]
- **Psychosocial risk factors**. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (such as peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [1,19] 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**. Cessation must be confirmed by a negative cotinine test prior to surgery approval. [20,21]
- **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. [22,23] 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

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Lumbar Decompression	
63005	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; lumbar, except for spondylolisthesis
63012	Laminectomy with removal of abnormal facets and/or pars inter-articularis with decompression of cauda equina and nerve roots for spondylolisthesis, lumbar (Gill type procedure)

CPT	
Code	**Description**
63017	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; lumbar
63042	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; lumbar
63047	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; lumbar
63056	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; lumbar (including transfacet, or lateral extraforaminal approach) (eg, far lateral herniated intervertebral disc)
+63044	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional lumbar interspace (List separately in addition to code for primary procedure)
+63048	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; each additional vertebral segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure)
+63057	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; each additional segment, thoracic or lumbar (List separately in addition to code for primary procedure)
Lumbar Fusion - Single Level	
22533	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar

CPT	
Code	**Description**
22612	Arthrodesis, posterior or posterolateral technique, single interspace; lumbar (with lateral transverse technique, when performed)
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace, lumbar
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar
+63052	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; single vertebral segment (List separately in addition to code for primary procedure)
+63053	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional vertebral segment (List separately in addition to code for primary procedure)
Lumbar Fusion - Multiple Levels	
+22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
+22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)
+22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)
+22632	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)

CPT	
Code	**Description**
+22634	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)
+63052	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; single vertebral segment (List separately in addition to code for primary procedure)
+63053	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional vertebral segment (List separately in addition to code for primary procedure)
Lumbar Microdiscectomy	
62380	Endoscopic decompression of spinal cord, nerve root(s), including laminotomy, partial facetectomy, foraminotomy, discectomy and/or excision of herniated intervertebral disc, 1 interspace, lumbar
63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar
+63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure)

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)

SUMMARY OF EVIDENCE

Surgical interventions for degenerative lumbar spinal stenosis: a systematic review with network meta-analysis [4]

- Study Design: This study is a systematic review with a network meta-analysis of randomized controlled trials (RCTs) comparing various surgical interventions for degenerative lumbar spinal stenosis (LSS).
- Target Population: The study included participants aged 40 years or older with a diagnosis of degenerative LSS, excluding those with malignancy, trauma, vertebral fracture, infection, and inflammatory disease.
- Key Factors: The primary outcome for effectiveness was physical function, and secondary outcomes included the intensity of back pain and leg pain. The study included 43 RCTs involving 5017 participants for the systematic review and 28 RCTs for the network meta-analysis. The study found that endoscopic-assisted laminotomy may be the safest and most effective intervention for improving physical function in adults with degenerative LSS.

Decompression alone versus decompression with instrumented fusion in the treatment of lumbar degenerative spondylolisthesis: a systematic review and meta-analysis of randomised trials [3]

- Study Design: This study is a systematic review with a meta-analysis of RCTs comparing decompression alone versus decompression with instrumented fusion in the treatment of lumbar degenerative spondylolisthesis (DS).

- Target Population: The study included adult participants with DS, excluding those with isthmic spondylolisthesis, degenerative scoliosis, spinal stenosis with other causes, or those with previous spinal surgery.
- Key Factors: The primary outcomes were the Oswestry Disability Index (ODI), back pain, and leg pain. Secondary outcomes included reoperation rate, complication rate, length of hospital stay, duration of surgery, blood loss during surgery, and quality of life. The study included four trials with 523 participants and found that adding fusion to decompression likely results in trivial differences in disability, pain, and quality of life at a 2-year follow-up. The study concluded that isolated decompression seems sufficient for most patients with DS.

Effects and Safety of Lumbar Fusion Techniques in Lumbar Spondylolisthesis: A Network Meta-Analysis of Randomized Controlled Trials [7]

- Study Design: This study is a network meta-analysis of RCTs comparing different lumbar fusion techniques in the treatment of lumbar spondylolisthesis.
- Target Population: The study included patients with lumbar spondylolisthesis treated with various lumbar interbody fusion (LIF) techniques.
- Key Factors: The primary outcomes were fusion rate and overall adverse event rate. Secondary outcomes included operative time, Oswestry Disability Index (ODI) score, and pain score. The study included 15 RCTs with 992 patients and found that circumferential fusion led to a significantly higher fusion rate than other techniques. The study concluded that circumferential fusion might be recommended due to its balance between fusion rate and overall adverse event rate

ANALYSIS OF EVIDENCE

Shared Findings [3,4,7]:

- All three studies emphasize the importance of evaluating different surgical techniques for spinal conditions.
- They all highlight the need for careful consideration of patient-specific factors when choosing the appropriate surgical intervention.
- The studies agree that minimally invasive techniques can offer benefits in terms of safety and effectiveness.

Differing Findings:

- Chen et al. 2024 [4] focuses on the effectiveness of endoscopic-assisted laminotomy for LSS, suggesting it as the safest and most effective option.
- Kaiser et al. 2023 [3] concludes that isolated decompression is generally sufficient for most patients with DS, questioning the added benefits of fusion.
- Kang et al. 2022 [7] finds that circumferential fusion offers the best balance between fusion rate and adverse event rate, recommending it for lumbar spondylolisthesis management.

Conclusion

In summary, while all three studies provide valuable insights into the treatment of spinal conditions, they each emphasize different surgical techniques and outcomes. Chen et al. 2024 [4] highlights the benefits of endoscopic-assisted laminotomy for LSS, Kaiser et al. 2023 [3] supports isolated decompression for DS, and Kang et al. 2022 [7] recommends circumferential fusion for lumbar spondylolisthesis.

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • Added axial low back pain alone is a contraindication for multi-level lumbar fusion surgery • Added elevated blood sugar as relative contraindication for spine surgery • Added negative cotinine lab test requirement for smokers prior to spine surgery approval • Removed Washington State Regulatory Language • Added technical description to codes • Adjusted applicable lines of business - Medicare Advantage checked • Updated references • Added a Summary of Evidence and Analysis of Evidence
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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Evolent Clinical Guideline 1761 for Hip Arthroplasty

Guideline Number: Evolent_CG_1761	**Applicable Codes**	
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Original Date: November 2015	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

GENERAL REQUIREMENTS

- Elective hip arthroplasty may be considered if the following general criteria are met:
  - Moderate to severe 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 body mass index (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:

- **Section One**
  - Persistent pain and documented loss of function with radiographic evidence of disease from any of the following:
    - Rheumatoid arthritis or inflammatory arthritis [1,3]
    - Femoral neck fracture
    - Malignancy [4]
    - Dysplasia [3]
    - Congenital hip disorders [3]
    - Avascular necrosis confirmed by imaging (radiographs, MRI, or other advanced

imaging) [1,3,5]

- Radiographs demonstrate bone-on-bone articulation [1,3,5]

- **Section Two**
  - There is persistent pain and documented loss of function for at least 12 weeks and includes all the following [1,3,5]:
    - Physical exam (PE) 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
      - Contractures
      - 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.) [6]

    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 [1–3,5]:
    - 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)
    - Pharmacological treatment: oral/topical NSAIDs, acetaminophen, or analgesics
    - Intra-articular corticosteroid injection
  - No corticosteroid injection into the joint within 12 weeks of surgery [1,7–9]

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 be discussed with the patient and documented in their medical record [10,11]

Absolute Contraindications

- Any infection of joints, soft tissues or hematogenous infection, including any active infections. If local or active:
    - Document in the patient's history, records should clearly demonstrate that the 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 [3,5]
- Any corticosteroid injection into the joint within 12 weeks of surgery [1,7–9]

Relative Contraindications

- 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 [3,5]
- Known metal sensitivities (e.g. cobalt, chromium, nickel) [12]
- BMI > 40kg/m^2; without discussion of increased risk conferred by BMI [5]
- Compromised soft tissue envelope
- Uncontrolled comorbidities [5,13]

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 [14,15]:

- 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**] [6]
- Male patient is less than 60 years old or female patient is less than 55 years old [16,17]
- BMI < 40kg/m^2 [12]
- No corticosteroid injection into the joint within 12 weeks of surgery [1,7–9]

Absolute Contraindications

- Any corticosteroid injection into the joint within 12 weeks of surgery [7–9]
- Osteoporosis or osteopenia Dual-energy X-ray Absorptiometry (DEXA) scan bone mineral density evaluation) [18]
    - Osteoporosis or poor bone quality may increase the risk of fixation failure or femoral neck fracture after hip resurfacing [15,19]
    - 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) [18]
- Large bone defects or cystic degeneration at the junction of the femoral head and neck on radiographs, Ultrasound (US), Magnetic Resonance Imaging (MRI), or Computed Tomography (CT) [12,14,15]
- Malignancy at the proximal femur
- Evidence of current, ongoing, or inadequately treated hip infection, or sepsis [13]
- Female of child-bearing age (due to metal ions circulating in blood with potential risk to fetus) [14]
- Chronic renal insufficiency (due to metal ions circulating and potential renal toxicity) [12,16]
- Known metal sensitivities (e.g. cobalt, chromium, nickel) [12]

Revision/Conversion Arthroplasty

Hip revision/conversion arthroplasty for a prior hip arthroplasty, fracture Open Reduction and Internal Fixation (ORIF), or **ANY** prior hip surgery may be considered medically necessary when the following criteria in either section one or section two are met [20,21]:

- **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 for 2 weeks
- **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 [1,7–9]

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

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Total Hip Arthroplasty/Resurfacing	
27130	Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft
S2118	Metal-on-metal total hip resurfacing, including acetabular and femoral components
Revision/Conversion Hip Arthroplasty	
27132	Conversion of previous hip surgery to total hip arthroplasty, with or without autograft or allograft

CPT	
Code	**Description**
27134	Revision of total hip arthroplasty; both components, with or without autograft or allograft
27137	Revision of total hip arthroplasty; acetabular component only, with or without autograft or allograft
27138	Revision of total hip arthroplasty; femoral component only, with or without allograft

Applicable Lines of Business

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

BACKGROUND

Grading Appendix [6]

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

SUMMARY OF EVIDENCE

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 [1]

- **Study Design**: This is a clinical practice guideline developed by the American College of Rheumatology and the American Association of Hip and Knee Surgeons. It uses a systematic literature review and the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.
- **Target Population**: Patients with symptomatic moderate-to-severe osteoarthritis or advanced symptomatic osteonecrosis with secondary arthritis who have not responded to nonoperative therapy and are considering elective hip or knee arthroplasty.
- **Key Factors**: The guideline provides evidence-based recommendations for the optimal timing of arthroplasty, including considerations for delaying surgery for nicotine reduction, glycemic control, and weight loss. It emphasizes shared decision-making between patients and physicians.

Indication Criteria for Total Hip Arthroplasty in Patients with Hip Osteoarthritis—Recommendations from a German Consensus Initiative [5]

- **Study Design**: This study is a consensus-based clinical practice guideline developed by a German multidisciplinary panel. It involved a systematic literature review and consensus meetings.
- **Target Population**: Patients with hip osteoarthritis considering total hip arthroplasty (THA).
- **Key Factors**: The guideline provides 31 recommendations for decision-making on THA, including minimum requirements such as confirmed diagnosis, assessment of illness burden, and ineffectiveness of non-surgical therapies. It also addresses modifiable risk factors and emphasizes shared decision-making.

Preoperative Corticosteroid Injections Demonstrate a Temporal and Dose-Dependent Relationship with the Rate of Postoperative Infection Following Total Hip Arthroplasty [7]

- **Study Design**: This study is a retrospective analysis using the PearlDiver database to investigate the relationship between corticosteroid injections (CSI) and the risk of periprosthetic joint infection (PJI) and surgical site infections (SSI) following total hip arthroplasty (THA).
- **Target Population**: Patients undergoing THA from 2011 to 2018 who had received intra-articular hip CSI prior to surgery.
- **Key Factors**: The study found a temporal and dose-dependent relationship between CSI and the risk of PJI and SSI. Injections within 4 months of surgery were associated with a higher incidence of PJI, and multiple injections increased the odds of infection.

ANALYSIS OF EVIDENCE

Shared Findings [1,5,7]**:**

- **Emphasis on Shared Decision-Making**: All three articles highlight the importance of shared decision-making between patients and physicians when considering THA. This ensures that the patient's individual circumstances, preferences, and risk factors are taken into account.
- **Consideration of Modifiable Risk Factors**: Both the Hannon and Lutzner guidelines emphasize the need to address modifiable risk factors such as nicotine use, glycemic control, and weight loss before proceeding with THA.

Differing Findings [1,5,7]**:**

- **Timing and Dose-Dependency of CSI**: The Forlenza study specifically investigates the relationship between preoperative CSI and the risk of postoperative infections, finding a clear temporal and dose-dependent relationship. This is not addressed in the Hannon and Lutzner guidelines.
- **Guideline Recommendations**: The Hannon guideline provides specific recommendations for the optimal timing of arthroplasty, including delaying surgery for certain risk factors, while the Lutzner guideline focuses on a broader set of criteria for decision-making on THA.

In summary, while all three articles emphasize the importance of shared decision-making and addressing modifiable risk factors, the Forlenza study provides specific evidence on the risks associated with preoperative CSI, [7] and the Hannon and Lutzner guidelines offer comprehensive recommendations for the timing and criteria for THA. [1,5]

POLICY HISTORY

Date	Summary
December 2025	• Total Hip Arthroplasty (THA) primary section updated with language to reflect non-operative treatment section. • Added CPT code table to as per new formatting. • Relative Contraindications and Absolute Contraindications verbiage updated to reflect metal sensitivities. • Revision/Conversion Arthroplasty updated the time frame for being off antibiotics to 2 weeks. • Updated CPT Code Name from Total Hip Arthroplasty (THA) to Total Hip Arthroplasty Resurfacing to reflect the UM matrix. • Updated References, General Information, and Disclaimer sections.

Date	Summary
	• Removed Washington State regulatory language. • Added a Summary of Evidence and Analysis of Evidence
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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REFERENCES

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Evolent Clinical Guideline 1762 for Hip Arthroscopy

Guideline Number: Evolent_CG_1762	**Applicable Codes**	
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Original Date: November 2015	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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) [1–3] **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** Magnetic Resonance Imaging (MRI) findings
- No radiographic findings of any of the following:
    - Significant arthritis (joint space < 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 of acetabulum with a center edge (CE) angle > 35 degrees 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) [3]
- Pigmented villonodular synovitis (PVNS) or synovial chondromatosis [3]
- Intra-articular loose body [1]
- Adductor tear or hamstring tear
- Pubic edema or osteitis pubis
- Gluteus medius or minimus tear [3]
- Ischiofemoral impingement (narrowed ischiofemoral and quadratus femoris spaces) [3]

- 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 unless combined with concomitant periacetabular osteotomy
- 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 < 40kg/m^2; [9] Individuals with BMI > 40kg/m^2 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**) [4]
    - Overhang of the anterolateral rim of the acetabulum, posterior wall sign, prominent ischial spine sign, acetabular protrusion, or retroversion with a center edge (CE) angle > 35 degrees and/or cross-over sign indicating pincer deformity (see **radiographic measurement appendix**) [4]
    - 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]

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Femoroacetabular Impingement (FAI) Hip Surgery	
29914	Arthroscopy, hip, surgical; with femoroplasty (ie, treatment of cam lesion)
29915	Arthroscopy, hip, surgical; with acetabuloplasty (ie, treatment of pincer lesion)
29916	Arthroscopy, hip, surgical; with labral repair
Hip Surgery - Other	
29860	Arthroscopy, hip, diagnostic with or without synovial biopsy (separate procedure)
29861	Arthroscopy, hip, surgical; with removal of loose body or foreign body
29862	Arthroscopy, hip, surgical; with debridement/shaving of articular cartilage (chondroplasty), abrasion arthroplasty, and/or resection of labrum
29863	Arthroscopy, hip, surgical; with synovectomy

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 degrees to 25 degrees), that require arthroscopic procedures appear to do as well as those with no evidence of dysplasia. [1,4,7]

Grading Appendix

Tönnis Classification of Osteoarthritis by Radiographic Changes [13]

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 degrees to 25 degrees)

Radiographic Measurement Index [14]

Alpha Angle

- Alpha angle was measured on the AP pelvis and Dunn 45 degrees 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 degrees (Dunn 45degrees) or greater or an alpha angle of 50 degrees (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 degrees defines dysplasia, 20 to 25 degrees borderline dysplasia, 26 to 39 degrees normal, and greater than 40 degrees lateral over coverage pincer impingement
    - Lateral over coverage was defined as a lateral center edge angle greater than 40 degrees

SUMMARY OF EVIDENCE

Outcomes of Surgical Management of Borderline Hip Dysplasia [1]:

- **Study Design:** Systematic review.
- **Target Population:** Patients with borderline hip dysplasia (LCEA 18-25°).
- **Key Factors**: This review aimed to define patient outcomes following hip arthroscopy and/or periacetabular osteotomy (PAO). It included data from 13 studies with 505 patients, showing post-operative improvement in patient-reported outcomes (PROs). The study reported a high reoperation rate, including both arthroscopic and open revision procedures, and emphasized the need for more robust studies on both specific arthroscopic techniques and open procedures.

Indications for Hip Arthroscopy [3]:

- **Study Design:** Clinical review.
- **Target Population:** Patients undergoing hip arthroscopy for various hip conditions.
- **Key Factors:** The study discusses the indications for hip arthroscopy, which include labral tears, chondral defects, and loose bodies. It highlights the development of hip-specific arthroscopic instrumentation and improved techniques that have expanded the indications for hip arthroscopy. The review also emphasizes the importance of appropriate patient selection and understanding the indications to optimize outcomes and minimize complications.

Best Practice Guidelines for Hip Arthroscopy in Femoroacetabular Impingement [8]:

- **Study Design:** This study utilized a Delphi process and nominal group technique to establish best practice guidelines (BPG) for hip arthroscopy in femoroacetabular impingement (FAI) syndrome. The process involved three iterative rounds of surveys and discussions among 15 experienced hip arthroscopists from 14 institutions in North America.
- **Target Population:** The target population included patients with FAI syndrome, which occurs due to abnormal contact between the proximal femur and acetabulum during hip joint motion. This condition can lead to labral tears, cartilage damage, and joint degeneration.
- **Key Factors:** The study aimed to reduce variability in clinical practice by developing consensus-based guidelines for preoperative, intraoperative, and postoperative management of FAI. The guidelines included 27 preoperative recommendations, 15 intraoperative practices, and 10 postoperative protocols. Consensus was reached on various aspects such as the avoidance of opioid prescription preoperatively, the importance of labral repair or refixation during surgery, and the inclusion of a structured postoperative rehabilitation protocol. The study highlighted the importance of patient selection, noting that certain characteristics like older age, longer duration of symptoms, and presence of arthritic changes could predict inferior outcomes.

ANALYSIS OF EVIDENCE

Shared Findings:

- All three studies emphasize the importance of appropriate patient selection to optimize outcomes and minimize complications. [1,3,8]
- They highlight the successful treatment of labral tears and the importance of labral repair or refixation during surgery. [1,8]
- The studies agree on the need for structured postoperative rehabilitation protocols to improve patient outcomes. [3,8]

Differing Findings:

- **Outcomes of Surgical Management of Borderline Hip Dysplasia** emphasizes the high reoperation rate in patients with borderline hip dysplasia and the need for more robust studies on both specific arthroscopic techniques and open procedures. [1]
- **Best Practice Guidelines for Hip Arthroscopy in Femoroacetabular Impingement** focuses on developing consensus-based guidelines to reduce variability in clinical practice, highlighting the importance of avoiding opioid prescription preoperatively and including structured postoperative rehabilitation protocols. [8]
- **Indications for Hip Arthroscopy** discusses the expanded indications for hip arthroscopy due to the development of hip-specific arthroscopic instrumentation and improved techniques. [3]

In summary, while all three studies highlight the importance of patient selection and structured postoperative rehabilitation, they differ in their focus on guidelines development, reoperation rates, and the expansion of indications for hip arthroscopy.

POLICY HISTORY

Date	Summary
December 2025	• Removed information deemed unnecessary from Background section. • Updated references • Updated Disclaimer, General Requirements, and Policy History sections • Removed Washington State regulatory language. • Added CPT code table to match new formatting • Added Summary of Evidence and Analysis of Evidence
November 2024	• This Guideline replaces Evolent Clinical Guideline 314 for Hip Arthroscopy

Date	Summary
	● Added cortisone injections within 3 months of any hip arthroscopy as a contraindication ● Removed descriptions of femoroacetabular impingement and CAM Pincer Combine Repair

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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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:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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 and radiologic findings, and response to previous non-operative treatments when medically appropriate.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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, nicotine) 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 [3]

- 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 [4,5]:
  - 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 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 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 [6] confirmed by imaging (radiographs, MRI, or other advanced imaging)
- Radiographs (X-rays) demonstrate bone-on-bone articulation
- Malignancy [7]

- **Section Two**
  - There is persistent pain and documented loss of function for at least 12 weeks including all of the following [2,8]:
    - 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. [9] 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; [9] 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 [4,5]:
      - 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 [1,10–13]
- No prior arthroscopic knee surgery within 6 months of surgery [14–16]

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 [17,18]

Absolute Contraindication

- Any infection of joints, soft tissues or hematogenous infection, including any active infection (local or active):
  - Document in the patient's history, records should clearly demonstrate that the 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]
- Extensor mechanism dysfunction [2]
- Any corticosteroid injection into the joint within 12 weeks of surgery [1,10–13]
- Any prior arthroscopic knee surgery within 6 months of surgery [14–16]

Relative Contraindication [2,19]

- 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
- Known metal sensitivities (e.g. cobalt, chromium, nickel)
- BMI > 40kg/m^2 without discussion of increased risk [1]
- Severe peripheral vascular disease
- Compromised soft tissue envelope
- Neuropathic joint [2]
- Insufficient bone stock for reconstruction [2]
- Uncontrolled comorbidities [18]

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

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

- 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 [4,5]:
  - 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 [20]
- Normal anterior cruciate ligament (ACL) or stable reconstructed ACL per physical exam test [20,21]
- Contracture ≤ 10 degrees upon physical exam (goniometer) [22]
- Angular deformity ≤ 15 degrees, passively correctable to neutral upon physical exam (goniometer) [20]
- 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 [9]
- No corticosteroid injection into the joint within 12 weeks of surgery [1,10–13]
- No prior arthroscopic knee surgery within 6 months of surgery [14–16]
- **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 [17,18]

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

Contraindications for Medial or Lateral UKA/PKA

- Local or systemic active infection
- Inflammatory arthritis [20]
- Angular deformity or contracture greater than indicated range

- Significant arthritic involvement of opposite compartment
- ACL instability [20,21]
- Poor bone quality or significant osteoporosis or osteopenia
- Meniscectomy of the opposite compartment, involving > 25% of meniscus [20]
- Stiffness greater than indicated range of motion
- Any corticosteroid injection into the joint within 12 weeks of surgery [1,10–13]
- Any prior arthroscopic knee surgery within 6 months of surgery [14–16]

Patellofemoral UKA/PKA

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

- **Section One:**
  - Failure of prior patellofemoral unloading procedures (i.e., Maquet or Fulkerson) [23]
  - **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. [24]
- **Section Two:**
  - At least 6 months of isolated patellar/anterior knee pain [24]
  - 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 [23]

- 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 [24]
- No cortisone injection into the joint within 12 weeks of surgery [1,10–13]

NOTE: MRI should not be the primary radiographic test used to determine the presence or severity of arthritic changes in the joint [9]

Contraindications for Patellofemoral UKA/PKA

- Local or systemic active infection
- Inflammatory arthritis
- Presence of tibiofemoral osteoarthritis [23]
- Patellofemoral malalignment with an increased Q angle [23]
- Limb malalignment including severe uncorrected coronal plane deformity (valgus > 8 or varus > 5 degree alignment) or sagittal plane deformity (120 degree flexion with < 10 degree flexion contracture) [23]
- Angular deformity or contracture greater than indicated range
- Knee instability (ligaments and/or menisci injuries) [23]
- Poor bone quality or significant osteoporosis or osteopenia
- Stiffness greater than indicated range of motion
- Any corticosteroid injection into the joint within 12 weeks of surgery [1,10–13]

Revision Arthroplasty

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

- **Section One**

- Previous removal of infected knee prosthesis [25]
- 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. [25,26]
- A clear statement by the treating surgeon that infection has been adequately treated
- Patient is off antibiotics for 2 weeks [25]

- **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) [25]
    - 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. [25,26]
    - 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 [1,10–13]

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 [1,10–13]

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

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Total Knee Arthroplasty (TKA)	
27447	Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patella resurfacing (total knee arthroplasty)
Partial-Unicompartmental Knee Arthroplasty (UKA)	
27438	Arthroplasty, patella; with prosthesis
27446	Arthroplasty, knee, condyle and plateau; medial OR lateral compartment
Revision Knee Arthroplasty	
27486	Revision of total knee arthroplasty, with or without allograft; 1 component
27487	Revision of total knee arthroplasty, with or without allograft; femoral and entire tibial component

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) [(27)]

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

SUMMARY OF EVIDENCE

2023 American College of Rheumatology and American Association of Hip and Knee Surgeons Clinical Practice Guideline [(1)]

Study Design: This study is a clinical practice guideline developed by the American College of Rheumatology and the American Association of Hip and Knee Surgeons. It uses a systematic

literature review and the Grading of Recommendations Assessment, Development, and Evaluation (GRADE) approach to rate the quality of evidence and develop recommendations.

Target Population: Patients with symptomatic and radiographic moderate-to-severe osteoarthritis or advanced symptomatic osteonecrosis with secondary arthritis of the hip or knee who have previously attempted nonoperative therapy, which was ineffective.

Key Factors:

- The guideline addresses the optimal timing of elective hip or knee arthroplasty (TJA) to improve patient-important outcomes such as pain, function, infection, hospitalization, and death at one year.
- It includes 13 clinically relevant population, intervention, comparator, outcomes (PICO) questions.
- Recommendations are made based on the quality of evidence, with a focus on shared decision-making between patients and clinicians.

Management of Osteoarthritis of the Knee (Non-Arthroplasty) [4]

Study Design: This is an evidence-based clinical practice guideline developed by the American Academy of Orthopaedic Surgeons for the management of osteoarthritis of the knee (non-arthroplasty). It is based on a systematic review of the available scientific and clinical information.

Target Population: Adults diagnosed with osteoarthritis of the knee undergoing non-arthroplasty treatment.

Key Factors:

- The guideline provides recommendations for various non-pharmacologic and pharmacologic interventions, including lateral wedge insoles, canes, braces, oral/dietary supplements, topical treatments, supervised exercise, and more.
- It emphasizes the importance of patient education, weight loss intervention, manual therapy, and other modalities to improve pain and function.
- The strength of recommendations is categorized as strong, moderate, limited, or consensus based on the quality of evidence.

2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee [5]

Study Design: This guideline, developed by the American College of Rheumatology and the Arthritis Foundation, updates the 2012 ACR recommendations for the management of osteoarthritis of the hand, hip, and knee. It uses the GRADE methodology to rate the quality of evidence and develop recommendations.

Target Population: Patients with osteoarthritis of the hand, hip, and knee.

Key Factors:

- The guideline provides strong recommendations for exercise, weight loss in overweight or obese patients, self-efficacy and self-management programs, tai chi, cane use, hand orthoses for first carpometacarpal joint OA, tibiofemoral bracing for knee OA, topical

NSAIDs for knee OA, oral NSAIDs, and intraarticular glucocorticoid injections for knee OA.

- Conditional recommendations are made for balance exercises, yoga, cognitive behavioral therapy, kinesiotaping, orthoses for hand joints other than the first CMC joint, patellofemoral bracing, acupuncture, thermal modalities, radiofrequency ablation, topical NSAIDs, intraarticular steroid injections, and chondroitin sulfate for hand OA.
- The guideline emphasizes shared decision-making between clinicians and patients, considering patients' values, preferences, and comorbidities.

ANALYSIS OF EVIDENCE

Shared Findings [1,4,5]**:**

- **Exercise and Weight Loss**: All three articles emphasize the importance of exercise and weight loss in managing knee osteoarthritis (OA). They agree that these interventions can improve pain and function, and are strongly recommended for patients with knee OA.
- **Use of NSAIDs**: The use of nonsteroidal anti-inflammatory drugs (NSAIDs) is consistently recommended across all three articles for managing knee OA. They highlight that NSAIDs can effectively reduce pain and improve function.
- **Intraarticular Glucocorticoid Injections**: All three articles support the use of intraarticular glucocorticoid injections for short-term pain relief in knee OA. They note that these injections can provide significant pain relief, although the duration of effectiveness may vary.

Differing Findings:

- **Timing of Arthroplasty**:
  - **2023 American College of Rheumatology and American Association of Hip and Knee Surgeons Clinical Practice Guideline**: This article provides detailed guidelines on the optimal timing of total joint arthroplasty (TJA), recommending against delaying surgery for additional nonoperative treatments like physical therapy, NSAIDs, or braces. It emphasizes proceeding directly to surgery without delay for patients with moderate-to-severe OA. [1]
  - **Management of Osteoarthritis of the Knee (Non-Arthroplasty)**: This guideline focuses on non-arthroplasty management of knee OA and does not provide specific recommendations on the timing of arthroplasty. It emphasizes various nonoperative treatments and their effectiveness. [4]
  - **2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee**: This guideline also does not provide specific recommendations on the timing of arthroplasty. It emphasizes a comprehensive management approach, including both nonoperative and pharmacologic treatments. [5]
- **Acupuncture**:

- **2023 American College of Rheumatology and American Association of Hip and Knee Surgeons Clinical Practice Guideline**: Does not provide specific recommendations on acupuncture for knee OA. [1]
- **Management of Osteoarthritis of the Knee (Non-Arthroplasty)**: Provides a limited recommendation for acupuncture, noting that it may improve pain and function but the evidence is inconsistent. [4]
- **2019 American College of Rheumatology/Arthritis Foundation Guideline for the Management of Osteoarthritis of the Hand, Hip, and Knee**: Conditionally recommends acupuncture for knee OA, acknowledging the variability in trial results and the small effect size. [5]

In summary, the three articles share common ground on the importance of exercise, weight loss, NSAIDs, and intraarticular glucocorticoid injections in managing knee OA. However, they differ in their recommendations on the timing of arthroplasty, the use of hyaluronic acid injections, and acupuncture. "2023 American College of Rheumatology and American Association of Hip and Knee Surgeons Clinical Practice Guideline" provides specific guidelines on the timing of arthroplasty, [1] while the other two articles focus more on nonoperative treatments. [4,5] The evidence for hyaluronic acid injections and acupuncture remains inconsistent, leading to varying recommendations across the articles.

POLICY HISTORY

Date	Summary
December 2025	• Added malignancy to Total Knee Arthroplasty (TKA) • Absolute Contraindications for TKA infection information updated and extensor mechanism dysfunction added. • Added metal sensitives, neuropathic joint, and insufficient bone stock for reconstruction to Relative Contraindications section for TKA • Contraindications for Patellofemoral section updated • Antibiotic time frame in Revision Arthroplasty section added • Removed Washington State regulatory language. • Updated References, General Information, and Disclaimer. • Added CPT Code table to match new formatting. • Added Summary of Evidence and Analysis of Evidence.
November 2024	• This policy replaces Evolent Clinical Guideline 315 for Knee Arthroplasty

Date	Summary
	● 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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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Evolent Clinical Guideline 1764 for Knee Arthroscopy

Guideline Number:	Applicable Codes	
Evolent_CG_1764		
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date:	**Last Revised Date:**	**Implementation Date:**
November 2015	December 2025	July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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 [1–3]

- 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** Magnetic Resonance Imaging (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 [1–3]

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 [1–3]

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 [1–3]

Meniscectomy/Meniscal Repair

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

- **Section One**
  - Symptomatic meniscal tear confirmed by MRI results that demonstrate a peripheral tear in the vascular zone, root tear, [8] or other tear that the requesting physician considers repairable and is associated with pain localized to the corresponding compartment upon physical examination [9,10]
  - No Kellgren-Lawrence Grade 3-4 changes on standing X-rays
- **Section Two**

- MRI demonstrates a meniscus tear [9,10] 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 or catching. [10]

- **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' [9,10]:
    - 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 [10] **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). [9,10]
  - Failure of at least 6 weeks of non-operative treatment, including **at least TWO** of the following [11]:
    - 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 [1–3]

Absolute Contraindications Meniscectomy/Meniscal Repair

- Arthroscopic meniscectomy or meniscal repair is never medically necessary in the presence of Kellgren-Lawrence Grade 4 osteoarthritis [9] (see **Grading Appendix**)
- **ANY** intra-articular cortisone injections within 4 weeks of surgery [1–3]

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** [9]:
  - 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 [10,12]:

- 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 [12]

- Uncorrected (staged or simultaneous) ligamentous insufficiency affecting one or more primary knee stabilizers 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 [1–3]

Ligament Reconstruction or Repair

Anterior Cruciate Ligament (ACL) Repair or Reconstruction with Allograft or Autograft, With or Without Extraarticular Augmentation

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) [13,14]:

- **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)) [15] (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 [16]

Posterior Cruciate Ligament (PCL) Reconstruction

PCL reconstruction or repair may be medically necessary when the following criteria are met [17,18]:

- 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 [19]:

- Pediatric and adolescent tears in individuals with open physis or growth plates
- Symptomatic partial tears with persistent instability despite non-operative treatment [18,19]
- 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, Medial Collateral Ligament (MCL), or Lateral Collateral Ligament (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 [20–22]:

- **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 [23,24] may be medically necessary when the following criteria are met:

- Skeletally mature adult [25]
- Individuals are symptomatic with anterior knee pain, swelling, mechanical symptoms of popping, locking, catching, or limited range of motion [26]
- For trochlea or patellar lesions physical examination findings should be localized to the patellofemoral joint [25,27]
- MRI confirms an isolated full-thickness chondral or osteochondral lesion of the femoral condyle, trochlea, or patella < 2.0 cm^2 [25,27]
- Physical exam findings and/or (imaging) results confirm no ligamentous instability [25–27]

- For femoral condyle lesions, no evidence of prior meniscectomy in same compartment unless concurrent meniscal transplant performed [27]
- Failure of at least **12 weeks** of non-operative treatment, including at least **TWO** of the following [25]:
  - 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 [1–3]

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. [23,28]

An articular cartilage restorative procedure may be medically necessary when the following criteria are met:

- Skeletally mature adult [25]
- Individual has been symptomatic (pain, swelling, mechanical symptoms of popping, locking, catching, or limited range of motion) for at least 6 months [26]
- Individual is < 50 years of age [24]
- BMI < 35kg/m^2 (optimal outcomes if patient BMI < 30kg/m^2) [27]
- No prior meniscectomy in same compartment (unless concurrent or staged meniscal transplant performed) [27]
- MRI results confirm an isolated full thickness chondral or osteochondral lesion of the femoral condyles or trochlea with stable surrounding articular cartilage [25–27]:
  - < 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**]) [25–27]
- Failure of at least **12 weeks** of non-operative treatment, including at least **TWO** of the following [25]:
  - 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) [27]
- No intra-articular cortisone injections within 4 weeks of surgery [1–3]

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.* [23,29]

An articular cartilage restorative procedure may be medically necessary when the following criteria are met [25–27]:

- Anterior knee pain and loss of function
- Individual is < 50 years of age [24]
- BMI < 35kg/m^2 (optimal outcomes if patient BMI < 30kg/m^2) [27]
- 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) [26,27]
- MRI results confirm an isolated full thickness chondral or osteochondral lesion of the patella [25–27]:
  - < 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**) [25–27]
- Failure of at least **12 weeks** of non-operative treatment, including at least **TWO** of the following [25]:
  - 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 [1–3]

***NOTE:** 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:**
  - 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:

- **Section One**
  - Proliferative rheumatoid synovium (in individuals with established rheumatoid arthritis)
  - Non-responsive to disease modifying drug (DMARD) therapy for at least 6 months [30,31]
  - At least one instance of aspiration of joint effusion and corticosteroid injection (if no evidence of infection) [30]
  - 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, [30] 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 [32,33]
  - At least one instance of aspiration of joint effusion and injection of corticosteroid (if no evidence of infection) [30]
  - 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** [34]
  - 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 [1–3]

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 [1–3]

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 [35–37]:

- 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 [1–3]

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 [38–41]:

- **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 ≥15 mm
  - Moderate to severe trochlear dysplasia [38,39]
  - 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 ≥15 mm, 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 [1–3]

***NOTE:** 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. [42] TT-TG values over 17 mm indicate other possible bony abnormalities such as increased femoral anteversion that may cause patellar instability. [40,43]

Manipulation Under Anesthesia (MUA)

MUA may be indicated when the following criteria are met [44–46]:

- 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 (extension deficit greater than 5 degrees) [45,46]
- 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. [45,47]

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 [1–3]

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Knee Manipulation Under Anesthesia (MUA)	
27570	Manipulation of knee joint under general anesthesia (includes application of traction or other fixation devices)
29884	Arthroscopy, knee, surgical; with lysis of adhesions, with or without manipulation (separate procedure)
Knee Ligament Reconstruction/Repair	

CPT	
Code	**Description**
27405	Repair, primary, torn ligament and/or capsule, knee; collateral
27407	Repair, primary, torn ligament and/or capsule, knee; cruciate
27409	Repair, primary, torn ligament and/or capsule, knee; collateral and cruciate ligaments
27427	Ligamentous reconstruction (augmentation), knee; extra-articular
27428	Ligamentous reconstruction (augmentation), knee; intra-articular (open)
27429	Ligamentous reconstruction (augmentation), knee; intra-articular (open) and extra-articular
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction
Knee Meniscectomy/Meniscal Repair/Meniscal Transplant	
27332	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial OR lateral
27333	Arthrotomy, with excision of semilunar cartilage (meniscectomy) knee; medial AND lateral
27403	Arthrotomy with meniscus repair, knee
29868	Arthroscopy, knee, surgical; meniscal transplantation (includes arthrotomy for meniscal insertion), medial or lateral
29880	Arthroscopy, knee, surgical; with meniscectomy (medial AND lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29881	Arthroscopy, knee, surgical; with meniscectomy (medial OR lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29882	Arthroscopy, knee, surgical; with meniscus repair (medial OR lateral)

CPT	
Code	**Description**
29883	Arthroscopy, knee, surgical; with meniscus repair (medial AND lateral)
Knee Surgery – Other	
27412	Autologous chondrocyte implantation, knee
27415	Osteochondral allograft, knee, open
27416	Osteochondral autograft(s), knee, open (eg, mosaicplasty) (includes harvesting of autograft[s])
27418	Anterior tibial tubercleplasty (eg, Maquet type procedure)
27420	Reconstruction of dislocating patella; (eg, Hauser type procedure)
27422	Reconstruction of dislocating patella; with extensor realignment and/or muscle advancement or release (eg, Campbell, Goldwaite type procedure)
27424	Reconstruction of dislocating patella; with patellectomy
27425	Lateral retinacular release, open
29866	Arthroscopy, knee, surgical; osteochondral autograft(s) (eg, mosaicplasty) (includes harvesting of the autograft[s])
29867	Arthroscopy, knee, surgical; osteochondral allograft (eg, mosaicplasty)
29870	Arthroscopy, knee, diagnostic, with or without synovial biopsy (separate procedure)
29873	Arthroscopy, knee, surgical; with lateral release
29874	Arthroscopy, knee, surgical; for removal of loose body or foreign body (eg, osteochondritis dissecans fragmentation, chondral fragmentation)
29875	Arthroscopy, knee, surgical; synovectomy, limited (eg, plica or shelf resection) (separate procedure)
29876	Arthroscopy, knee, surgical; synovectomy, major, 2 or more compartments (eg, medial or lateral)
29877	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage (chondroplasty)

CPT	
Code	**Description**
29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
29885	Arthroscopy, knee, surgical; drilling for osteochondritis dissecans with bone grafting, with or without internal fixation (including debridement of base of lesion)
29886	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion
29887	Arthroscopy, knee, surgical; drilling for intact osteochondritis dissecans lesion with internal fixation
G0289	Arthroscopy, knee, surgical, for removal of loose body, foreign body, debridement/shaving of articular cartilage (chondroplasty) at the time of other surgical knee arthroscopy in a different compartment of the same knee

Applicable Lines of Business

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

BACKGROUND

Meniscectomy and Arthritis of the Knee

Studies have shown 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. [9,48] 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. [9,49]

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) *(50)*

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 *(51)*

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 *(52)*

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 *(53)*

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.)

Level	Activity Description
	Competitive sports- cycling, cross-country skiing; Recreational sports- jogging on uneven ground at least twice weekly
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

SUMMARY OF EVIDENCE

Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline [4]:

- **Study Design**: This is an evidence-based clinical practice guideline for the management of osteoarthritis of the knee (non-arthroplasty). It is based on a systematic review of the literature and includes recommendations for various non-pharmacologic and pharmacologic interventions.
- **Target Population**: Adults diagnosed with osteoarthritis of the knee.
- **Key Factors**: The guideline covers a wide range of interventions, including lateral wedge insoles, canes, braces, oral/dietary supplements, topical treatments, supervised exercise, neuromuscular training, self-management, patient education, weight loss intervention, manual therapy, massage, laser treatment, acupuncture, transcutaneous electrical nerve stimulation, percutaneous electrical nerve stimulation, pulsed electromagnetic field therapy, extracorporeal shockwave therapy, oral NSAIDs, oral acetaminophen, oral narcotics, hyaluronic acid, intra-articular corticosteroids, platelet-rich plasma, denervation therapy, lavage/debridement, partial meniscectomy, and tibial osteotomy.

Academy of Orthopaedic Surgeons Clinical Practice Guideline Summary [11]:

- **Study Design**: This is a clinical practice guideline based on a systematic review of published studies for the treatment of acute isolated meniscal pathology. It includes three recommendations and six options to assist orthopedic surgeons and other qualified physicians.
- **Target Population**: Patients with acute isolated meniscal pathology, which can occur in individuals of all ages but is more common in younger, active individuals.

- **Key Factors**: The guideline highlights the incidence of meniscus tears, the goal of treatment (pain relief, improved function, and return to activities), and the risks associated with surgical treatment. It also discusses the importance of preserving healthy meniscal tissue and the use of MRI for diagnosis.

International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus [12]:

- **Study Design**: This document is a consensus statement from the International Meniscus Reconstruction Experts Forum (IMREF) on the practice of meniscal allograft transplantation (MAT). It is based on a consensus group technique and includes 15 statements generated from the IMREF 2015 survey.
- **Target Population**: Patients with symptomatic knee after the loss of a functional meniscus, including those with unicompartmental pain, ACL deficiency, and articular cartilage repair.
- **Key Factors**: The consensus statement covers indications for MAT, surgical techniques, postoperative care, and the importance of a functional meniscus. It also discusses the evolution of MAT, the role of the meniscus in knee function, and the need for careful patient selection.

ANALYSIS OF EVIDENCE

Shared Findings:

- **Effectiveness of Arthroscopy**:
  - All three articles discuss the effectiveness of knee arthroscopy in treating various knee conditions. They agree that arthroscopy can be beneficial for certain conditions, such as meniscal tears and osteoarthritis, but the extent of its effectiveness varies.
  - **Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline** provides a comprehensive review of various treatments for knee osteoarthritis, including arthroscopy, and concludes that arthroscopy with lavage and/or debridement is not recommended for primary knee osteoarthritis. [4]
  - **Academy of Orthopaedic Surgeons Clinical Practice Guideline Summary** emphasizes the high rate of improvement in function and return to sports or other activities following arthroscopic surgery for acute meniscal pathology. [11]
  - **International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus** highlights the evolution of meniscal allograft transplantation (MAT) and its role in improving joint stability and function, particularly in cases of meniscus deficiency. [12]
- **Risks and Complications**:
  - All three articles acknowledge the potential risks and complications associated with knee arthroscopy, such as infection, thromboembolism, nerve damage, and persistent or recurrent pain.

- **Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline** highlights the increased risk of adverse events with oral NSAIDs and the importance of considering patient comorbidities. [4]
- **Academy of Orthopaedic Surgeons Clinical Practice Guideline Summary** mentions specific risks like pulmonary embolus and re-tear of the meniscus. [11]
- **International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus** discusses the variability in MAT outcomes and the need for careful patient selection to optimize clinical results. [12]

Differing Findings:

- **Recommendations for Use**:
  - **Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline** offers a broader range of recommendations for managing knee osteoarthritis, including the use of lateral wedge insoles, canes, braces, dietary supplements, and various non-surgical treatments. [4]
  - **Academy of Orthopaedic Surgeons Clinical Practice Guideline Summary** provides specific recommendations for the use of MRI in diagnosing acute meniscal pathology and emphasizes the importance of preserving as much functional meniscal tissue as possible. [11]
  - **International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus** focuses on the indications for MAT, including unicompartmental pain, ACL deficiency, and articular cartilage repair, and provides detailed guidelines for graft procurement, preparation, and surgical techniques. [12]
- **Evidence and Methodology**:
  - **Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline** is a comprehensive clinical practice guideline developed by the American Academy of Orthopaedic Surgeons (AAOS) and includes a detailed review of the literature, methodology, and recommendations for various treatments. [4]
  - **Academy of Orthopaedic Surgeons Clinical Practice Guideline Summary** is based on a systematic review of published studies and provides evidence-based clinical practice guidelines for managing acute isolated meniscal pathology. [11]
  - **International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus** presents a consensus statement from the International Meniscus Reconstruction Experts Forum (IMREF) and emphasizes the importance of standardized approaches to MAT. [12]

In summary, while all three articles agree on the potential benefits and risks of knee arthroscopy, they differ in their specific recommendations, evidence, and methodology. Academy of Orthopaedic Surgeons Clinical Practice Guideline Summary and the International Meniscus Reconstruction Experts Forum (IMREF) 2015 Consensus focus on specific surgical techniques and patient selection, [11,12] while Management of Osteoarthritis of the Knee (Non-Arthroplasty) Evidence-Based Clinical Practice Guideline provides a broader range of recommendations for managing knee osteoarthritis.

POLICY HISTORY

Date	Summary
December 2025	• Ligament reconstruction or repair subheading updated to reflection augmentation. • Patellar Malalignment section 2 indications updated. • Removed Washington State regulatory language. • Background section updated. • Updated General Information and Disclaimer. • Updated references. • Added CPT Codes table to match new formatting. • Added Summary of Analysis and Analysis of Evidence.
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services 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. Evolent clinical guidelines contain guidance that requires prior authorization and service limitations. 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.

Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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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:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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 :

- Evidence of painful osteoarthritis or inflammatory, non-infectious arthritis (e.g., rheumatoid) with functional limitations such as ADLs, employment, or recreation [1,3,4]
- Functional and intact rotator cuff and deltoid (adequate abduction strength); confirmed by physical examination, MRI, or CT scan [1,3,4]
- Complete or near-complete loss of joint space* on axillary or AP X-rays (internal rotation and/or external rotation)* [1]

  ***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 [1,5–8]
- 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*). [5,11]
- 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 [1,5–8]
- 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, particularly when open reduction and internal fixation (ORIF) is not feasible or contraindicated **OR**
- Individual meets all 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 [1,5–8]
- 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 [1,5–8]

- 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** 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.**)
- 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 muscle
- Requests for RTSA 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 [1,5–8]
- 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

- Any cortisone injection into the joint within 12 weeks of surgery [1,5–8]
- Active infection within 12 weeks of surgery [12]

- Neurologic disease resulting in CRPS or Charcot shoulder [12]
- 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** 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** the following criteria are met:

- Non-repairable massive rotator cuff tear [12,18–20]
- Intact deltoid function [12,20]
- 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 persistent pain and functional impairment, particularly in the context of pseudoparalysis or massive irreparable tears [12,18]
- Age > 60; requests for RTSA in individuals < 60 will be reviewed on a case-by-case basis [12,20]
- Failure of **at least 12** weeks of attempted physical therapy or properly instructed home exercise program unless there is worsening of symptoms [19–21]
- No arthroscopic surgery of the shoulder within 12 weeks of surgery [9,10]
- No cortisone injection into the joint within 12 weeks of surgery [1,5–8]

Contraindications

- Any cortisone injection into the joint within 12 weeks of surgery [1,5–8]
- 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 [24,25]

See **Contraindications***

There are six primary indications for revision shoulder arthroplasty:

- Conversion of a hemiarthroplasty to a total shoulder arthroplasty
- Conversion of a hemiarthroplasty to a reverse shoulder arthroplasty
- Revision of a total shoulder arthroplasty to another total shoulder arthroplasty
- Revision of a total shoulder arthroplasty to a reverse shoulder arthroplasty
- Revision of a reverse total shoulder arthroplasty to another reverse shoulder arthroplasty
- 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** the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent pain and functional impairment that limits activities of daily living
- 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:
    - 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** the following criteria are met:

- Evidence of a prior hemiarthroplasty
- Persistent shoulder pain and functional loss impairment that limits activities of daily living
- 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 function
- 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** the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent shoulder pain and functional loss impairment that limits activities of daily living
- 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 function
- 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** the following criteria are met:

- Evidence of prior total shoulder arthroplasty
- Persistent shoulder pain and functional loss impairment that limits activities of daily living
- 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 confirmed by physical exam or imaging
- 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** 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 impairment that limits activities of daily living
  - 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 muscle

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

May be necessary when **all** 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 impairment that limits activities of daily living
  - 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 confirmed by radiographic osteopenia, osteomalacia or severe osteoporosis on dual-energy x-ray absorptiometry (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 [1,5–8]

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Total/Reverse Shoulder Arthroplasty or Resurfacing	
23472	Arthroplasty, glenohumeral joint; total shoulder (glenoid and proximal humeral replacement (eg, total shoulder))
Partial Shoulder Arthroplasty/Hemiarthroplasty	
23470	Arthroplasty, glenohumeral joint; hemiarthroplasty
Revision Shoulder Arthroplasty	
23473	Revision of total shoulder arthroplasty, including allograft when performed; humeral or glenoid component
23474	Revision of total shoulder arthroplasty, including allograft when performed; humeral and glenoid component

Applicable Lines of Business

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

SUMMARY OF EVIDENCE

Reverse total shoulder arthroplasty [12]:

- **Study Design**: This study is a comprehensive review of reverse total shoulder arthroplasty (RTSA) since its introduction in 1987 in Europe and 2004 in the United States.

- **Target Population**: The study focuses on patients with various shoulder conditions, primarily those with rotator cuff tear arthropathy, but also includes other conditions like acute proximal humerus fracture, chronic locked dislocation, and glenohumeral arthritis with severe glenoid bone loss.
- **Key Factors**: The study discusses the indications, contraindications, and clinical outcomes of RTSA. It highlights the high complication rates (19% to 68%) and the need for improvements in prosthesis design and surgical techniques to optimize treatment outcomes.

Glenohumeral osteoarthritis with intact rotator cuff treated with reverse shoulder arthroplasty [(14)]:

- **Study Design**: This is a systematic review of the literature on reverse shoulder arthroplasty (RSA) for glenohumeral osteoarthritis with an intact rotator cuff.
- **Target Population**: The review includes studies on patients with osteoarthritis and an intact rotator cuff treated with primary RSA.
- **Key Factors**: The review analyzes the outcomes and complication rates of RSA in this specific patient population. It finds that RSA provides optimal outcomes with low complication rates, even in the presence of altered glenoid morphology. The study emphasizes the importance of preoperative considerations such as glenoid retroversion and bone loss.

Complications and implant survivorship following primary reverse total shoulder arthroplasty in patients younger than 65 years [(16)]:

- **Study Design**: This is a systematic review of the complications and implant survivorship following primary reverse total shoulder arthroplasty (RTSA) in patients younger than 65 years.
- **Target Population**: The review focuses on younger patients (under 65 years) who have undergone primary RTSA.
- **Key Factors**: The study reports an overall complication rate of 18.6%, with reoperations at 14.4% and revisions at 11.2%. It finds that RTSA is safe and effective in younger patients, with clinical outcome scores showing significant and lasting improvements. The study also notes that complication, reoperation, and revision rates are similar to those seen in older patient cohorts.

ANALYSIS OF EVIDNCE

Shared Findings:

- **Effectiveness of RTSA**: All three studies agree that RTSA is effective in improving clinical outcomes and providing pain relief for patients with various shoulder conditions, including rotator cuff tear arthropathy and osteoarthritis. [(12,14,16)]
- **Complication Rates**: The studies highlight the presence of complications associated with RTSA. Familiari et al. report a wide range of complication rates (19% to 68%), [(12)]

while Goldenberg et al. report an overall complication rate of 18.6%. [16] Heifner et al. also note low complication rates in their specific patient population. [14]

- **Importance of Preoperative Considerations**: Both Heifner et al. and Familiari et al. emphasize the importance of preoperative considerations such as glenoid retroversion and bone loss in achieving optimal outcomes. [12,14]

Differing Findings:

- **Target Population**: Familiari et al. focus on a broad range of shoulder conditions, [12] while Heifner et al. specifically review patients with osteoarthritis and an intact rotator cuff. [14] Goldenberg et al. focus on younger patients under 65 years. [16]
- **Complication Rates and Age**: Goldenberg et al. specifically address the safety and effectiveness of RTSA in younger patients, noting that complication, reoperation, and revision rates are similar to those seen in older patient cohorts. [16] Familiari et al. and Heifner et al. do not specifically focus on age. [12,14]
- **Clinical Outcomes**: While all studies report improvements in clinical outcomes, Goldenberg et al. highlight significant and lasting improvements in younger patients. [16] Heifner et al. emphasize optimal outcomes in patients with osteoarthritis and an intact rotator cuff. [14]

In summary, these studies collectively provide strong evidence supporting the effectiveness of RTSA in improving clinical outcomes and providing pain relief for patients with various shoulder conditions. They also highlight the importance of preoperative considerations and the presence of complications associated with the procedure. However, they differ in their focus on specific patient populations and the reported complication rates.

POLICY HISTORY

Date	Summary
December 2025	• Hemiarthroplasty ORIF not feasible verbiage added • RTSA Arthritis section information updated and condensed • Impairment from shoulder pain distinction expanded • Added CPT code table to match new formatting. • Updated the General Information, Disclaimer, and References • Added Summary of Evidence and Analysis of Evidence.
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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Evolent Clinical Guideline 1770 for Shoulder Arthroscopy

Guideline Number: Evolent_CG_1770	**Applicable Codes**	
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Original Date: August 2016	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

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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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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 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 a magnetic resonance image (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. [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 (US) (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 [12]:

- Rest or activity modification
- Minimum of 4 weeks of oral NSAIDs (if not medically contraindicated)

- No cortisone injection within 12 weeks prior to surgery [13–16]

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 [8]:

- 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 US that demonstrates a small, full thickness tear (< 1 cm) [10,17]
- Unless worsening symptoms develop, failure of at least 6 weeks of non-operative treatment,* including physical therapy or a properly instructed home exercise program [12] (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 [13–16]

*__NOTE__: The requirement for conservative, non-operative treatment is waived in individuals ages < 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) [8]

- Functional loss (age-appropriate activities of daily living (ADLs), occupational or athletic) [8]
- 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 [8,9]
- Rotator cuff weakness or severe pain with rotator cuff testing on physical exam [8]
- MRI or US results demonstrates a medium (1-3 cm) or large (3-5 cm), full-thickness tear (tear must be a complete single tendon or greater) [10,17]
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,18] or there is a Warner classification of no or mild atrophy [18,19]
- No cortisone injection within 12 weeks prior to surgery [13–16]

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 [7,20]:

- MRI or US demonstrates massive (> 5 cm and/or ≥2 tendons involved), full-thickness tears (with intact or reparable subscapularis tendon for superior capsular reconstruction) [10,11,17,20]
- MRI demonstrates no advanced fatty changes (Goutallier stage 0 (normal muscle), 1 (some fatty streaks), or 2 (less than 50% fatty degeneration or infiltration) [11,18] or there is a Warner classification of no or mild atrophy [18,19]
- 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 [13–16]

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 [21]:

- 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 [13–16]

Isolated Superior Capsular Reconstruction

A Superior Capsular Reconstruction may be necessary when **all** the following criteria are met [20,22,23]:

- MRI or US demonstrates massive (> 5 cm or ≥2 tendons), 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 Goutallier grade ≥3 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 computed tomography (CT) arthrogram that demonstrate failure of healing (Sugaya type 4-5, see **Background**) or recurrent tear ≥12 weeks after index surgery. [24,25]

All RCR revision cases greater than 1 year following an initial repair must again meet indications as specified by tear size listed in the sections above for a primary repair.

Contraindications

Applies to all rotator cuff repair [24]:

- 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 [13–16]
- A smoking cessation program is highly recommended for all actively smoking patients [1,2]

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 [26]:

- 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 [27]
- Physical examination demonstrates findings of a SLAP tear (active compression test (O'Brien test), compression rotation test, clunk, or crank test, etc.) [6,28]
- MRI demonstrates Type II, IV SLAP tear - see the classifications of tears below [29]:
    - **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)*
- 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 [26]

- **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). [29,30]

Anterior-Inferior Labral Tear (Bankart Lesion) [31]

- 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. Cases with a history of frank anterior dislocations without MRI evidence of a labrum tear will be reviewed on a case-by-case basis.

Anterior-Inferior Labral Tear (Bankart Lesion) – Contraindications [31]

- 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 (see **Background**), or if there is > 20% glenoid bone loss by x-ray, CT, or MRI [32–34]

- Isolated pain only (no documented recurrent instability events) in individuals over 40
- X-ray, MRI, or CT shows significant degenerative arthritis of the glenohumeral joint
- Seizure disorders, collagen disorders (e.g., Ehlers-Danlos), neurologic injuries (e.g., axillary nerve palsy), and atraumatic instability

Posterior Labral Tear [35,36]

Surgical repair of a posterior labral tear may be necessary when **all** 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.) [37]

- 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 [38,39]:

- 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)
- MRI with arthrogram confirms capsular laxity and excludes Bankart and Kim lesions (tear between posterior labrum and articular cartilage), or glenoid erosion
- Failure of at least 6 months of formal physical therapy and activity modification

Adhesive Capsulitis [40,41]

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

Surgery for adhesive capsulitis may be necessary when **all** 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 [42,43]:

- 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 [44–46] 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. A primary repair of a proximal long head of the biceps tear is rare and poorly understood. [44]

Biceps tenotomy or tenodesis may be necessary when the following criteria in any of the following sections are met [47,48]:

- **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** [44–46,49]
    - 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. [50]

Subacromial Decompression (SAD) [51,52]

See **Background**

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

Codes

CPT	
Code	**Description**
Shoulder Rotator Cuff Repair	
23410	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; acute
23412	Repair of ruptured musculotendinous cuff (eg, rotator cuff) open; chronic
23420	Reconstruction of complete shoulder (rotator) cuff avulsion, chronic (includes acromioplasty)
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
Shoulder Labral Repair	
23450	Capsulorrhaphy, anterior; Putti-Platt procedure or Magnuson type operation
23455	Capsulorrhaphy, anterior; with labral repair (eg, Bankart procedure)
23460	Capsulorrhaphy, anterior, any type; with bone block
23462	Capsulorrhaphy, anterior, any type; with coracoid process transfer
23465	Capsulorrhaphy, glenohumeral joint, posterior, with or without bone block
23466	Capsulorrhaphy, glenohumeral joint, any type multi-directional instability
29806	Arthroscopy, shoulder, surgical; capsulorrhaphy
29807	Arthroscopy, shoulder, surgical; repair of SLAP lesion
Frozen Shoulder Repair/Adhesive Capsulitis	
29825	Arthroscopy, shoulder, surgical; with lysis and resection of adhesions, with or without manipulation
Shoulder Surgery Other	
23120	Claviculectomy; partial

CPT	
Code	**Description**
23125	Claviculectomy; total
23130	Acromioplasty or acromionectomy, partial, with or without coracoacromial ligament release
23405	Tenotomy, shoulder area; single tendon
23415	Coracoacromial ligament release, with or without acromioplasty
23430	Tenodesis of long tendon of biceps
23700	Manipulation under anesthesia, shoulder joint, including application of fixation apparatus (dislocation excluded)
29805	Arthroscopy, shoulder, diagnostic, with or without synovial biopsy (separate procedure)
29819	Arthroscopy, shoulder, surgical; with removal of loose body or foreign body
29820	Arthroscopy, shoulder, surgical; synovectomy, partial
29821	Arthroscopy, shoulder, surgical; synovectomy, complete
29822	Arthroscopy, shoulder, surgical; debridement, limited, 1 or 2 discrete structures (eg, humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor complex, labrum, articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies])
29823	Arthroscopy, shoulder, surgical; debridement, extensive, 3 or more discrete structures (eg, humeral bone, humeral articular cartilage, glenoid bone, glenoid articular cartilage, biceps tendon, biceps anchor complex, labrum, articular capsule, articular side of the rotator cuff, bursal side of the rotator cuff, subacromial bursa, foreign body[ies])
29824	Arthroscopy, shoulder, surgical; distal claviculectomy including distal articular surface (Mumford procedure)
29825	Arthroscopy, shoulder, surgical; with lysis and resection of adhesions, with or without manipulation
29828	Arthroscopy, shoulder, surgical; biceps tenodesis

CPT	
Code	**Description**
+29826	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with coracoacromial ligament (ie, arch) release, when performed (List separately in addition to code for primary procedure)

Applicable Lines of Business

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

BACKGROUND

Rotator Cuff Grades for Atrophy and Classification for Retears

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

Warner classification of muscle atrophy of rotator cuff musculature [18]

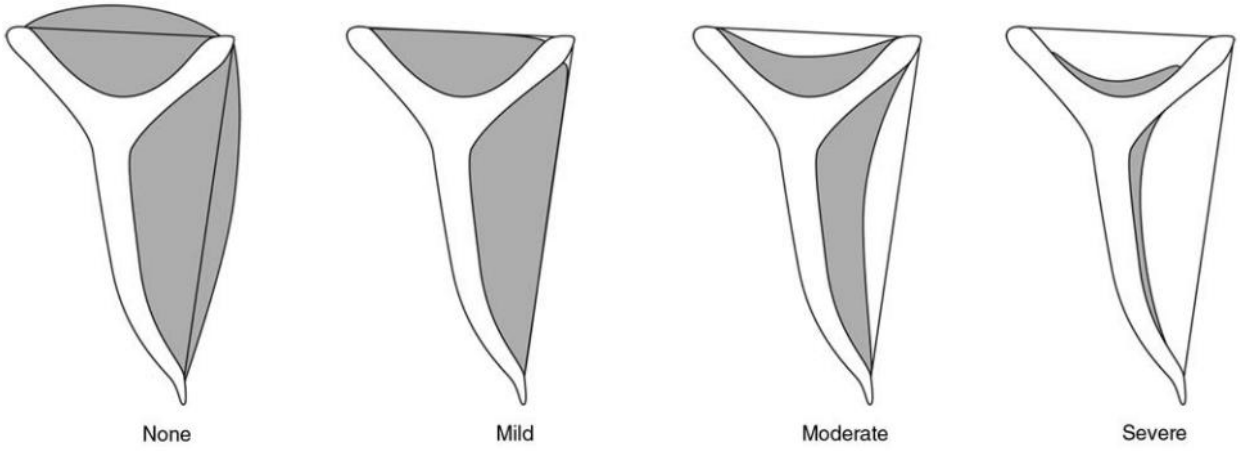

Illustration of the Warner method of evaluating rotator cuff atrophy based on T1-weighted sagittal oblique magnetic resonance images. The grade is determined by the amount of muscle above or below a line drawn from the edge of the coracoid to the tip of the scapular spine and a line from the superior aspect of the coracoid to the superior border of the scapular spine.

Hamada classification of rotator cuff arthropathy [53]

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 [54]

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 [33,34,55,56]

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.

SUMMARY OF EVIDENCE

Management of Rotator Cuff Injuries [7]:

- **Study Design:** This clinical practice guideline is based on a systematic review of current scientific and clinical research. The guideline contains 33 recommendations, including both diagnosis and treatment.
- **Target Population:** The guideline focuses on adults with rotator cuff injuries.
- **Key Factors:**
  - **Burden of Disease:** Chronic shoulder pain affects approximately 8% of American adults, with rotator cuff pathology being the leading cause of shoulder-related disability.
  - **Etiology:** Rotator cuff tears have two main causes: injury and degeneration.
  - **Incidence and Prevalence:** Approximately 4.5 million patient visits related to shoulder pain occur each year in the United States.
  - **Management of Small to Medium Tears:** Both physical therapy and surgical

management result in notable improvement in patient-reported outcomes for patients with symptomatic small to medium full-thickness rotator cuff tears.

- **Long-Term Nonsurgical Management:** Patient-reported outcomes improve with physical therapy in symptomatic patients with full-thickness rotator cuff tears, but tear size, muscle atrophy, and fatty infiltration may progress over 5 to 10 years.
- **Surgical Management:** Healed rotator cuff repairs show improved patient-reported and functional outcomes compared to physical therapy and unhealed repairs.
- **Acromioplasty and Rotator Cuff Repair:** Routine use of acromioplasty as a concomitant treatment is not supported compared to arthroscopic repair alone for patients with small to medium-sized full-thickness rotator cuff tears.
- **Diagnosis (Clinical Examination):** Clinical examination can be useful to diagnose or stratify patients with rotator cuff tears, but a combination of tests will increase diagnostic accuracy.
- **Diagnosis (Imaging):** MRI, MRA, and ultrasonography are useful adjuncts to a clinical examination for identifying rotator cuff tears.
- **Post-Op Mobilization Timing:** Similar postoperative clinical and patient-reported outcomes for small to medium-sized full-thickness rotator cuff tears between early and delayed mobilization.

Physical Examination Tests of the Shoulder [9]**:**

- **Study Design:** This is a systematic review and meta-analysis of diagnostic test performance for physical examination tests (PETS) of the shoulder. The study adheres to the principles outlined in the Cochrane guidelines and the PRISMA statement.
- **Target Population:** The study includes data from 11 articles that met the inclusion criteria, focusing on patients with shoulder complaints.
- **Key Factors:**
  - **SLAP Lesions:** The Compression-Rotation test obtained the highest diagnostic odds ratio (DOR) among single PETS for SLAP lesions.
  - **Rotator Cuff Tears:** The Supraspinatus test obtained the highest DOR for diagnosing any full-thickness rotator cuff tear.
  - **Subacromial Impingement Syndrome:** The Hawkins test obtained the highest DOR for diagnosing subacromial impingement syndrome.
  - **Overall Validity:** The pooled DOR for PETS for SLAP lesions was 1.38, indicating statistical validity.
  - **Clinical Performance:** No single PETS showed superior clinical test performance, but a combination of tests may increase diagnostic accuracy.

Management of Rotator Cuff Injuries Evidence-Based Clinical Practice Guideline [12]**:**

- **Study Design:** This clinical practice guideline (CPG) is based on a systematic review of published studies regarding the management of rotator cuff injuries. The review was conducted between October 2023 and June 2024, with the final search performed on June 7, 2024.

- **Target Population:** The guideline addresses the management of rotator cuff injuries in adults. It is not intended for pediatric patients.
- **Key Factors:**
  - **Management of Small to Medium Tears:** Both physical therapy and operative treatment result in significant improvement in patient-reported outcomes for patients with symptomatic small to medium full-thickness rotator cuff tears.
  - **Long-Term Non-Operative Management:** Patient-reported outcomes improve with physical therapy in symptomatic patients with full-thickness rotator cuff tears. However, the tear size, muscle atrophy, and fatty infiltration may progress over 5 to 10 years with non-operative management.
  - **Operative Management vs. Non-Operative Management:** Healed rotator cuff repairs show improved patient-reported and functional outcomes compared to physical therapy and unhealed repairs.
  - **Acromioplasty & Rotator Cuff Repair:** Routine use of acromioplasty as a concomitant treatment is not suggested for therapeutic benefit compared to arthroscopic repair alone for patients with small to medium-sized full-thickness rotator cuff tears.
  - **Diagnosis (Clinical Examination):** Clinical examination can be useful to diagnose or stratify patients with rotator cuff tears; however, a combination of tests will increase diagnostic accuracy.
  - **Diagnosis (Imaging):** MRI, MRA, CT, and ultrasound are useful adjuncts to a clinical exam and radiographs for identifying rotator cuff tears.
  - **Post-Op Mobilization Timing:** Postoperative clinical and patient-reported outcomes are similar for small to medium-sized full-thickness rotator cuff tears managed with early or delayed mobilization.

ANALYSIS OF EVIDENCE

Shared Findings:

- **Effectiveness of Physical Therapy and Surgical Management**:
  - All three documents agree that both physical therapy and surgical management result in significant improvements in patient-reported outcomes (PROs) for patients with symptomatic small to medium full-thickness rotator cuff tears. [7,9,12]
  - Long-term non-operative management with physical therapy improves PROs, but the tear size, muscle atrophy, and fatty infiltration may progress over 5 to 10 years. [7,12]
- **Diagnosis and Imaging**:
  - Clinical examination and imaging techniques such as MRI, MRA, CT, and ultrasound are useful adjuncts for diagnosing rotator cuff tears. [7,12]
  - A combination of physical examination tests (PETS) increases diagnostic accuracy compared to any single test. [7,9]

- **Post-Operative Management**:
  - Post-operative clinical and patient-reported outcomes are similar for small to medium-sized full-thickness rotator cuff tears managed with early or delayed mobilization. [7,12]
  - Routine use of acromioplasty as a concomitant treatment is not suggested for therapeutic benefit compared to arthroscopic repair alone. [7,12]

Differing Findings:

- **Specific Physical Examination Tests**:
  - The Gismervik et al. (2017) study provides a detailed analysis of various PETS, highlighting the diagnostic odds ratio (DOR) for different tests. For example, the Supraspinatus test obtained the highest DOR for diagnosing any full-thickness rotator cuff tear. [9] This level of detail is not present in the other two documents.
- **Biological Augmentation and Other Treatments**:
  - The Weber et al. (2020) document discusses the use of biological augmentation with platelet-derived products, noting that while it does not improve PROs, limited evidence supports its use in decreasing retear rates. [7] This topic is not covered in the other two documents.
- **Specific Recommendations and Strength of Evidence**:
  - The Weber et al. (2020) document provides a detailed breakdown of recommendations with varying strengths of evidence, including strong, moderate, limited, and consensus recommendations. [7] This structured approach to recommendations is more comprehensive compared to the other two documents.

In summary, the evidence suggests that shoulder arthroscopy, combined with appropriate diagnostic and post-operative management strategies, is a valuable approach for treating rotator cuff injuries. The detailed analysis of PETS in the Gismervik et al. (2017) study and the comprehensive recommendations in the Weber et al. (2020) document provide additional insights that can guide clinical decision-making.

POLICY HISTORY

Date	Summary
December 2025	• Updated references • Updated the General Information and Disclaimer sections • Updated definition of massive tear to > 5 cm and/or ≥2 tendons in Rotator Cuff Repair section • Updated the Hamada grade to ≤2 and the Goutallier grade to ≥ 3 in the RCR Isolated Superior Capsular Reconstruction

Date	Summary
	• Smoking cessation contraindication added to RCR Contraindications section • Updated the Anterior-Inferior Labral Tears Contraindications section to include seizure disorders, collagen disorders, neurologic injuries, and atraumatic instability • MRI with arthrogram added to Multidirectional Instability of the Shoulder section • Warner classification of muscle atrophy and image added to Background section. • Background section updated. • Added CPT codes table to match new formatting. • Added Summary of Evidence and Analysis of Evidence.
November 2024	• This guideline replaces Evolent Clinical Guideline 318 for Shoulder Arthroscopy • Added indications for biceps tenodesis for long head of the biceps ruptures • Removed background sections for: labral repairs, adhesive capsulitis, DCE, LHB, Loose body removal, synovectomy and added on-track/off-track instability to background section

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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Evolent Clinical Guideline 1760 for Deformity Surgery

Guideline Number: Evolent_CG_1760	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: July 2015	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

INDICATIONS

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

- When **ALL the following** criteria are met [1–3]:
  - 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 [1–3]:
  - 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 [2,4,5]

- Documented failure of **at least twelve (12)** consecutive weeks in the past year of **any TWO** 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 [6–8]

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

- **Medical contraindications to surgery**: Such as osteoporosis; infection of soft tissue adjacent to the spine, whether or not it has spread to the spine; severe cardiopulmonary disease; anemia; malnutrition, systemic infection, and elevated blood sugar [9]
- **Psychosocial risk factors**: It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (such as peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [9,10] 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**. Cessation must be confirmed by a negative cotinine test prior to surgery approval. [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

Codes

CPT	
Code	**Description**
Deformity Surgery	
22206	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (eg, pedicle/vertebral body subtraction); thoracic
22207	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (eg, pedicle/vertebral body subtraction); lumbar
22210	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; cervical
22212	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; thoracic

CPT	
Code	**Description**
22214	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; lumbar
22220	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; cervical
22222	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; thoracic
22224	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; lumbar
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace, lumbar
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar
22800	Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments
22802	Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments
22804	Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments
22808	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments
22810	Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments
22812	Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments
22830	Exploration of spinal fusion

CPT	
Code	**Description**
+22208	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (eg, pedicle/vertebral body subtraction); each additional vertebral segment (List separately in addition to code for primary procedure)
+22216	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; each additional vertebral segment (List separately in addition to primary procedure)
+22226	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)
+22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)
+22632	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)

Applicable Lines of Business

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

SUMMARY OF EVIDENCE

Preoperative medical assessment for adult spinal deformity surgery: a state-of-the-art review [6]

Study Design: This study is a state-of-the-art review that assesses preoperative medical risk factors for complications in adult spinal deformity (ASD) surgery. The review includes evidence levels for various risk factors associated with complications in ASD surgery.

Target Population: The target population includes patients undergoing surgery for adult spinal deformity.

Key Factors:

- Methods: The study involved a literature search using the PubMed database to identify publications related to complications, risk factors, and adult spinal deformity. The included publications were assessed for the level of evidence as described in clinical practice guidelines published by the North American Spine Society.
- Results: The study found that frailty had good evidence (Grade A) as a risk factor for complications in ASD patients. Fair evidence (Grade B) was assigned for bone quality, smoking, hyperglycemia and diabetes, nutritional status, immunosuppression/steroid use, cardiovascular disease, pulmonary disease, and renal disease. Indeterminate evidence (Grade I) was assigned for pre-operative cognitive function, mental health, social support, and opioid utilization.
- Conclusions: Identifying risk factors for preoperative complications in ASD surgery is crucial for empowering informed choices for patients and surgeons and managing patient expectations. Risk factors with Grade A and B evidence should be identified prior to elective surgery and modified to reduce the risk of preoperative complications.

Selective Thoracolumbar/Lumbar Fusion in Adolescent Idiopathic Scoliosis: A Comprehensive Review of the Literature [3]

Study Design: This study is a comprehensive review of the literature on selective thoracolumbar/lumbar fusion in adolescent idiopathic scoliosis (AIS).

Target Population: The target population includes adolescents with idiopathic scoliosis.

Key Factors:

- Introduction: AIS is a three-dimensional spine deformity leading to disability and various physical and psychological problems. Proper preoperative treatment is needed to improve appearance while maintaining spine function.
- Criteria for Selective TL/L Fusion: The study discusses the criteria for selective thoracolumbar/lumbar fusion, including Lenke's classification for AIS, which considers only structural curves in the fusion plan.
- Anterior or Posterior Approaches: The study compares the anterior and posterior approaches for selective TL/L fusion, highlighting the advantages and complications of each.
- Selective TL/L Fusion in Lenke Type 6: The study examines the outcomes of unfused structural thoracic curves following selective TL/L fusion in Lenke 6C AIS patients.

- Lowest Instrumented Vertebra Selection: The study discusses the selection of the lowest instrumented vertebra to maximize correction and movement.
- Sagittal Alignment: The study evaluates the sagittal plane in selective TL/L fusion, showing significant changes in various parameters preoperatively and postoperatively.
- Long-term Outcome: The study reviews the long-term outcomes, patient satisfaction, and complications of selective TL/L fusion.

Commentary: Appropriate Use Criteria for Lumbar Degenerative Scoliosis: Developing Evidence-based Guidance for Complex Treatment Decisions [4]

Study Design: This study is a commentary on the development of Appropriate Use Criteria (AUC) for lumbar degenerative scoliosis, providing evidence-based guidance for complex treatment decisions.

Target Population: The target population includes patients with lumbar degenerative scoliosis.

Key Factors:

- Introduction: Lumbar degenerative scoliosis is a common problem treated more frequently due to an aging population and increased capacity to manage difficult problems in older patients. The condition often involves the intersection of degenerative spinal stenosis and spinal deformity.
- AUC Methodology: The RAND–UCLA Appropriateness Method was used to guide decision-making based on expert opinion and best available information. The method considers the expected health benefits and negative consequences of a procedure.
- Findings: The panel generated treatment recommendations for 260 clinical scenarios. Clinical scenarios with mild symptoms or limited stenosis and small deformities were generally deemed inappropriate for surgery. The most common clinical scenarios deemed appropriate for surgical treatment involved patients with moderate to severe leg pain or neurogenic claudication.
- Discussion: The study emphasizes the importance of evidence-based guidance for optimizing treatment for lumbar degenerative scoliosis. The AUC process aims to improve the quality and cost-effectiveness of care

ANALYSIS OF EVIDENCE

Shared Conclusions [3,4,6]:

All three studies emphasize the importance of evidence-based decision-making in spinal surgery. They highlight the need for careful assessment of risk factors, patient selection, and treatment criteria to optimize surgical outcomes and minimize complications.

Differing Conclusions:

- Arora et al. 2023 focuses on identifying and modifying preoperative risk factors for complications in ASD surgery, emphasizing the role of frailty, bone quality, and other medical conditions. [6]
- Ghandhari et al. 2023 provides a detailed analysis of selective thoracolumbar/lumbar

fusion in AIS, discussing various surgical approaches, criteria for fusion, and long-term outcomes. [3]

- Glassman et al. 2017 develops Appropriate Use Criteria for lumbar degenerative scoliosis, providing a framework for making complex treatment decisions based on patient-specific factors and clinical scenarios. [4]

In summary, while all three studies contribute valuable insights into spinal surgery, they each focus on different aspects of the field, from preoperative risk assessment to surgical techniques and treatment guidelines. This comprehensive analysis helps to reiterate the importance of tailored, evidence-based approaches in managing spinal deformities and optimizing patient outcomes.

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • Added elevated blood sugar as relative contraindication for spine surgery • Added negative cotinine lab test requirement for smokers prior to spine surgery approval • Updated references • Added technical description to codes • Added a Summary of Evidence and Analysis of Evidence

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

Date	Summary
	● Removed bullet point for documented progression of 10 degrees in one year in a coronal plane x-ray from the Indications in Lumbar Deformity

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established, we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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Evolent Clinical Guideline 1772 for Thoracic Spine Surgery

Guideline Number: Evolent_CG_1772	**Applicable Codes**	
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Original Date: July 2015	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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
  - 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

- For deformity cases – refer to Evolent Clinical Guideline 1760 for Deformity Surgery
- 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 [3,4]

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

- **Medical contraindications to surgery:** Such as osteoporosis; infection of soft tissue adjacent to the spine, whether or not it has spread to the spine; severe cardiopulmonary disease; anemia; malnutrition, systemic infection, and elevated blood sugar [5]
- **Psychosocial risk factors**: It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (such as 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**. Cessation must be confirmed by a negative cotinine test prior to surgery approval. [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

Codes

CPT	
Code	**Description**
Thoracic Spine Surgery	
22532	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)
22610	Arthrodesis, posterior or posterolateral technique, single interspace; thoracic (with lateral transverse technique, when performed)
22830	Exploration of spinal fusion
63003	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; thoracic
63016	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; thoracic
63046	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; thoracic
63055	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; thoracic
63064	Costovertebral approach with decompression of spinal cord or nerve root(s) (eg, herniated intervertebral disc), thoracic; single segment
63077	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, single interspace

CPT	
Code	**Description**
+22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
+22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)
+63048	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; each additional vertebral segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure)
+63057	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; each additional segment, thoracic or lumbar (List separately in addition to code for primary procedure)
+63066	Costovertebral approach with decompression of spinal cord or nerve root(s) (eg, herniated intervertebral disc), thoracic; each additional segment (List separately in addition to code for primary procedure)
+63078	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, each additional interspace (List separately in addition to code for primary procedure)

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.

SUMMARY OF EVIDENCE

Preoperative Maximization to Reduce Complications in Spinal Surgery [3]

- Study Design: This is an invited narrative review.
- Target Population: The study focuses on patients undergoing elective spine surgery.
- Key Factors: The review summarizes current literature on modifiable risk factors that can be optimized preoperatively to reduce complications and improve patient-reported outcomes in spinal surgery. These factors include obesity, malnutrition, diabetes, preoperative anemia, vitamin D deficiency, nicotine use, and opioid use.

Clinical characteristics and surgical outcome of thoracic myelopathy caused by ossification of the ligamentum flavum: a retrospective analysis of 85 cases [1]

- Study Design: This is a retrospective comparative study.
- Target Population: The study includes 85 patients with thoracic myelopathy caused by ossification of the ligamentum flavum (OLF) in China.
- Key Factors: The study assesses the safety and effectiveness of posterior decompressive laminectomy and resection of OLF. It identifies important predictors of surgical outcomes, such as the level of OLF, preoperative duration of symptoms, intramedullary signal change on T2-weighted imaging, and preoperative severity of myelopathy.

The incidence and risk factors of postoperative neurological deterioration after posterior decompression with or without instrumented fusion for thoracic myelopathy [2]

- Study Design: This is a retrospective study.
- Target Population: The study involves 168 patients with thoracic myelopathy who underwent posterior decompression with or without instrumented fusion.

- Key Factors: The study explores the incidence and risk factors of postoperative neurological deterioration. It identifies several risk factors, including the presence of ossification of the posterior longitudinal ligament combined with OLF, spinal canal occupancy ratio more than 70%, intraoperative bleeding more than 800 mL, and mean arterial pressure less than 81 mm Hg.

ANALYSIS OF EVIDENCE

Shared Findings:

- Both Li et al 2016 [1] and Wang et al 2016 [2] highlight the importance of preoperative factors in predicting surgical outcomes. Specifically, they both identify the severity of myelopathy and intramedullary signal changes on T2-weighted imaging as significant predictors.
- All three studies emphasize the importance of optimizing patient conditions preoperatively to improve surgical outcomes and reduce complications. [1–3]

Differing Findings:

- Maitra 2020 [3] focuses on a broader range of modifiable risk factors and their optimization to improve patient-reported outcomes in spinal surgery.
- Li et al 2016 [1] provides a detailed analysis of the clinical features, radiological findings, and surgical outcomes of thoracic myelopathy caused by OLF, emphasizing the effectiveness of posterior decompressive laminectomy and resection of OLF.
- Wang et al 2016 [2] specifically investigates the incidence and risk factors of postoperative neurological deterioration, identifying several intraoperative and preoperative factors that contribute to this complication.

Conclusion:

In summary, while all three studies emphasize the importance of preoperative optimization and identify significant predictors of surgical outcomes, they differ in their specific focus areas and the range of factors they consider. Maitra 2020 provides a broad overview of modifiable risk factors, Li et al 2016 focuses on the clinical and surgical aspects of thoracic myelopathy caused by OLF, and Wang et al 2016 investigates the risk factors for postoperative neurological deterioration.

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • Added elevated blood sugar as relative contraindication for spine surgery • Added negative cotinine lab test requirement for smokers prior to spine surgery approval • Updated references • Added technical description to codes • Added a Summary of Evidence and Analysis of Evidence
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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that requires prior authorization and service limitations. 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.

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Evolent Clinical Guideline 1771 for Spine Surgery Other

Guideline Number: Evolent_CG_1771	**Applicable Codes**	
"Evolent" refers to Evolent Health LLC and Evolent Specialty Services, Inc. 		
Original Date: July 2015	**Last Revised Date:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

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 [3–5]

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

Codes

CPT	
Spine Surgery Other: Neoplasm, Lesion, Infection (All Regions)	
Code	**Description**
Fusion	
22532	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic

CPT	
Spine Surgery Other: Neoplasm, Lesion, Infection (All Regions)	
Code	**Description**
22533	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2
22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)
22590	Arthrodesis, posterior technique, craniocervical (occiput-C2)
22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)
22600	Arthrodesis, posterior or posterolateral technique, single interspace; cervical below C2 segment
22610	Arthrodesis, posterior or posterolateral technique, single interspace; thoracic (with lateral transverse technique, when performed)
22612	Arthrodesis, posterior or posterolateral technique, single interspace; lumbar (with lateral transverse technique, when performed)
22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)

CPT	
Spine Surgery Other: Neoplasm, Lesion, Infection (All Regions)	
Code	**Description**
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace, lumbar
22632	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar
22634	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)
Lesion Decompression	
63265	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; cervical
63266	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; thoracic
63267	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; lumbar
63268	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; sacral
63270	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; cervical
63271	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; thoracic
63272	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; lumbar

CPT	
Spine Surgery Other: Neoplasm, Lesion, Infection (All Regions)	
Code	**Description**
63273	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; sacral
63275	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, cervical
63276	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, thoracic
63277	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, lumbar
63278	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, sacral
63280	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, cervical
63281	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, thoracic
63282	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, lumbar
63283	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, sacral
63285	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, cervical
63286	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, thoracic
63287	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, thoracolumbar
63290	Laminectomy for biopsy/excision of intraspinal neoplasm; combined extradural-intradural lesion, any level
63295	Osteoplastic reconstruction of dorsal spinal elements, following primary intraspinal procedure (List separately in addition to code for primary procedure)

Applicable Lines of Business

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

SUMMARY OF EVIDENCE

An Overview of Decision Making in the Management of Metastatic Spinal Tumors [5]

- Study Design: This is a narrative review that provides an overview of decision-making and current treatment options for metastatic spinal tumors. The review is based on a MEDLINE literature search for studies in English reporting on human subjects.
- Target Population: Patients with metastatic spinal tumors.
- Key Factors: The review discusses the multidisciplinary management of metastatic spinal tumors, emphasizing the importance of effective pain management, achieving local tumor control, adequate neurological decompression, and surgical stabilization. It highlights the evolution of treatment strategies, including limited decompression followed by postoperative stereotactic body radiotherapy (SBRT) as the current standard of care.

Systemic considerations for the surgical treatment of spinal metastatic disease: a scoping literature review [2]

- Study Design: This is a scoping literature review conducted by the AO Spine Knowledge Forum Tumor group. The review follows a framework derived from Arksey and O'Malley and adheres to the PRISMA-ScR checklist.
- Target Population: Adult patients (≥18 years) surgically treated for spinal metastatic disease.
- Key Factors: The review aims to summarize emerging evidence relating systemic considerations to clinical outcomes following surgery for spinal metastatic disease. It identifies preoperative systemic variables negatively associated with postoperative outcomes, including demographics, medical comorbidities, biochemical abnormalities, low muscle mass, generalized motor weakness, poor ambulation, reduced performance status, and systemic disease burden. The findings are intended to inform a shared decision-making approach with patients and their families.

Multidisciplinary Approach to Patients With Metastatic Spinal Cord Compression: A Diagnostic Therapeutic Algorithm to Improve the Neurological Outcome [4]

- Study Design: This is an original research article that proposes a diagnostic-therapeutic

algorithm for managing patients with metastatic spinal cord compression. The algorithm is based on the experience of a primary care center and involves a multidisciplinary team.

- Target Population: Patients with vertebral metastases and symptoms of spinal cord compression.
- Key Factors: The study emphasizes the importance of early diagnosis and treatment to prevent neurological deficits. It outlines a step-by-step algorithm involving emergency room physicians, spine surgeons, neuroradiologists, radiation oncologists, and oncologists. The algorithm aims to optimize outcomes by ensuring timely MRI evaluation, surgical intervention, and systemic therapy

ANALYSIS OF EVIDENCE

Shared Findings [2,4,5]:

- All three studies emphasize the importance of a multidisciplinary approach in managing metastatic spinal tumors and spinal cord compression.
- They all highlight the need for early diagnosis and timely intervention to improve patient outcomes.
- The studies agree on the significance of effective pain management, local tumor control, and neurological decompression.

Differing Findings:

- Zaveri et al 2021 [5] focuses on the evolution of treatment strategies and the current standard of care involving limited decompression followed by postoperative SBRT.
- MacLean et al 2022 [2] provides a comprehensive summary of systemic considerations and their impact on clinical outcomes, emphasizing the need for a shared decision-making approach.
- Rispoli et al 2022 [4] proposes a specific diagnostic-therapeutic algorithm and highlights the role of a multidisciplinary team in optimizing patient outcomes.

Conclusion:

In summary, while all three studies underscore the importance of a multidisciplinary approach and early intervention, they each offer unique perspectives on the management of metastatic spinal tumors and spinal cord compression. Zaveri et al focus on treatment evolution, MacLean et al on systemic considerations, and Rispoli et al on a diagnostic-therapeutic algorithm

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • No substantial clinical changes • Added technical description to codes • Added a Summary of Evidence and Analysis of Evidence
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

Disclaimer

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Evolent Clinical Guidelines are comprehensive and inclusive of various procedural applications for each service type. Our guidelines may be used to supplement Medicare criteria when such criteria is not fully established. When Medicare criteria is determined to not be fully established,

we only reference the relevant portion of the corresponding Evolent Clinical Guideline that is applicable to the specific service or item requested in order to determine medical necessity.

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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:** December 2025	**Implementation Date:** July 2026

TABLE OF CONTENTS

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

INDICATIONS

Lumbar total disc arthroplasty (artificial disc replacement) may be considered **medically necessary** when **ALL** of the following indications are met [1–3]:

- 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 [4]
    - 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 (Dual-energy X-ray Absorptiometry (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

NOTE: 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 [5,6]

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

- **Medical contraindications to surgery:** Such as osteoporosis; infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition, systemic infection, and elevated blood sugar [7]
- **Psychosocial risk factors**: It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (such as peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention. [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**. Cessation must be confirmed by a negative cotinine test prior to surgery approval. [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.

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
Lumbar Artificial Disc Replacement - Single Level	
22857	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression); single interspace, lumbar
22862	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; lumbar
22865	Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; lumbar
Lumbar Artificial Disc Replacement - Multiple Levels	
22860	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression); second interspace, lumbar (List separately in addition to code for primary procedure)
+0164T	Removal of total disc arthroplasty, (artificial disc), anterior approach, each additional interspace, lumbar (List separately in addition to code for primary procedure)
+0165T	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, lumbar (List separately in addition to code for primary procedure)

Applicable Lines of Business

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

SUMMARY OF EVIDENCE

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 [2]

- Study Design: Meta-analysis of randomized controlled trials.
- Target Population: Patients with functionally disabling chronic low back pain due to single-level lumbar degenerative disc disease (DDD).
- Key Factors: The study compared total disc replacement (TDR) with fusion over a 5-year period. Outcomes included Oswestry Disability Index (ODI) success, back pain scores, reoperations, and patient satisfaction. TDR showed greater ODI success and patient satisfaction, and a lower risk of reoperation compared to fusion.

Indications for Lumbar Total Disc Replacement: Selecting the Right Patient with the Right Indication for the Right Total Disc [3]

- Study Design: Comprehensive literature review.
- Target Population: Patients with lumbar degenerative disc disease (DDD).
- Key Factors: The study synthesized information on general indications for lumbar total disc replacement (TDR). It highlighted the importance of patient selection criteria based on safety and optimizing outcomes. The primary indication for TDR was painful disc degeneration unresponsive to at least 6 months of nonoperative care. The study also discussed various contraindications and the impact of previous spine surgery.

Lumbar Total Disc Replacements for Degenerative Disc Disease: A Systematic Review of Outcomes With a Minimum of 5 years Follow-Up [1]

- Study Design: Systematic review.
- Target Population: Patients with lumbar degenerative disc disease (DDD).
- Key Factors: The review included 22 studies with a minimum of 5 years follow-up. It evaluated clinical outcomes, reoperation, and complication rates of lumbar TDR devices. The mean follow-up time was 8.30 years. The study found significant improvements in

pain reduction, clinical success, and patient satisfaction. The mean complication and reoperation rates were 18.53% and 13.6%, respectively

ANALYSIS OF EVIDENCE

Shared Findings:

- Effectiveness of TDR:
  - All three studies agree that TDR is an effective treatment for lumbar DDD. Zigler et al. 2018 [2] found that TDR offers several clinical advantages over fusion, including greater Oswestry Disability Index (ODI) success and patient satisfaction. Wen et al. 2024 [1] reported significant improvements in pain reduction, clinical success, and patient satisfaction. Büttner-Janz et al. 2014 [3] emphasized the importance of patient selection to optimize outcomes.
- Patient Satisfaction:
  - Both Zigler et al. 2018 [2] and Wen et al. 2024 [1] found that patients with TDR reported higher satisfaction rates compared to those who underwent fusion.
- Reoperation Rates:
  - Zigler et al. 2018 [2] and Wen et al. 2024 [1] both reported lower reoperation rates for TDR compared to fusion.

Differing Findings:

- Patient Selection Criteria:
  - Büttner-Janz et al. 2014 [3] focused extensively on patient selection criteria, highlighting the importance of excluding patients with osteopenia/osteoporosis, previous abdominal surgery, and other contraindications. This level of detail on patient selection is not as prominent in the other two studies.
- Long-Term Outcomes:
  - Wen et al. 2024 [1] provided a more comprehensive analysis of long-term outcomes, including a comparison between mid-term (5 years) and long-term (≥10 years) follow-up studies. They found no significant difference in clinical outcomes between mid-term and long-term follow-up, suggesting that the benefits of TDR are maintained over time.
- Complication Rates:
  - Wen et al. 2024 [1] reported a mean complication rate of 18.53%, with specific details on different TDR devices. This level of detail on complications is not as extensively covered in Zigler et al. 2018 [2] or Büttner-Janz et al. 2014 [3].

Conclusion

In summary, all three studies support the effectiveness of TDR for treating lumbar DDD, with shared conclusions on patient satisfaction and lower reoperation rates. However, they differ in their focus on patient selection criteria, long-term outcomes, and complication rates. Büttner-

Janz et al. 2014 emphasize the importance of selecting the right patients for TDR, while Wen et al. 2024 provide a detailed analysis of long-term outcomes and complications. Zigler et al. 2018 highlight the clinical advantages of TDR over fusion in terms of ODI success and patient satisfaction.

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • Added elevated blood sugar as relative contraindication for spine surgery • Added negative cotinine lab test requirement for smokers prior to spine surgery approval • Removed Washington State Regulatory language • Added technical description to codes • Updated references • Added a Summary of Evidence and Analysis of Evidence
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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Evolent Clinical Guideline 1767 for 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:** December 2025	**Implementation Date:** July 2026

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.*
- *The guideline criteria in the following sections were developed utilizing evidence-based and peer-reviewed resources from medical publications and societal organization guidelines as well as from widely accepted standard of care, best practice recommendations.*

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.

Special Note

In order for surgeries to be considered medically necessary there must be clear medical records that demonstrate a clear surgical plan that matches the request for surgery.

INDICATIONS

Percutaneous Sacroiliac Joint (SIJ) Fusion

- **Surgical indications (when ALL of the following are present)** [1–5]**:**
  - Chronic sacroiliac joint dysfunction or 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 multimodal non-operative treatment that must include medications and a physical therapy or home exercise program
  - Physical exam demonstrating pain to palpation over the sacral sulcus in the absence of tenderness of similar severity elsewhere (such as provocative maneuvers)
  - Absence of generalized pain behavior
  - Positive pain response to a cluster of 3 provocative tests (such as thigh thrust, compression test, Gaenslen's test, distraction test, Faber test)
  - Use of an FDA-approved transfixation device
  - Diagnostic imaging studies that include **ALL** of the following:
    - Imaging (plain radiographs and a CT or MRI) of the SIJ that excludes the presence of destructive lesions (e.g., tumor, infection)
    - 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 SIJ 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)

Open Sacroiliac Joint (SIJ) Fusion

Open SIJ fusion is limited and reserved for specific clinical scenarios where minimally invasive approaches are not feasible or have failed.

- **Surgical indications (when ANY of the following are present)** [6–8]:
  - Revision surgery for failed previous SIJ fusion
  - Nonunion/instability after traumatic fracture or dislocation
  - Tumor or infection involving the sacrum/SIJ
  - Presence of aberrant anatomy that precludes minimally invasive access

- SIJ is being fused as part of a long construct in the setting of adult spinal deformity

RELATIVE CONTRAINDICATIONS FOR SPINE SURGERY (9,10)

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

- **Medical contraindications to surgery:** Such as osteoporosis; infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition, systemic infection, and elevated blood sugar (11)
- **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. (11,12) 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**. Cessation must be confirmed by a negative cotinine test prior to surgery approval. (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.

CODING AND STANDARDS

Codes

CPT	
Code	**Description**
27278	Arthrodesis, sacroiliac joint, percutaneous, with image guidance, including placement of intra-articular implant(s) (eg, bone allograft[s], synthetic device[s]), without placement of transfixation device
27279	Arthrodesis, sacroiliac joint, percutaneous or minimally invasive (indirect visualization), with image guidance, includes obtaining bone graft when performed, and placement of transfixation device

CPT	
Code	**Description**
27280	Arthrodesis, sacroiliac joint, open, includes obtaining bone graft, including instrumentation, when performed

Applicable Lines of Business

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

SUMMARY OF EVIDENCE

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 [(1)]

- Study Design: This study is a review of scientific evidence for new devices for sacroiliac joint fusion (SIJF). It includes a systematic literature review and database queries.
- Target Population: The study focuses on patients with sacroiliac (SI) joint pathology, which is a significant contributor to lower back pain.
- Key Factors: The review covers trends in diagnosis and treatment of SI joint pathology over the past 10 years, the advent of minimally invasive surgical techniques, and the explosion of new medical devices for SIJF. The study categorizes novel devices and evaluates their clinical trends and current data. It highlights the need for further randomized comparative trials to evaluate different surgical approaches and novel devices.

Biomechanics of a laterally placed sacroiliac joint fusion device supplemental to S2 alar-iliac fixation in a long-segment adult spinal deformity construct: a cadaveric study of stability and strain distribution [(6)]

- Study Design: This is a cadaveric study that evaluates the biomechanics of a laterally placed sacroiliac joint fusion device supplemental to S2 alar-iliac (S2AI) fixation in a long-segment adult spinal deformity construct.
- Target Population: The study uses eight L1–pelvis human cadaveric specimens, including six females and two males with a mean age of 60.5 years.

- Key Factors: The study assesses changes in stability, pedicle screw, and rod strain with extended distal S2AI fixation and supplemental bilateral integration of two sacroiliac joint fusion devices. It finds that long-segment constructs ending with S2AI screws create a more stable construct than those ending with S1 screws, reducing lumbosacral and sacroiliac joint motion and S1 screw-bending moment in flexion. However, these benefits are paired with increased rod strain at the lumbosacral junction.

Minimally Invasive Sacroiliac Joint Fusion vs Conservative Management in Patients With Sacroiliac Joint Dysfunction: A Systematic Review and Meta-Analysis [2]

- Study Design: This is a systematic review and meta-analysis that evaluates the effectiveness of minimally invasive sacroiliac joint fusion (MISJF) compared to conservative management in patients with sacroiliac joint dysfunction.
- Target Population: The review includes studies with a total of 388 patients, with 207 treated conservatively and 181 treated with MISJF.
- Key Factors: The review finds that MISJF is more effective and cost-effective than conservative management in reducing pain and disability in patients with sacroiliac joint dysfunction. The included studies report statistically significant differences in favor of the MISJF groups for pain and disability outcomes. The review also highlights the need for further well-powered, independent research to improve the overall evidence

ANALYSIS OF EVIDENCE

Shared Findings [1,2,6]**:**

- All three studies emphasize the importance of minimally invasive sacroiliac joint fusion (SIJF) techniques in improving patient outcomes.
- They highlight the need for further research and randomized comparative trials to evaluate the effectiveness and safety of different devices and approaches.

Differing Findings:

- Himstead et al. 2021 [1] focuses on the categorization and evaluation of novel devices for SI joint fusion, emphasizing the need for more randomized trials.
- de Andrada Pereira et al. 2022 [6] provides a biomechanical analysis of the stability and strain distribution in long-segment constructs, highlighting the trade-off between stability and increased rod strain.
- Hermans et al. 2022 [2] compares MISJF with conservative management, concluding that MISJF is more effective and cost-effective in reducing pain and disability

POLICY HISTORY

Date	Summary
December 2025	• Added second bullet in the general information section • Added elevated blood sugar as relative contraindication for spine surgery • Added negative cotinine lab test requirement for smokers prior to spine surgery approval • Removed Washington State Regulatory Language • Added technical description to codes • Removed absolute contraindication and background sections • Updated references • Added a Summary of Evidence and Analysis of Evidence
October 2025	• Guideline name was adjusted from Evolent Clinical Guideline 1767 for Percutaneous Sacroiliac Joint Fusion to Evolent Clinical Guideline 1767 for Sacroiliac Joint Fusion • Added indications for open SIJ fusion and absolute contraindications • Removed the exclusion of inflammatory arthropathy in diagnostic imaging studies • Added requirement for an FDA-approved transfixation device • Added CPT codes: 27278, 27280
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

LEGAL AND COMPLIANCE

Guideline Approval

Committee

Reviewed / Approved by Evolent Specialty Services Clinical Guideline Review Committee

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