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Clinical Appropriateness Guidelines

Musculoskeletal

Appropriate Use Criteria: Spine Surgery

Proprietary

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Description and Application of the Guidelines

The Carelon Clinical Appropriateness Guidelines (hereinafter “the Carelon Clinical Appropriateness Guidelines” or the “Guidelines”) are designed to assist providers in making the most appropriate treatment decision for a specific clinical condition for an individual. The Guidelines establish objective and evidence-based criteria for medical necessity determinations, where possible, that can be used in support of the following:

- To establish criteria for when services are medically necessary
- To assist the practitioner as an educational tool
- To encourage standardization of medical practice patterns
- To curtail the performance of inappropriate and/or duplicate services
- To address patient safety concerns
- To enhance the quality of health care
- To promote the most efficient and cost-effective use of services

The Carelon guideline development process complies with applicable accreditation and legal standards, including the requirement that the Guidelines be developed with involvement from appropriate providers with current clinical expertise relevant to the Guidelines under review and be based on the most up-to-date clinical principles and best practices. Resources reviewed include widely used treatment guidelines, randomized controlled trials or prospective cohort studies, and large systematic reviews or meta-analyses. Carelon reviews all of its Guidelines at least annually.

Carelon makes its Guidelines publicly available on its website. Copies of the Guidelines are also available upon oral or written request. Additional details, such as summaries of evidence, a list of the sources of evidence, and an explanation of the rationale that supports the adoption of the Guidelines, are included in each guideline document.

Although the Guidelines are publicly available, Carelon considers the Guidelines to be important, proprietary information of Carelon, which cannot be sold, assigned, leased, licensed, reproduced or distributed without the written consent of Carelon. Use of the Guidelines by any external AI entity without the express written permission of Carelon is prohibited.

Carelon applies objective and evidence-based criteria, and takes individual circumstances and the local delivery system into account when determining the medical appropriateness of health care services. The Carelon Guidelines are just guidelines for the provision of specialty health services. These criteria are designed to guide both providers and reviewers to the most appropriate services based on a patient’s unique circumstances. In all cases, clinical judgment consistent with the standards of good medical practice should be used when applying the Guidelines. Guideline determinations are made based on the information provided at the time of the request. It is expected that medical necessity decisions may change as new 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 and for justifying and demonstrating the existence of medical necessity for the requested service. The Guidelines are not a substitute for the experience and judgment of a physician or other health care professionals. Any clinician seeking to apply or consult the Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment.

The Guidelines do not address coverage, benefit or other plan specific issues. Applicable federal and state coverage mandates take precedence over these clinical guidelines, and in the case of reviews for Medicare Advantage Plans, the Guidelines are only applied where there are not fully established CMS criteria. If requested by a health plan, Carelon will review requests based on health plan medical policy/guidelines in lieu of the Carelon Guidelines. Pharmaceuticals, radiotracers, or medical devices used in any of the diagnostic or therapeutic interventions listed in the Guidelines must be FDA approved or conditionally approved for the intended use. However, use of an FDA-approved or conditionally approved product does not constitute medical necessity or guarantee reimbursement by the respective health plan.

The Guidelines may also be used by the health plan or by Carelon for purposes of provider education, or to review the medical necessity of services by any provider who has been notified of the need for medical necessity review, due to billing practices or claims that are not consistent with other providers in terms of frequency or some other manner.

General Clinical Guideline

Clinical Appropriateness Framework

Critical to any finding of clinical appropriateness under the guidelines for a specific diagnostic or therapeutic intervention are the following elements:

- Prior to any intervention, it is essential that the clinician confirm the diagnosis or establish its pretest likelihood based on a complete evaluation of the patient. This includes a history and physical examination and, where applicable, a review of relevant laboratory studies, diagnostic testing, and response to prior therapeutic intervention.
- The anticipated benefit of the recommended intervention is likely to outweigh any potential harms, including from delay or decreased access to services that may result (net benefit).
- Widely used treatment guidelines and/or current clinical literature and/or standards of medical practice should support that the recommended intervention offers the greatest net benefit among competing alternatives.
- There exists a reasonable likelihood that the intervention will change management and/or lead to an improved outcome for the patient.

Providers may be required to submit clinical documentation in support of a request for services. Such documentation must a) accurately reflect the clinical situation at the time of the requested service, and b) sufficiently document the ordering provider's clinical intent.

If these elements are not established with respect to a given request, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would justify a finding of clinical appropriateness. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account to the extent permitted by law.

Simultaneous Ordering of Multiple Diagnostic or Therapeutic Interventions

Requests for multiple diagnostic or therapeutic interventions at the same time will often require a peer-to-peer conversation to understand the individual circumstances that support the medical necessity of performing all interventions simultaneously. This is based on the fact that appropriateness of additional intervention is often dependent on the outcome of the initial intervention.

Additionally, either of the following may apply:

- Current literature and/or standards of medical practice support that one of the requested diagnostic or therapeutic interventions is more appropriate in the clinical situation presented; or
- One of the diagnostic or therapeutic interventions requested is more likely to improve patient outcomes based on current literature and/or standards of medical practice.

Repeat Diagnostic Intervention

In general, repeated testing of the same anatomic location for the same indication should be limited to evaluation following an intervention, or when there is a change in clinical status such that additional testing is required to determine next steps in management. At times, it may be necessary to repeat a test using different techniques or protocols to clarify a finding or result of the original study.

Repeated testing for the same indication using the same or similar technology may be subject to additional review or require peer-to-peer conversation in the following scenarios:

- Repeated diagnostic testing at the same facility due to technical issues
- Repeated diagnostic testing requested at a different facility due to provider preference or quality concerns

- Repeated diagnostic testing of the same anatomic area based on persistent symptoms with no clinical change, treatment, or intervention since the previous study
- Repeated diagnostic testing of the same anatomic area by different providers for the same member over a short period of time

Repeat Therapeutic Intervention

In general, repeated therapeutic intervention in the same anatomic area is considered appropriate when the prior intervention proved effective or beneficial and the expected duration of relief has lapsed. A repeat intervention requested prior to the expected duration of relief is not appropriate unless it can be confirmed that the prior intervention was never administered. Requests for ongoing services may depend on completion of previously authorized services in situations where a patient's response to authorized services is relevant to a determination of clinical appropriateness.

Cervical Decompression With or Without Fusion

Description and Scope

Cervical spine surgery is commonly performed for cervical radiculopathy or myelopathy. The goal of surgery is adequate decompression of the nerve roots and/or spinal cord and stabilization of the spine.

Cervical decompression may be performed with or without a fusion procedure and broadly divided into anterior, posterior, or combined surgical approach. The choice of procedure depends on several factors, including:

- Location of the compression
- Presence of deformity or instability
- Number of levels involved
- Patient age and surgical fitness

Laminoplasty is a related procedure for achieving decompression without the need for fusion and is frequently used to treat multilevel central stenosis or ossification of the posterior longitudinal ligament (OPLL).

This guideline addresses the following interventions when performed as **elective, non-emergent** procedures and not as part of the care of an acute or traumatic event.

- **Anterior cervical corpectomy and fusion (ACCF)** – for long anterior compression of the spinal cord from spondylosis, large disc extrusions, or ossification of the posterior longitudinal ligament
- **Anterior cervical discectomy/fusion/internal fixation (ACDF)** – decompression of the nerve roots or spinal cord by disc or osteophyte removal, with or without a fusion
- **Posterior cervical foraminotomy** – for nerve root decompression in cases of soft posterolateral disc herniation or bony foraminal stenosis
- **Posterior laminectomy with or without fusion** – for congenital stenosis, multilevel central stenosis from spondylosis, or multiple discontinuous levels where fusion is recommended to prevent kyphotic deformity. Note that a regional kyphosis (greater than 13 degrees) has been associated with unfavorable outcomes following posterior-only surgery
- **Posterior laminoplasty** – osteoplastic enlargement of the spinal canal (for example, by one sided laminectomy and hinge opening of the contralateral side)

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in this section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Conservative management¹ must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
 - Physical therapy rendered by a qualified provider of physical therapy services

- Supervised home treatment program that includes **ALL** the following:
 - Participation in a patient-specific or tailored program
 - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
 - Compliance (documented or by clinician attestation on follow-up evaluation)
- **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
 - Anti-inflammatory medications and analgesics²
 - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants²
 - Epidural corticosteroid injection(s)²
 - Alternative therapies such as acupuncture, chiropractic manipulation, massage therapy, activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

¹ Additional condition or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

² In the absence of contraindications

Clinical reevaluation – In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate. *The requirement for a period of conservative management as a prerequisite to a surgical procedure is waived when there is evidence of progressive nerve or spinal cord compression resulting in a significant neurologic deficit, or when myelopathy, weakness, or bladder disturbance is present.*

Reporting of symptom severity – Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging studies – All imaging must be performed and read by an independent radiologist. If discrepancies should arise in the interpretation of the imaging, the radiologist report will supersede. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

Osteotomy – Spinal osteotomy procedures are reported when a portion or portions of the vertebral segment or segments is (are) cut and removed in preparation for realigning the spine as part of a spinal deformity correction. These procedures may be required for congenital, developmental, and degenerative spinal deformities.

Corpectomy typically reflects a longitudinal resection of the vertebral body from disc space to disc space often resulting in a destabilization of the complex. In the cervical spine, at least 50% of the vertebral body is removed. In the thoracic/lumbar spine, at least 30% of the corpus is removed.

General Recommendations

Tobacco cessation – Adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products for at least 6 weeks prior to surgery is strongly recommended to reduce the risk of pseudoarthrosis.

Diabetes – It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to surgery.

Body mass index (BMI) – It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

When there are patient-specific modifiable comorbidities that may adversely impact patient-reported outcomes or health status, a shared decision-making discussion that covers these modifiable comorbidities is strongly recommended and should be documented.

Cervical Decompression (Laminectomy, Laminotomy, Laminoplasty, Facetectomy, Foraminotomy, Discectomy)

Cervical decompression with or without fusion is considered medically necessary to treat ANY of the following conditions:

Instability

Instability of the cervical spine due to **ANY** of the following conditions, where instability is caused by the condition itself, or when treatment of the condition is anticipated to result in instability (i.e., resection or debridement):

- Tumor of the spine or spinal canal
- Infection (osteomyelitis, discitis, or spinal abscess)
- Fracture or dislocation (may be traumatic or pathologic)
- Nontraumatic atlantoaxial (C1-C2) instability or subluxation (greater than 5 mm as documented by imaging) in **ANY** of the following:
 - Connective tissue disorders such as rheumatoid arthritis
 - Down syndrome
 - Os odontoideum
 - Skeletal dysplasia
- Symptomatic, non-traumatic cervical spondylosis as demonstrated by **EITHER** of the following radiographic findings:
 - Sagittal plane angulation of greater than 11 degrees between adjacent segments
 - Subluxation or translation of greater than 3 mm on static lateral views or dynamic radiographs

Cervical radiculopathy

When imaging studies demonstrate nerve root compression due to herniated disc or spondylotic osteophyte correlating with the distribution of signs and symptoms, and **ANY** of the following criteria apply:

- Objective neurologic findings which correlate with a cervical nerve root impingement
- Progressive or severe neurologic deficits secondary to spinal cord or foraminal compression

- Unremitting radicular pain which has not responded to at least 6 weeks of appropriate conservative management (physical therapy optional)

Spondylotic cervical myelopathy

Spondylotic cervical myelopathy when **BOTH** of the following criteria are met:

- Clinical signs and symptoms of myelopathy which may include loss of dexterity, urinary urgency, new-onset bowel or bladder incontinence, frequent falls, hyperreflexia, Hoffmann sign, increased tone or spasticity, gait abnormality, or pathologic Babinski sign
- Imaging studies which demonstrate cervical cord compression

Ossification of the posterior longitudinal ligament

Ossification of the posterior longitudinal ligament (OPLL), with or without kyphosis, when **BOTH** of the following criteria are met:

- Clinical signs and symptoms of myelopathy which may include loss of dexterity, urinary urgency, new-onset bowel or bladder incontinence, frequent falls, hyperreflexia, Hoffmann sign, increased tone or spasticity, gait abnormality, or pathologic Babinski sign
- Imaging studies which demonstrate cervical cord compression

Cervical synovial cyst

Cervical synovial cyst when **BOTH** of the following criteria are met:

- Radicular pain (with or without demonstrable neurologic deficits) which has not responded to at least 6 weeks of conservative management
- Documentation of a synovial cyst on CT or MRI performed within the past 6 months which correlates with symptoms and exam findings

Degenerative cervical kyphosis

Degenerative cervical kyphosis when **ANY** of the following criteria are met:

- Clinical signs and symptoms of myelopathy which may include loss of dexterity, urinary urgency, new-onset bowel or bladder incontinence, frequent falls, hyperreflexia, Hoffmann sign, increased tone or spasticity, gait abnormality, or pathologic Babinski sign, **AND** imaging studies which demonstrate cervical cord compression
- Debilitating neck pain with documented functional limitations (e.g., NDI >35)
- Clinically significant problems with horizontal gaze, swallowing, or breathing

Pseudoarthrosis

Pseudoarthrosis when **ALL** the following criteria are met:

- Advanced imaging studies highly suggestive of nonunion at a motion segment at which a fusion had been previously attempted. This includes lack of bridging bone and/or dynamic motion demonstrated on flexion-extension radiographs
- At least 6 months have elapsed since the prior procedure, unless there is evidence of hardware breakage or loosening
- The patient experienced significant relief of symptoms following the procedure
- Recurrent symptoms or functional impairment have not responded to at least 6 weeks of conservative management following confirmation of the diagnosis

Implant/Instrumentation failure

Implant/Instrumentation failure demonstrated on standard or advanced imaging showing malposition or other evidence of failure (e.g., subsidence, surrounding radiolucency, dislocation/subluxation, vertebral body fracture, or hardware breakage).

Failed cervical disc arthroplasty

For replacement or revision arthroplasty, see [Cervical Disc Arthroplasty](#).

Cervical decompression and/or fusion is considered medically necessary at the index level after a prior cervical disc arthroplasty when **EITHER of the following criteria are met**:

- Evidence of implant/device failure is demonstrated on standard or advanced imaging showing malposition or other evidence of failure (e.g., subsidence, surrounding radiolucency, dislocation/subluxation, vertebral body fracture, or hardware breakage); **AND** Symptoms can be attributed to implant failure or other implant related mechanical complications
- Clinical symptoms persist or recur in the absence of implant failure; **AND** Criteria for [cervical radiculopathy](#) or [myelopathy](#) are met (as above)

Progressive neck pain or deformity

Progressive neck pain or deformity following prior posterior cervical decompressive laminectomy or laminoplasty

Cordotomy

Biopsy, excision, or evacuation and imaging suggests ANY of the following:

- Tumor or metastatic neoplasm
- Infectious process (for example, epidural abscess)
- Arteriovenous malformation
- Malignant or non-malignant mass

Multilevel spinal stenosis

Cervical laminectomy or laminoplasty is considered medically necessary for treatment of multilevel spinal stenosis of the cervical spine when **ALL** the following criteria are met:

- Clinical signs and symptoms of myelopathy which may include loss of dexterity, urinary urgency, new-onset bowel or bladder incontinence, frequent falls, hyperreflexia, Hoffmann sign, increased tone or spasticity, gait abnormality, or pathologic Babinski sign
- Imaging studies which demonstrate cervical cord compression
- Neutral to lordotic cervical alignment with no greater than 13 degrees of kyphosis

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Isolated neck pain and spinal stenosis without MRI evidence of intrinsic cord compression
- Asymptomatic spinal stenosis without MRI evidence of intrinsic cord compression
- Cervical/Thoracic laminectomy when criteria above are not met

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant*, December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

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0095T	Removal of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure)
0219T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; cervical
0220T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; thoracic
22210	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; cervical
22216	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; each additional vertebral segment (List separately in addition to primary procedure)
22220	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; cervical
22226	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)
22532	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
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, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2
22552	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2, each additional interspace (List separately in addition to code for separate 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
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
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, each additional interspace (List separately in addition to code for primary procedure)

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; each additional interspace (List separately in addition to code for primary procedure)
22830	Exploration of spinal fusion
22840	Posterior non-segmental instrumentation (eg, Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841	Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure)
22843	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure)
22844	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 13 or more vertebral segments (List separately in addition to code for primary procedure)
22845	Anterior instrumentation; 2 to 3 vertebral segments (List separately in addition to code for primary procedure)
22846	Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22847	Anterior instrumentation; 8 or more vertebral segments (List separately in addition to code for primary procedure)
22848	Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum (List separately in addition to code for primary procedure)
22849	Reinsertion of spinal fixation device
22853	Insertion of interbody biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854	Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
22859	Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh, methylmethacrylate) to intervertebral disc space or vertebral body defect without interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
22864	Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical
63001	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; cervical
63003	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; thoracic
63015	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; cervical
63016	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; thoracic
63020	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical
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)
63040	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; cervical
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)
63045	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; cervical
63046	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; thoracic

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)
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 [e.g., wire, suture, mini-plates], when performed)
63055	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; thoracic
63075	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; cervical, single interspace
63076	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; cervical, each additional interspace (List separately in addition to code for primary procedure)
63081	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment
63082	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, each additional segment (List separately in addition to code for primary procedure)
63185	Laminectomy with rhizotomy; 1 or 2 segments
63190	Laminectomy with rhizotomy; more than 2 segments
63191	Laminectomy with section of spinal accessory nerve
63194	Laminectomy with cordotomy, with section of 1 spinothalamic tract, 1 stage; cervical
63196	Laminectomy with cordotomy, with section of both spinothalamic tracts, 1 stage; cervical
63198	Laminectomy with cordotomy with section of both spinothalamic tracts, 2 stages within 14 days; cervical
63250	Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; cervical
63265	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; cervical
63270	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; cervical
63275	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, cervical
63280	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, cervical
63285	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, cervical
63300	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, cervical
63304	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, cervical
63308	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; each additional segment (List separately in addition to codes for single segment)

Cervical Disc Arthroplasty

Description and Scope

Cervical disc arthroplasty, also known as cervical artificial disc replacement, was developed as an alternative to cervical fusion for treatment of cervical radiculopathy due to severe degenerative disc disease.

For the appropriate indications, cervical disc arthroplasty has shown promising results in the available data, suggesting at least equivalence to cervical fusion following adequate decompression.

This guideline addresses cervical disc arthroplasty when performed as an **elective, non-emergent** procedure and not as part of the care of an acute or traumatic event.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Conservative management¹ must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
 - Physical therapy rendered by a qualified provider of physical therapy services
 - Supervised home treatment program that includes **ALL** the following:
 - Participation in a patient-specific or tailored program
 - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
 - Compliance (documented or by clinician attestation on follow-up evaluation)
 - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
 - Anti-inflammatory medications and analgesics²
 - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants²
 - Epidural corticosteroid injection(s)²
 - Alternative therapies such as acupuncture, chiropractic manipulation, massage therapy, activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

¹ Additional condition or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

² In the absence of contraindications

Clinical reevaluation – In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate. *The requirement for a period of conservative management as a prerequisite to a surgical procedure is waived when there is evidence of progressive nerve or spinal cord compression resulting in a significant neurologic deficit, or when myelopathy, weakness, or bladder disturbance is present.*

Reporting of symptom severity – Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging studies – All imaging must be performed and read by an independent radiologist. If discrepancies should arise in the interpretation of the imaging, the radiologist report will supersede. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

General Recommendations

Tobacco cessation – Adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products for at least 6 weeks prior to surgery is strongly recommended to reduce the risk of pseudoarthrosis.

Diabetes – It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to surgery.

Body mass index (BMI) – It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

When there are patient-specific modifiable comorbidities that may adversely impact patient-reported outcomes or health status, a shared decision-making discussion that covers these modifiable comorbidities is strongly recommended and should be documented.

Cervical Disc Arthroplasty

Cervical disc arthroplasty is considered medically necessary for the following indications:

Radiculopathy

Radiculopathy related to nerve root compression caused by one or two-level degenerative disease between C3-C4 and C6-C7, with or without neck pain, when **ALL** the following criteria are met:

- Objective neurologic findings which correlate with a cervical nerve root impingement, progressive or severe neurologic deficits secondary to spinal cord or foraminal compression, and/or unremitting radicular pain which has not responded to at least 6 weeks of appropriate conservative management (physical therapy optional)

- Imaging studies demonstrate nerve root compression due to herniated disc or spondylotic osteophyte correlating with the distribution of signs and symptoms
- The individual is skeletally mature as documented by growth plate closure
- An FDA-approved cervical artificial intervertebral device is used in accordance with FDA labeling and will be implanted using an anterior approach

Myelopathy or myeloradiculopathy

Myelopathy or myeloradiculopathy related to central spinal stenosis caused by one or two-level degenerative disease between C3-C4 and C6-C7, with or without neck pain, when **ALL** the following criteria are met:

- Clinical signs and symptoms of myelopathy which may include loss of dexterity, urinary urgency, new-onset bowel or bladder incontinence, frequent falls, hyperreflexia, Hoffmann sign, increased tone or spasticity, gait abnormality, or pathologic Babinski sign
- Imaging studies demonstrate cervical cord compression due to herniated nucleus pulposus or osteophyte formation
- The individual is skeletally mature as documented by growth plate closure
- An FDA-approved cervical artificial intervertebral device is used in accordance with FDA labeling and will be implanted using an anterior approach

Failed cervical disc arthroplasty

For fusion, see [Cervical Decompression](#).

Revision or replacement of a cervical artificial disc at the index level is considered medically necessary when **EITHER of the following criteria are met:**

- Evidence of implant/device failure is demonstrated on standard or advanced imaging showing malposition or other evidence of failure (e.g., subsidence, surrounding radiolucency, dislocation/subluxation, vertebral body fracture, or hardware breakage); **AND** Symptoms can be attributed to implant failure or other implant related mechanical complications
- Clinical symptoms persist or recur in the absence of implant failure; **AND** Criteria for cervical [radiculopathy](#) or [myelopathy](#) are met (as above)

Two-level Cervical Disc Arthroplasty

Two-level arthroplasty (simultaneous or subsequent to one previously performed)

Two-level cervical disc arthroplasty is considered medically necessary when performed at two (2) contiguous levels simultaneously or at a second contiguous level to a previously performed arthroplasty when the criteria are met for each disc level, and the device being utilized is FDA-approved for two (2) levels (e.g., Mobi-C®, Prestige LP™, and Simplify® Disc).

Contraindications

- Active systemic infection or infection localized to the site of implantation
- Osteoporosis defined as dual energy x-ray absorptiometry (DEXA) bone density measured T-score of negative 2.5 or lower
- Marked cervical instability on neutral resting lateral or flexion/extension radiographs with greater than or equal to 3 mm translation or greater than 11 degrees of angular difference to either adjacent level
- Clinically compromised vertebral bodies at the affected level due to current or past trauma, anatomic deformity, or cervical spine malignancy

- Focal kyphosis at the level of planned arthroplasty
- Moderate or severe spondylosis at the level to be treated, characterized by bridging osteophytes, loss of greater than 50% of normal disc height, or severely limited range of motion (i.e., less than 2 degrees) at the affected level
- Severe facet joint arthropathy
- Ossification of the posterior longitudinal ligament (OPLL)
- Sensitivity or allergy to implant materials

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Cervical total disc arthroplasty at more than two (2) levels or at two (2) non-contiguous levels
- Cervical total disc arthroplasty in an individual with a previous fusion at another cervical level
- Hybrid constructs in a single procedure involving cervical fusion with cervical total disc arthroplasty
- Cervical disc arthroplasty at levels other than C3-C4 to C6-C7

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is "close to" the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant*, December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

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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)
22856	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophylectomy for nerve root or spinal cord decompression and microdissection); single interspace, cervical
22858	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophylectomy for nerve root or spinal cord decompression and microdissection); second level, cervical (List separately in addition to code for primary procedure)
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

Lumbar Disc Arthroplasty

Description and Scope

Lumbar disc arthroplasty, also known as lumbar artificial disc surgery or total disc arthroplasty, was developed as an alternative to lumbar fusion for treatment of back pain due to severe degenerative disc disease.

The procedure is similar to lumbar interbody fusion in that an anterior approach is required. Unlike fusion, motion at the level of disc replacement is maintained, which would seem to be advantageous in terms of preventing secondary degenerative changes and preserving spine mechanics.

This guideline addresses lumbar disc arthroplasty when performed as an **elective, non-emergent** procedure and not as part of the care of an acute or traumatic event.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Conservative management¹ must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
 - Physical therapy rendered by a qualified provider of physical therapy services
 - Supervised home treatment program that includes **ALL** the following:
 - Participation in a patient-specific or tailored program
 - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
 - Compliance (documented or by clinician attestation on follow-up evaluation)
 - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
 - Anti-inflammatory medications and analgesics²
 - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants²
 - Epidural corticosteroid injection(s)²
 - Alternative therapies such as acupuncture, chiropractic manipulation, massage therapy, activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

¹ Additional condition or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

² In the absence of contraindications

Clinical reevaluation – In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate. *The requirement for a period of conservative management as a prerequisite to a surgical procedure is waived when there is evidence of progressive nerve or spinal cord compression resulting in a significant neurologic deficit, or when cauda equina syndrome or conus medullaris syndrome is present, and urgent intervention is indicated.*

Reporting of symptom severity – Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging studies – All imaging must be performed and read by an independent radiologist. If discrepancies should arise in the interpretation of the imaging, the radiologist report will supersede. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

General Recommendations

Tobacco cessation – Adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products for at least 6 weeks prior to surgery is strongly recommended to reduce the risk of pseudoarthrosis.

Diabetes – It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to surgery.

Body mass index (BMI) – It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

When there are patient-specific modifiable comorbidities that may adversely impact patient-reported outcomes or health status, a shared decision-making discussion that covers these modifiable comorbidities is strongly recommended and should be documented.

Lumbar Disc Arthroplasty

Lumbar disc arthroplasty is considered medically necessary when ALL the following criteria are met:

- Age between 18 and 60 years
- Primary complaint is axial pain determined to be of discogenic origin
- Symptoms present for at least 6 months, which have not responded to a multifaceted program of conservative management over that period of time

- Presence of single or dual (when using 2-level FDA-approved implant) level, advanced disc disease at L3-L4, L4-L5, or L5-S1, as documented by MRI and plain radiographs demonstrating moderate to severe degeneration of the disc with Modic changes (peridiscal bone signal above and below the disc space in question)
- At least moderate pain and disability ideally documented by a visual analog scale (VAS) pain score of 40 or higher (out of 100, or 4 out of 10) or with functional limitation of one or more IADL
- Any underlying psychiatric disorder, such as depression, should be diagnosed and the management optimized prior to surgical intervention
- Absence of symptomatic degenerative disc disease at all other lumbar levels, as documented by normal radiographs, and MRI showing no abnormalities or mild degenerative changes
- Use of an FDA-approved implant for the intended level

Contraindications

- Significant facet arthropathy at the index level
- Disease above L3-L4 or L4-L5 depending on FDA-approved levels
- Bony lumbar spinal stenosis
- Pars defect
- Prior fusion at intended level
- Poorly managed psychiatric disorder
- Chronic radiculopathy (unremitting pain with predominance of leg pain symptoms greater than back pain symptoms persisting a minimum of one year)
- Clinically compromised vertebral bodies at affected level due to current or past trauma
- Lytic spondylolisthesis or degenerative spondylolisthesis of grade greater than 1
- Allergy or sensitivity to implant materials (cobalt, chromium, molybdenum, polyethylene, titanium)
- Presence of infection or tumor
- Osteopenia or osteoporosis (defined as DEXA bone density measured T-score less than or equal to -1.0)

Exclusions

Indications other than those addressed in this guideline are considered not medically necessary including, but not limited to, the following:

- Disc replacement at more than one spinal level (unless FDA approved for more than one level, e.g., prodisc® L Total Disc Replacement)
- Prior lumbar fusion
- Isolated radicular compression syndromes, especially due to disc herniation
- Hybrid lumbar total disc arthroplasty/lumbar fusion (lumbar total disc arthroplasty at one level at the same time as lumbar fusion at a different level)
- Arthroplasty using devices other than those which are FDA approved, or use of an FDA-approved device in a manner which does not meet FDA requirements

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

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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)
22857	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression); single interspace, lumbar
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)
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 Discectomy, Foraminotomy, and Laminotomy

Description and Scope

Lumbar decompression procedures, performed alone or in combination with spinal fusion, are designed to relieve symptoms of neural compression.

Lumbar discectomy involves removal of the disc, in whole or part. Foraminotomy and laminotomy involve removal of a portion of the lamina (bony arch) on the dorsal surface of a vertebra. These procedures are typically performed to access the disc space and relieve pressure on the nerve roots and spinal cord.

Endoscopic decompression is an alternative to an open procedure. The procedure involves endoscopic visualization and removal of lumbar disc herniation via transforaminal or interlaminar approach and endoscopic decompression of lumbar stenosis. It is distinguished from open or other forms of minimally invasive decompression in that the operative field is not visualized with the naked eye but rather through an endoscope projected onto a monitor.

This guideline addresses lumbar discectomy, foraminotomy, and laminotomy when performed as **elective, non-emergent** procedures and not as part of the care of an acute or traumatic event.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Conservative management¹ must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
 - Physical therapy rendered by a qualified provider of physical therapy services
 - Supervised home treatment program that includes **ALL** the following:
 - Participation in a patient-specific or tailored program
 - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
 - Compliance (documented or by clinician attestation on follow-up evaluation)
 - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment** requirement includes **ANY** of the following:
 - Anti-inflammatory medications and analgesics²
 - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants²
 - Epidural corticosteroid injection(s)²

- Alternative therapies such as acupuncture, chiropractic manipulation, massage therapy, activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

¹ Additional condition or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

² In the absence of contraindications

Clinical reevaluation – In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate. *The requirement for a period of conservative management as a prerequisite to a surgical procedure is waived when there is evidence of progressive nerve or spinal cord compression resulting in a significant neurologic deficit, or when cauda equina syndrome or conus medullaris syndrome is present, and urgent intervention is indicated.*

Reporting of symptom severity – Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging studies – All imaging must be performed and read by an independent radiologist. If discrepancies should arise in the interpretation of the imaging, the radiologist report will supersede. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

General Recommendations

Tobacco cessation – Adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products for at least 6 weeks prior to surgery is strongly recommended to reduce the risk of pseudoarthrosis.

Diabetes – It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to surgery.

Body mass index (BMI) – It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

When there are patient-specific modifiable comorbidities that may adversely impact patient-reported outcomes or health status, a shared decision-making discussion that covers these modifiable comorbidities is strongly recommended and should be documented.

Lumbar Discectomy, Foraminotomy, and Laminotomy

Lumbar discectomy, foraminotomy, and laminotomy are considered medically necessary to treat the following conditions:

Acute neurologic deterioration

Acute neurologic deterioration including signs and symptoms of cauda equina syndrome, or rapid progression of neurologic deficits confirmed by imaging, regardless of underlying pathology.

Lumbar disc herniation

Also see [Lumbar disc herniation](#) in the *Lumbar Laminectomy guideline*.

Initial disc herniation when **ALL** the following criteria are met:

- **EITHER** of the following:
 - Radicular pain (radiculitis/radiculopathy) with significant functional impairment or physical exam findings that correlate with radiculopathy or nerve root compression such as:
 - Nerve root tension sign
 - Dermatomal sensory loss
 - Motor strength deficit (myotomal)
 - Abnormal reflex changes
 - Progressive or severe neurologic deficits secondary to cauda equina, lateral recess or foraminal compression (conservative management requirement waived)
- Documentation of nerve root compression or thecal sac impingement on MRI or other advanced imaging performed within the past 9 months that correlates with clinical findings
- All other reasonable sources of pain have been ruled out
- Failure of at least 6 weeks of conservative management (Physical therapy optional)

Recurrent disc herniation when **BOTH** criteria are met:

- Requirements for initial herniation
- Failure of at least 6 weeks of conservative management

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Axial low back pain without a neural component
- Disc bulge or herniation without nerve compression
- Asymptomatic disc herniation
- Spinal stenosis that is asymptomatic, or with symptoms limited to low back pain
- Use of an annular closure device (e.g., bone anchored annular closure device)

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Codes

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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; single interspace, lumbar
63032	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; with repair of annular defect by implantation of bone-anchored annular closure device, including all imaging guidance, 1 interspace, lumbar (List separately in addition to code for primary procedure)
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)
63042	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; lumbar
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)
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)
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)
C9757	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and excision of herniated intervertebral disc, and repair of annular defect with implantation of bone anchored annular closure device, including annular defect measurement, alignment and sizing assessment, and image guidance; 1 interspace, lumbar

Lumbar Fusion and Treatment of Spinal Deformity (including Scoliosis and Kyphosis)

Description and Scope

Lumbar fusion is one of the most common spinal surgical procedures and a well-established treatment for spinal instability resulting from a variety of conditions. Most techniques utilize a bone graft to join two or more adjacent vertebral bodies into a single unit, which permanently immobilizes the involved section of the spine.

Techniques to achieve lumbar spinal fusion are numerous and include different surgical approaches (anterior, posterior, lateral) to the spine, different areas of fusion (intervertebral body [interbody], transverse process [posterolateral]), different fusion materials (bone graft and/or metal instrumentation), and a variety of ancillary techniques to augment fusion.

Lumbar fusion has been widely used to treat back pain associated with degenerative disc disease and spinal stenosis in the absence of instability. A large number of fusion operations are also performed for nonspecific low back pain which has not responded to standard treatment. Evidence to support the efficacy of fusion in treating these common conditions has been inconsistent, and many experts agree that the procedure is overused.

This guideline addresses lumbar and thoracolumbar fusion when performed as **elective, non-emergent** procedures and not as part of the care of an acute or traumatic event such as fracture (excluding periprosthetic fracture).

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

Discography results will not be used as a determining factor of medical necessity for any requested procedures.

When fusion at more than one level is planned, the criteria below apply to each level of lumbar fusion being considered. These criteria also apply to lumbar fusion of a level adjacent to a prior lumbar fusion.

The standard of care for lumbar spinal fusion is a single session including multiple approach techniques. Multi-session fusions occur on different days or require an additional anesthesia session and are not typically performed unless for treatment of severe scoliosis or other spinal deformities.

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Conservative management¹ must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
 - Physical therapy rendered by a qualified provider of physical therapy services
 - Supervised home treatment program that includes **ALL** the following:
 - Participation in a patient-specific or tailored program

- Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
- Compliance (documented or by clinician attestation on follow-up evaluation)
- **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment requirement** includes **ANY** of the following:
 - Anti-inflammatory medications and analgesics²
 - Adjunctive medications such as nerve membrane stabilizers or muscle relaxants²
 - Epidural corticosteroid injection(s)²
 - Alternative therapies such as acupuncture, chiropractic manipulation, massage therapy, activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

¹ Additional condition or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

² In the absence of contraindications

Clinical reevaluation – In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate. *The requirement for a period of conservative management as a prerequisite to a surgical procedure is waived when there is evidence of progressive nerve or spinal cord compression resulting in a significant neurologic deficit, or when cauda equina syndrome or conus medullaris syndrome is present, and urgent intervention is indicated.*

Reporting of symptom severity – Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging studies – All imaging must be performed and read by an independent radiologist. If discrepancies should arise in the interpretation of the imaging, the radiologist report will supersede. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

Osteotomy – Spinal osteotomy procedures are reported when a portion or portions of the vertebral segment or segments is (are) cut and removed in preparation for realigning the spine as part of a spinal deformity correction. These procedures may be required for congenital, developmental, and degenerative spinal deformities.

Corpectomy typically reflects a longitudinal resection of the vertebral body from disc space to disc space often resulting in a destabilization of the complex. In the cervical spine, at least 50% of the vertebral body is removed. In the thoracic/lumbar spine, at least 30% of the corpus is removed.

General Recommendations

Tobacco cessation – Adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products for at least 6 weeks prior to surgery is strongly recommended to reduce the risk of pseudoarthrosis.

Diabetes – It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to surgery.

Body mass index (BMI) – It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

When there are patient-specific modifiable comorbidities that may adversely impact patient-reported outcomes or health status, a shared decision-making discussion that covers these modifiable comorbidities is strongly recommended and should be documented.

Lumbar Fusion

Lumbar fusion with or without decompression is considered medically necessary to treat ANY of the following conditions:

Failed lumbar disc arthroplasty

Implant failure demonstrated on standard or advanced imaging showing malposition or other evidence of failure (e.g., subsidence, surrounding radiolucency, dislocation/subluxation, vertebral body fracture)

In the absence of imaging demonstrating implant failure, **ALL** the following criteria are met:

- At least 6 months have elapsed since the most recent disc implant procedure, following which the patient experienced significant relief of symptoms
- Symptoms of radicular pain, neurogenic claudication, or worsening refractory back pain correlate with imaging findings of neural compression
- Impairment or loss of function has not responded to a minimum of 12 weeks of conservative management since the previous surgery

Flat back syndrome

Flat back syndrome (iatrogenic or degenerative) when **ALL** the following criteria are met:

- Presence of intractable back pain, neurogenic claudication or neurological deficit
- Failure of 6 months of conservative management
- Decompensated sagittal imbalance demonstrated on standing radiography, defined as mismatch between pelvic incidence (PI) and lumbar lordosis (LL) of more than 10 degrees and sagittal vertical axis (SVA) greater than 5 cm

Implant/Instrumentation failure

Implant/Instrumentation failure demonstrated on standard or advanced imaging showing malposition or other evidence of failure (e.g., subsidence, surrounding radiolucency, dislocation/subluxation, vertebral body fracture, or hardware breakage)

Instability

Instability due to **ANY** of the following conditions, where instability is caused by the condition itself, or when treatment of the condition is anticipated to result in instability (i.e., resection or debridement)

- Tumor of the spine or spinal canal
- Infection (osteomyelitis, discitis, or spinal abscess)

- Fracture or dislocation; may be traumatic or pathologic
- Degenerative spondylolisthesis with flexion and extension lateral spine x-rays* showing a fixed anterolisthesis of greater than or equal to 3 mm, or movement of greater than or equal to 3 mm and symptoms or functional impairment have not responded to at least 6 weeks of conservative management.

**The medical record must document the surgeon's interpretation of office-based flexion-extension lateral spine x-rays to evaluate for the presence or absence of anterior-posterior lumbar instability. Verbal attestation will not be sufficient to meet the requirements.*

Isthmic spondylolisthesis

Isthmic spondylolisthesis when **ALL** the following conditions are met:

- Congenital (Wiltse I) or acquired pars defect (Wiltse II) with flexion and extension lateral spine x-rays* showing a fixed anterolisthesis of greater than or equal to 3 mm, or movement of greater than or equal to 3 mm) documented on x-ray
- Failure of at least 3 months of conservative management
- **ANY** of the following:
 - Persistent back pain (with or without neurogenic symptoms) with functional impairment
 - Listhesis greater than 50% in children, 75% in mature adolescents or progressed by more than 30%
 - Progressive postural deformity or gait abnormality
 - Persistent functional impairment
 - Neurological symptoms

**The medical record must document the surgeon's interpretation of office-based flexion-extension lateral spine x-rays to evaluate for the presence or absence of anterior-posterior lumbar instability. Verbal attestation will not be sufficient to meet the requirements.*

Lumbar disc herniation

Recurrent, same level, disc herniation when **ALL** the following are demonstrated:

- At least 3 months have elapsed since the prior procedure
- The patient experienced significant relief of symptoms following the procedure
- Recurrent symptoms or functional impairment have not responded to at least 12 weeks of conservative management
- Neural compression correlating with the clinical presentation and instability is demonstrated on imaging studies

Note: Fusion for same-level disc herniation without instability may be considered following two (2) prior discectomies at that level.

Lumbar synovial cyst

Lumbar synovial cyst when **BOTH** of the following criteria are met:

- Radicular pain (with or without demonstrable neurologic deficits) or neurogenic claudication which has not responded to at least 6 weeks of conservative management
- Documentation of a synovial cyst on CT or MRI performed within the past 6 months which correlates with symptoms and exam findings

Pseudoarthrosis

Pseudoarthrosis when **ALL** the following criteria are met:

- Advanced imaging studies highly suggestive of nonunion at a motion segment at which a fusion had been previously attempted
- At least 6 months have elapsed since the prior procedure
- The patient experienced significant relief of symptoms following the procedure
- Recurrent symptoms or functional impairment have not responded to at least 12 weeks of conservative management following confirmation of the diagnosis

Scheuermann's kyphosis

Scheuermann's kyphosis (SK) when **ALL** the following criteria are met:

- Diagnosis established by radiography or advanced imaging
 - Dorsal kyphosis with wedging of greater than 5 degrees of 3 successive vertebrae, with or without endplate irregularities and Schmorl's nodes
- Six (6) months of initial conservative management has failed to improve symptoms
- Thoracic kyphosis is greater than 60 degrees or thoracolumbar kyphosis is greater than 20 degrees
- **EITHER** of the following clinical considerations:
 - Intractable pain and/or loss of function assessed with a validated patient centered outcome measure
 - Deformity that affects quality of life

Scoliosis

Progressive adolescent idiopathic scoliosis when **EITHER** of the following is present:

- Skeletally immature: Cobb angle greater than 40 degrees (Thoracic, Thoracolumbar, Lumbar)
- Skeletally mature: Cobb angle greater than 50 degrees (Thoracic, Thoracolumbar, Lumbar)

Juvenile, neuromuscular, congenital scoliosis when **EITHER** of the following is present:

- Progressive deformity (e.g., greater than 10 degrees of change) that leads to sagittal or frontal plane imbalance
- Neurologic compromise

Severe degenerative scoliosis with a minimum Cobb angle of 30 degrees, or sagittal vertical axis greater than 5 cm, and **EITHER** of the following:

- Documented progression of deformity with persistent axial (non-radiating) pain and functional impairment, unresponsive to at least 3 months of conservative management
- Persistent and significant neurogenic symptoms (claudication or radicular pain) with functional impairment, unresponsive to at least 3 months of conservative management

Spinal stenosis

Lumbar fusion is considered medically necessary as an adjunct to decompression for treatment of spinal stenosis (central or foraminal) when **ANY of the following** (1-4) are present **AND ALL 3 additional criteria** are met:

1. Instability (anterolisthesis) is demonstrated on imaging studies*, or anticipated due to **EITHER** of the following:
 - a. Facet joint excision greater than 50% bilaterally or 75% unilaterally at the level fused

- b. Resection of the pars interarticularis at the level fused
2. **Indirect decompression is planned with an anterior approach**** and provided the procedure is not being done solely for degenerative disc disease (discogenic or axial low back pain)
 3. Adjacent-level stenosis, e.g., stenosis that has developed above or below a previous fusion
 4. Recurrent stenosis, e.g., stenosis that has developed at a level previously operated

Additional criteria (ALL are required)

1. Neurogenic claudication or radicular pain with significant functional impairment
2. Failure to respond to at least 6 weeks of conservative management
3. Documentation of central/lateral recess/or foraminal stenosis on MRI, CT, or CT myelography performed within the past 12 months

**Instability may be demonstrated by flexion and extension lateral spine x-rays showing a fixed anterolisthesis of greater than or equal to 3 mm, or movement of greater than or equal to 3 mm. The medical record must document the surgeon's interpretation of office-based flexion-extension lateral spine x-rays to evaluate for the presence or absence of anterior-posterior lumbar instability. Verbal attestation will not be sufficient to meet the requirements.*

***The clinical evidence suggests anterior interbody fusion may be effective for indirect decompression of symptomatic foraminal stenosis. The efficacy of indirect decompression for lateral recess or severe central stenosis is uncertain. The presence of severe facet disease and hypertrophy, immobile facets, presence of osteophytes in the lateral recesses or foramen, calcified discs, and osteophytes arising from the posterior endplates are relative contraindications to an indirect decompression procedure. Proper patient selection is paramount for success. Despite careful patient selection a second stage posterior decompression may be medically necessary if complete relief is not obtained within 24-48 hours of the initial first stage procedure.*

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Isolated axial low back pain, with or without imaging findings of degenerative disc disease, annular tears, disc bulges, protrusion, extrusion, or sequestration
- Chronic nonspecific low back pain
- Facet joint syndrome
- Degenerative lumbar spondylosis without stenosis or spondylolisthesis

Staged, multi-session* spinal fusions are considered **not medically necessary** for fusion involving fewer than three (3) levels, unless performed for treatment of severe scoliosis or other spinal deformities.

**Multi-session is defined as procedures occurring on different days or requiring an additional anesthesia session.*

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant*, December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

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0164T	Removal of total disc arthroplasty, (artificial disc), anterior approach, each additional interspace, lumbar (List separately in addition to code for primary procedure)
0221T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; lumbar
0222T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; each additional vertebral segment
22206	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., pedicle/vertebral body subtraction); thoracic
22207	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., pedicle/vertebral body subtraction); lumbar
22208	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (e.g., pedicle/vertebral body subtraction); each additional vertebral segment (List separately in addition to code for primary procedure)
22212	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; thoracic
22214	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; lumbar
22216	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; each additional vertebral segment (List separately in addition to primary procedure)
22222	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; thoracic
22224	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; lumbar
22226	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; each additional vertebral segment (List separately in addition to code for primary procedure)
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)
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)
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)
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, 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; each additional interspace (List separately in addition to code for primary procedure)
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
22818	Kyphectomy, circumferential exposure of spine and resection of vertebral segment(s) (including body and posterior elements); single or 2 segments
22819	Kyphectomy, circumferential exposure of spine and resection of vertebral segment(s) (including body and posterior elements); 3 or more segments
22830	Exploration of spinal fusion
22840	Posterior non-segmental instrumentation (eg, Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841	Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure)
22843	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure)
22844	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 13 or more vertebral segments (List separately in addition to code for primary procedure)
22845	Anterior instrumentation; 2 to 3 vertebral segments (List separately in addition to code for primary procedure)
22846	Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22847	Anterior instrumentation; 8 or more vertebral segments (List separately in addition to code for primary procedure)
22848	Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum (List separately in addition to code for primary procedure)
22849	Reinsertion of spinal fixation device

22853	Insertion of interbody biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854	Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
22859	Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh, methylmethacrylate) to intervertebral disc space or vertebral body defect without interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
22865	Removal of total disc arthroplasty (artificial disc), anterior approach, 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)
63085	Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, single segment
63086	Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, each additional segment (List separately in addition to code for primary procedure)
63087	Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; single segment
63088	Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; each additional segment (List separately in addition to code for primary procedure)
63090	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; single segment
63091	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; each additional segment (List separately in addition to code for primary procedure)
63101	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); thoracic, single segment
63102	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); lumbar, single segment
63103	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); thoracic or lumbar, each additional segment (List separately in addition to code for primary procedure)
63301	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by transthoracic approach
63302	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by thoracolumbar approach
63303	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, lumbar or sacral by transperitoneal or retroperitoneal approach
63305	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by transthoracic approach
63306	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by thoracolumbar approach
63307	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, lumbar or sacral by transperitoneal or retroperitoneal approach

63308	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; each additional segment (List separately in addition to codes for single segment)
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Lumbar Laminectomy

Description and Scope

Lumbar decompression procedures, performed alone or in combination with spinal fusion, are designed to relieve symptoms of neural compression. Laminectomy is the most widely used and involves removal of a portion of the bony arch, or lamina, on the dorsal surface of a vertebra. Removal of the lamina on only one side of the bone is referred to as a hemilaminectomy. The most common indication for laminectomy is spinal stenosis, a chronic narrowing of the spinal canal due to degenerative arthritis and disc degeneration.

In addition to spinal fusion, it is not uncommon for a laminectomy to be performed in combination with other decompression procedures, including removal of the intervertebral disc (discectomy).

Endoscopic decompression is an alternative to an open procedure. The procedure involves endoscopic visualization and removal of lumbar disc herniation via transforaminal or interlaminar approach and endoscopic decompression of lumbar stenosis. It is distinguished from open or other forms of minimally invasive decompression in that the operative field is not visualized with the naked eye but rather through an endoscope projected onto a monitor.

This guideline addresses lumbar laminectomy when performed as an **elective, non-emergent** procedure and not as part of the care of an acute or traumatic event.

Clinical Indications

The following general requirements apply to all indications except where they differ from the specific requirements. The specific requirements take precedence over any stated general requirement.

General Information

The terms in the section provide operational definitions when they are referenced as requirements in the guideline.

Documentation supporting medical necessity and a clearly stated plan of care should be submitted at the time of the request and must include the following components:

Conservative management¹ must include a combination of strategies to reduce inflammation, alleviate pain, and correct underlying dysfunction, including physical therapy **AND** at least **ONE** complementary conservative treatment strategy.

- **Physical therapy requirement** includes **ANY** of the following:
 - Physical therapy rendered by a qualified provider of physical therapy services
 - Supervised home treatment program that includes **ALL** the following:
 - Participation in a patient-specific or tailored program
 - Initial active instruction by MD/DO/PT with redemonstration of patient ability to perform exercises
 - Compliance (documented or by clinician attestation on follow-up evaluation)
 - **Exception to the physical therapy requirement** in unusual circumstances (for instance, intractable pain so severe that physical therapy is not possible) when clearly documented in the medical record
- **Complementary conservative treatment** requirement includes **ANY** of the following:
 - Anti-inflammatory medications and analgesics²

- Adjunctive medications such as nerve membrane stabilizers or muscle relaxants²
- Epidural corticosteroid injection(s)²
- Alternative therapies such as acupuncture, chiropractic manipulation, massage therapy, activity modification, and/or a trial period of rest (e.g., from the aggravating/contributing factors), where applicable

¹ Additional condition or procedure-specific requirements may apply and can be found in the respective sections of the guideline.

² In the absence of contraindications

Clinical reevaluation – In most cases, reevaluation should include a physical examination. Direct contact by other methods, such as telephone communication or electronic messaging, may substitute for in-person evaluation when circumstances preclude an office visit. Clinical reevaluation must be done in reasonable proximity to the anticipated date of service such that the patient's condition would be unlikely to change by the date of service.

Failure of conservative management requires **ALL** the following:

- Patient has completed a full course of conservative management (as defined above) for the current episode of care
- Worsening of or no significant improvement in signs and/or symptoms upon clinical reevaluation
- More invasive forms of therapy are being considered

Documentation of compliance with a plan of therapy that includes elements from these areas is required where conservative management is appropriate. *The requirement for a period of conservative management as a prerequisite to a surgical procedure is waived when there is evidence of progressive nerve or spinal cord compression resulting in a significant neurologic deficit, or when cauda equina syndrome or conus medullaris syndrome is present, and urgent intervention is indicated.*

Reporting of symptom severity – Severity of pain and its associated impact on activities of daily living (ADLs) and instrumental ADLs (IADLs) are key factors in determining the need for intervention. For purposes of this guideline, significant pain and functional impairment refer to pain rated at least 3 out of 10 in intensity and associated with inability to perform at least two (2) ADLs and/or IADLs.

Imaging studies – All imaging must be performed and read by an independent radiologist. If discrepancies should arise in the interpretation of the imaging, the radiologist report will supersede. The results of all imaging studies should correlate with the clinical findings in support of the requested procedure.

General Recommendations

Tobacco cessation – Adherence to a tobacco cessation program resulting in abstinence from tobacco and nicotine products for at least 6 weeks prior to surgery is strongly recommended to reduce the risk of pseudoarthrosis.

Diabetes – It is strongly recommended that a patient with a history of diabetes maintain a hemoglobin A1C of 8% or less prior to surgery.

Body mass index (BMI) – It is strongly recommended that a patient with a BMI equal to or greater than 40 attempt weight reduction prior to surgery.

When there are patient-specific modifiable comorbidities that may adversely impact patient-reported outcomes or health status, a shared decision-making discussion that covers these modifiable comorbidities is strongly recommended and should be documented.

Lumbar Laminectomy

Acute neurologic deterioration

Laminectomy is considered medically necessary for acute neurologic deterioration including signs and symptoms of cauda equina or conus medullaris syndrome, or rapid progression of neurologic deficits confirmed by imaging, regardless of underlying pathology.

Lumbar disc herniation

Also see [Lumbar disc herniation](#) in the *Lumbar Discectomy, Foraminotomy, and Laminotomy guideline*.

Laminectomy is considered medically necessary for lumbar disc herniation when **ALL** the following criteria are met:

- Radicular pain (radiculitis/radiculopathy) with significant functional impairment and/or physical exam findings that correlate with radiculopathy or nerve root compression such as:
 - Nerve root tension sign
 - Dermatomal sensory loss
 - Motor strength deficit (myotomal)
 - Abnormal reflex changes
- Documentation of a central disc herniation in the spinal canal causing bilateral nerve root compression or thecal sac impingement on MRI or other advanced imaging performed within the past 9 months and that correlates with clinical findings
- Laminotomy increases the relative risk of iatrogenic neurological deficit
- All other reasonable sources of pain have been ruled out
- Failure of at least 6 weeks of conservative management

Lumbar spinal stenosis (with or without spondylolisthesis)

Laminectomy is considered medically necessary when **ALL** the following criteria are met:

- Neurogenic claudication (symptoms aggravated by standing/walking and/or alleviated by sitting/forward flexion) or radicular pain (VAS at least 4) with significant functional impairment
- Failure to respond to at least 6 weeks of conservative management
- Documentation of central/lateral recess/or foraminal stenosis on MRI, CT, or CT myelography performed within the past 12 months

Lumbar synovial cyst

Lumbar synovial cyst removal is considered medically necessary when **ALL** the following criteria are met:

- Radicular pain (with or without demonstrable neurologic deficits) or neurogenic claudication which has not responded to at least 6 weeks of conservative management
- Documentation of a synovial cyst on CT or MRI performed within the past 6 months which correlates with symptoms and exam findings

Dorsal rhizotomy

Dorsal rhizotomy is considered medically necessary as a treatment for spasticity (for example, cerebral palsy).

Tethered cord syndrome

A. Primary tethered cord syndrome (TCS) refers to a collection of motor and sensory signs and symptoms associated with a disorder affecting the conus medullaris, typically caused by direct mechanical traction on the conus. Tethered cord syndrome can be classified as either primary or secondary.

Untethering of the caudal spinal cord is considered medically necessary in children and adults when there is a low-lying conus (located below L2) and/or a thickened filum terminale (greater than 2 mm in diameter) observed on an MRI, CT scan, or ultrasound in infants. See additional criteria below for [Children](#) and [Adults](#).

See [Relative contraindications*](#) and [Exclusions**](#) for untethering of the spinal cord.

Children under 18

Additionally, the individual must have **ANY** of the following conditions:

Newborns and Infants

- Skin anomaly: dimples, bumps, hairy patch on the lower back, gluteal fold asymmetry, skin discoloration, dermal sinus
- Delayed walking or other developmental delays
- Terminal syringomyelia: syrinx is in the distal third of the spinal cord

Non-infant Children

- Unexplained and continuous back and/or leg pain for more than 6 weeks, worsened by activity
- Weakness in the legs, with or without deformity
- Gait incoordination or imbalance
- Leg numbness and tingling
- Neurogenic bladder (increased frequency, urgency, or incontinence) confirmed by urodynamic study
- Developmental scoliosis with the following Cobb angle:
 - Skeletally immature: Cobb angle greater than 40 degrees (Thoracic, Thoracolumbar, Lumbar)
 - Skeletally mature: Cobb angle greater than 50 degrees (Thoracic, Thoracolumbar, Lumbar)
- Terminal syringomyelia: syrinx is in the distal third of the spinal cord

Adults 18 years or older

Additionally, the individual must exhibit symptoms and signs of a neurogenic bladder, such as incontinence, urgency, or difficulty emptying, which should be confirmed through urodynamic studies.

B. Secondary TCS refers to tethering that develops from the presence of a tumor, scarring from infection, prior surgery, or trauma that restricts spinal cord mobility.

C. Occult tethered cord syndrome (OTCS) refers to an individual with urinary dysfunction, which includes incontinence and urgency, that can occur alongside leg or back pain, leg weakness or numbness, constipation, or fecal incontinence in individuals with a normally positioned conus (ending above L3), and a filum terminale that measures 2 mm or less in diameter. Urodynamic studies are required to confirm the presence of a neurogenic bladder.

*Relative contraindications for untethering of the spinal cord

- Unstable medical condition that would put the individual at risk for anesthesia or surgery
- Asymptomatic individuals with complex pathologies, such as chaotic lipomas and anterior sacral meningoceles, can be observed, and the surgery is deferred until early symptoms and signs appear

****Exclusions for untethering of the spinal cord**

- Prophylactic surgery in asymptomatic children over age 1 or adults who show no signs or symptoms despite a low conus medullaris or a normally positioned conus and a fatty filum on imaging
- Low back pain is the sole criterion for a child over age 1 or an adult with no urinary symptoms and exhibits normal imaging and urodynamic studies

Biopsy, excision, or evacuation

Biopsy, excision, or evacuation is considered medically necessary when imaging suggests **ANY** of the following:

- Tumor or metastatic neoplasm
- Infectious process (for example, epidural abscess)
- Arteriovenous malformation
- Malignant or non-malignant mass

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Axial low back pain without a neural component
- Disc bulge or herniation without nerve compression
- Spinal stenosis that is asymptomatic, or with symptoms limited to low back pain
- Annular tears
- Tethered cord syndrome (see [Exclusions for untethering the spinal cord](#))

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is "close to" the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant*, December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

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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
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)
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
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
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)
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)
63185	Laminectomy with rhizotomy; 1 or 2 segments
63190	Laminectomy with rhizotomy; more than 2 segments
63200	Laminectomy, with release of tethered spinal cord, lumbar
63252	Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; thoracolumbar
63267	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; lumbar
63272	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; lumbar
63277	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, lumbar
63282	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, lumbar
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

Noninvasive Electrical Bone Growth Stimulation

Description and Scope

Bone growth stimulators, also known as osteogenesis stimulators, are utilized to promote bone healing in spinal fusion through delivery of electrical current to the fusion site. Noninvasive devices are worn externally, beginning at any time from the date of surgery until up to 6 months after surgery.

This guideline addresses noninvasive electrical bone growth stimulation of the spine when performed as **elective, non-emergent** procedures and not as part of the care of an acute or traumatic event. This guideline does not address electrical and ultrasound bone growth stimulation devices for the treatment of orthopedic conditions of the appendicular skeleton.

Clinical Indications

Cervical Fusion

Noninvasive electrical stimulation of the spine to augment spinal fusion in all regions of the cervical spine is considered medically necessary in individuals at high risk for pseudoarthrosis in **ANY** of the following scenarios:

- Fusion revision (e.g., repeat surgery due to prior unhealed fusion attempt) when at least 6 months has passed since the original surgery and imaging studies confirm that healing has not progressed in the preceding 3 months
- Fusion performed at three (3) or more adjacent levels** for cervical fusion when **ANY** of the following risk factors are present:
 - Diabetes
 - Osteoporosis
 - Active nicotine use

***Defined as 3 or more motion segments (4 vertebrae)*

Thoracic or Lumbar Fusion

Noninvasive electrical stimulation of the spine to augment primary thoracic or lumbar spinal fusion is considered medically necessary in individuals at high risk for pseudoarthrosis in **ANY** of the following scenarios:

- Fusion revision (e.g., repeat surgery due to prior unhealed fusion attempt) when at least 6 months have passed since the original surgery and imaging studies confirm that healing has not progressed in the preceding 3 months
- Presence of **ANY** of the following risk factors:
 - Diabetes
 - Metabolic bone disease (including osteoporosis, osteopenia, and bone disease secondary to renal disease, nutritional deficiency, or conditions in which bone healing is likely to be compromised)
 - Immunocompromised
 - Systemic vascular disease
 - History of long-term use of corticosteroids
 - Active nicotine use

- Fusion performed at two (2) or more adjacent levels*

*Defined as 2 or more motion segments (3 vertebrae); alternatively, one level includes the upper and lower vertebral segment and the intervening disc space, e.g., L4-L5 is one level.

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Treatment of spondylolysis or pars interarticularis defect
- Semi-invasive electrical bone growth stimulation for any indication
- As an adjunct for primary bone healing of a spinal fracture
- As a nonsurgical treatment of an established pseudoarthrosis

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20974	Electrical stimulation to aid bone healing; noninvasive (nonoperative)
E0748	Osteogenesis stimulator, electrical, non-invasive, spinal applications

Vertebroplasty/Kyphoplasty

Description and Scope

Vertebral augmentation procedures have been developed as a treatment option for debilitating pain due to bony destruction of the vertebral body. These procedures are interventional techniques in which bone cement is injected via percutaneous insertion of a needle into the vertebral body under image guidance. The most commonly used material is polymethylmethacrylate (PMMA).

Vertebroplasty involves direct injection of material into the bone to stabilize an area of collapse, while kyphoplasty utilizes inflatable bone tamps to create a cavity, thus reducing the fracture and creating a space into which material is then injected.

The objective of both procedures is to alleviate pain and strengthen bone. Their efficacy has been well established for the treatment of pain related to malignant lytic bone lesions. The evidence regarding their use in treating pain due to osteoporotic fractures and other bone pathology is less compelling.

Clinical Indications

Percutaneous Vertebroplasty or Kyphoplasty

Percutaneous vertebroplasty or kyphoplasty of the cervical, lumbar, or thoracic region is considered medically necessary for treatment of the following conditions:

Osteolytic vertebral metastasis, myeloma, or plasmacytoma

Osteolytic vertebral metastasis, myeloma, or plasmacytoma with severe back pain related to destruction of the vertebral body **NOT** involving the major part of the cortical bone

Vertebral hemangiomas

Vertebral hemangiomas with severe pain or nerve compression, or aggressive radiologic signs, when radiation therapy has failed to relieve symptoms

Eosinophilic granuloma

Eosinophilic granuloma with pain and spinal instability

Vertebral compression fracture

Vertebral compression fracture due to osteoporosis or osteopenia when **ALL** the following requirements are met:

- Recent onset of back pain localized to the fracture site which has not responded to at least 6 weeks of conservative medical management*
 - ***Conservative management** should include, but is not limited to, initial bed rest with progressive activity, analgesics, physical therapy, bracing and exercises to correct postural deformity and increase muscle tone, salmon calcitonin, bisphosphonates, and calcium supplementation.
- Tenderness to palpation directly over the fracture site
- Advanced imaging studies confirming a non-traumatic, acute compression fracture
- Recent imaging studies (MRI or CT) which eliminate disc herniation or other causes of spine pain
- Absence of imaging findings which would confer unacceptable risk to the spinal cord or related structures, including **ALL** the following:

- Spinal stenosis of greater than 20% due to retropulsed fragments
- Vertebral body collapse to less than one third (33%) original height
- Vertebral plana (collapse greater than 90%)
- Anatomical damage of the vertebra that prevents safe access of the needle to the vertebral body
- Burst fracture with retropulsed fragments demonstrated by imaging

Contraindications

- Severe cardiopulmonary disease
- Coagulation disorders
- Known allergy to any of the materials used in either procedure
- Active or incompletely treated infection

Exclusions

Indications other than those addressed in this guideline are considered **not medically necessary** including, but not limited to, the following:

- Prophylaxis in patients deemed to be at risk but with no evidence of acute vertebral fracture
- Prophylaxis for the prevention of proximal junctional kyphosis and failure following posterior spinal fusion
- Non-pathologic, acute (high-energy) traumatic fractures of the vertebra
- Compression fractures shown by the medical record to be more than one year old
- Asymptomatic vertebral compression fracture

Percutaneous sacroplasty is considered **not medically necessary** for all indications due to lack of conclusive evidence indicating a positive impact to overall health outcomes.

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant*, December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

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0200T	Percutaneous sacral augmentation (sacroplasty), unilateral injection(s), including the use of a balloon or mechanical device, when used, 1 or more needles
0201T	Percutaneous sacral augmentation (sacroplasty), bilateral injections, including the use of a balloon or mechanical device, when used, 2 or more needles
22510	Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; cervicothoracic
22511	Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; lumbosacral [when specified as lumbar]
22512	Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; each additional cervicothoracic or lumbosacral vertebral body [when specified as other than sacral] (List separately in addition to code for primary procedure)
22513	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; thoracic
22514	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; lumbar
22515	Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; each additional thoracic or lumbar vertebral body (List separately in addition to code for primary procedure)
C7504	Percutaneous vertebroplasties (bone biopsies included when performed), first cervicothoracic and any additional cervicothoracic or lumbosacral vertebral bodies, unilateral or bilateral injection, inclusive of all imaging guidance
C7505	Percutaneous vertebroplasties (bone biopsies included when performed), first lumbosacral and any additional cervicothoracic or lumbosacral vertebral bodies, unilateral or bilateral injection, inclusive of all imaging guidance
C7507	Percutaneous vertebral augmentations, first thoracic and any additional thoracic or lumbar vertebral bodies, including cavity creations (fracture reductions and bone biopsies included when performed) using mechanical device (eg, kyphoplasty), unilateral or bilateral cannulations, inclusive of all imaging guidance
C7508	Percutaneous vertebral augmentations, first lumbar and any additional thoracic or lumbar vertebral bodies, including cavity creations (fracture reductions and bone biopsies included when performed) using mechanical device (eg, kyphoplasty), unilateral or bilateral cannulations, inclusive of all imaging guidance
C1062	Intravertebral body fracture augmentation with implant (e.g., metal, polymer)

Bone Graft Substitutes and Bone Morphogenetic Proteins

Description and Scope

Iliac crest bone graft has long been the standard adjunct used in spinal fusion surgery. Morbidity associated with bone graft harvest has led to the development of alternative strategies for facilitating the fusion, including bone morphogenetic proteins, demineralized bone matrix, and graft expanders such as synthetic bone grafts and allograft tissue.

Demineralized bone matrix (DBM) is comprised of allograft bone, typically harvested from cadavers, from which inorganic material has been removed. DBM products are produced as putty, paste, and flexible sheets which are placed during the fusion procedure to induce new bone formation and facilitate healing.

Recombinant human bone morphogenetic protein-2 (rhBMP-2, e.g., INFUSE®) is one of a family of naturally occurring proteins which stimulate bone growth. Produced for commercial use utilizing recombinant DNA technology, rhBMP-2 has shown some promise in facilitating bone graft healing.

P-15 peptide (e.g., I-FACTOR®, PearlMatrix™) is a synthetic 15-amino acid peptide that mimics natural collagen to attract and activate bone-forming cells (osteogenic cells).

Synthetic bone grafts are biocompatible materials that mimic the structure and function of natural bone. They include such materials as ceramics and bioactive glass.

This guideline applies to the use of bone graft substitutes (BGS) for spinal applications only. It does not address the use of BGS for other anatomical areas.

Clinical Indications

Bone Graft Substitutes

The use of a bone graft substitute (limited to Demineralized Bone Matrix or Recombinant Human Bone Morphogenetic Protein-2) as an adjunct to spinal fusion procedure is considered medically necessary when **ALL** the following criteria are met:

- Criteria for the spinal fusion procedure itself have been met
- Requirements ([below](#)) for either [DBM](#) or [rhBMP-2](#) are met
- At least **ONE** of the following risk factors for nonunion or pseudoarthrosis is present:
 - Diabetes
 - Metabolic bone disease (including osteoporosis, osteopenia, and bone disease secondary to renal disease, nutritional deficiency, or conditions in which bone healing is likely to be compromised)
 - Immunocompromised
 - Systemic vascular disease
 - History of long-term corticosteroid use
 - Active nicotine use

OR

- The use of autograft is not feasible for **ANY** of the following reasons:

- Autograft tissue is not available due to prior autograft
- There is insufficient autograft tissue for the intended procedure
- The patient is not an appropriate candidate for autograft due to **ANY** of the following:
 - Increased risk for complications from harvesting procedure, including anatomic disruption at donor site, or comorbid conditions known to increase surgical risk
 - Poor quality bone (osteopenia/osteoporosis)
 - Obesity
 - Infection or fracture at donor site
 - Lumbar pseudoarthrosis
 - Lumbar fusion greater than or equal to 2 levels

Demineralized Bone Matrix

Demineralized bone matrix (DBM) may be considered medically necessary only when used as bone graft extender combined with autograft and/or used in a structural cage implant.

Recombinant Human Bone Morphogenetic Protein-2

Recombinant human bone morphogenetic protein-2 (rhBMP-2, e.g., INFUSE Bone Graft) may be considered medically necessary in skeletally mature persons only for the following instrumented lumbar fusion procedures:

- Anterior lumbar interbody fusion (ALIF) or lateral lumbar interbody fusion (LLIF, OLIF, DLIF, or XLIF)
- Posterolateral or intertransverse lumbar fusion

Exclusions

Bone graft substitutes other than those addressed in this guideline are considered **not medically necessary** as an adjunct to spinal fusion including, but not limited to, the following:

- DBM combined with any other bone graft substitute
- Use of rhBMP-2 in the following scenarios:
 - Cervical or thoracic spinal fusion procedures
 - Posterior lumbar interbody fusion (PLIF) or transforaminal lumbar interbody fusion (TLIF)
 - Known hypersensitivity to rhBMP-2, bovine Type I collagen
 - Active malignancy or current treatment for a malignancy
 - Skeletally immature patients (<18 years of age or no radiographic evidence of epiphyseal closure)
 - Pregnant women
 - Active infection at the operative site
- Use of P-15 Peptide (e.g., I-FACTOR) in any spinal fusion
- Use of mesenchymal stem cell therapy, progenitor cells, or bone marrow aspirates alone or in combination with other bone graft substitutes
- Allograft bone products containing viable stem cells, including but not limited to demineralized bone matrix with stem cells
- Allograft bone graft that must be combined with autologous blood or bone marrow

- Use of any of the following classes of synthetic bone graft substitutes alone or in combinations:
 - Ceramics
 - Hydroxyapatite (HA), nanocrystalline hydroxyapatite, beta-tricalcium phosphate (TCP), biphasic calcium phosphate (BCP)
 - Bioactive glass-metal oxides, calcium silicate, calcium sulfate

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Codes

The following code list is not meant to be all-inclusive. Authorization requirements will vary by health plan. Please consult the applicable health plan for guidance on specific procedure codes.

Medical necessity reviews are initiated by submitting the correct AMA CPT codes. Specific CPT codes for services should be used when available. The submitted codes must accurately identify the service or procedure to be performed. If no such code exists, contact the health plan directly and report the service or procedure using the appropriate unlisted procedure or Not Otherwise Classified (NOC) code (which often ends in 99). Do not submit a code that is “close to” the procedure performed in lieu of an unlisted code. Correct coding demands that the code reported is appropriate for the service provided (i.e., a code that most accurately represents the service provided), and not a code that is similar but represents another service. (*CPT® Assistant*, December 2010) Nonspecific or NOC codes may be subject to additional documentation requirements and review.

CPT/HCPCS

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20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (List separately in addition to code for primary procedure)
20931	Allograft, structural, for spine surgery only (List separately in addition to code for primary procedure)
20932	Allograft, includes templating, cutting, placement and internal fixation, when performed; osteoarticular, including articular surface and contiguous bone (List separately in addition to code for primary procedure)
20933	Allograft, includes templating, cutting, placement and internal fixation, when performed; hemicortical intercalary, partial (ie, hemicylindrical) (List separately in addition to code for primary procedure)
20934	Allograft, includes templating, cutting, placement and internal fixation, when performed; intercalary, complete (ie, cylindrical) (List separately in addition to code for primary procedure)
20936	Autograft for spine surgery only (includes harvesting the graft); local (e.g., ribs, spinous process, or laminar fragments) obtained from same incision (List separately in addition to code for primary procedure)
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
20938	Autograft for spine surgery only (includes harvesting the graft); structural, bicortical or tricortical (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
20939	Bone marrow aspiration for bone grafting, spine surgery only, through separate skin or fascial incision (List separately in addition to code for primary procedure)
C9359	Porous purified collagen matrix bone void filler (Integra Mozaik Osteoconductive Scaffold Putty, Integra OS Osteoconductive Scaffold Putty), per 0.5 cc
C9362	Porous purified collagen matrix bone void filler (Integra Mozaik Osteoconductive Scaffold Strip), per 0.5 cc

History

Status	Review Date	Effective Date	Action
Revised	01/29/2026	09/19/2026	Independent Multispecialty Physician Panel (IMPP) review. For Bone Graft Substitutes (BGS), rearranged criteria and clarified that scope is limited to spinal applications. Clarified the scenarios in which demineralized bone matrix is medically necessary and additional scenarios for which BGS are not medically necessary. Aligned General Recommendations across Carelon musculoskeletal surgical guidelines. Added references. Added CPT codes 0219T, 0220T, 0221T, 0222T.
Updated codes 01/01/2026	n/a	Unchanged	CPT code update: added 63032.

Status	Review Date	Effective Date	Action
Revised	01/30/2025	11/15/2025 except for Healthy Blue LA Medicaid, BCBS OH Medicaid	IMPP review. For Lumbar Laminectomy, separated tethered cord syndrome indication into 3 categories, and removed requirement for children to demonstrate neurogenic bladder through urodynamic studies.
Revised	01/23/2024	10/20/2024 except for Healthy Blue LA Medicaid	IMPP review. Added clarification to Cervical disc arthroplasty exclusions. Added Lumbar discectomy exclusion for annular closure device. For Lumbar Laminectomy, Lumbar Discectomy, Foraminotomy, and Laminotomy, expanded timeframe for imaging lumbar disc herniation to 9 months and lumbar spinal stenosis to 12 months. Added other clarifications throughout. Updated references. Added CPT code 62380, and HCPCS codes C1062 and C9757. Added required language per new Medicare regulations.
Updated	n/a	01/01/2024	Added guidance for correct coding to code sections.
Revised	04/12/2023	09/10/2023; 11/05/2023 for Indiana Medicaid	IMPP review. Added clarifications and elements to required documentation and management.
Revised	01/24/2023	09/10/2023; 11/05/2023 for Indiana Medicaid	IMPP review. Cervical decompression and Cervical disc arthroplasty for radiculopathy, Lumbar discectomy, foraminotomy, laminotomy for lumbar disc herniation – removed conservative management requirement when objective neurologic deficits present; PT optional; for recurrent lumbar disc herniation, shortened conservative management required to 6 weeks. Cervical decompression for degenerative cervical kyphosis – added indications for debilitating neck pain and other clinically significant problems. Cervical decompression, Lumbar fusion for pseudarthrosis – shortened time since prior procedure to 6 months. Lumbar disc arthroplasty – removed exclusion for “prior spine surgery of any form at the target level” to align with FDA language. Lumbar fusion for isthmic spondylolisthesis – instability present for pars defect. Lumbar laminectomy without fusion – added indication for synovial cyst. Vertebroplasty/Kyphoplasty for osteolytic metastasis, myeloma, or plasmacytoma – removed prior chemo or radiation therapy; new exclusion for prophylactic vertebroplasty in posterior spinal fusion. References updated. Added HCPCS C7504, C7505, C7507, C7508.
Updated	–	01/01/2023	2023 Annual CPT code update: removed 0163T, added 22860; description changes for 22630, 22633, 22857.
Revised	11/11/2021	09/11/2022* *Not for Indiana Medicaid	IMPP review. Cervical decompression with or without fusion, cervical disc arthroplasty: added criteria for when revision or replacement may be medically necessary. New indication for 2-level cervical disc arthroplasty at a 2 nd contiguous level to a previously performed arthroplasty. Lumbar disc arthroplasty: added requirement to manage underlying psychiatric disorder; added contraindications (i.e., prior fusion, poorly managed psychiatric disorder, chronic radiculopathy) and exclusion for prior lumbar fusion. Lumbar fusion: removed “associated neurological deficits” as a clinical consideration for Scheuermann’s kyphosis; expanded scoliosis indication to include thoracic for progressive adolescent idiopathic, increased Cobb angle to greater than 50 degrees in skeletally mature patients; revised spinal stenosis to require surgeon’s interpretation of flexion-extension lateral spine x-ray documented in the medical record, added indications for recurrent and adjacent-level stenosis after a prior fusion, and planned indirect decompression via anterior approach. Removed HCPCS code C9757.

Status	Review Date	Effective Date	Action
Revised	11/11/2021	06/12/2022; 09/11/2022 for Anthem Medicaid except Indiana	IMPP review. Added indication for 2-level lumbar disc arthroplasty when using a 2-Level FDA-approved implant (exception added under exclusions). Lumbar discectomy: removed exclusion for annular closure devices. Lumbar fusion: removed exclusion for anterior lumbar interbody fusion for indirect lumbar decompression in the absence of instability. Updated references.
Updated	–	01/01/2022	2022 Annual CPT code update: added 63052 and 63053; description changes for 22600, 22610, 22612, 22614, 22633, 22634, 63048.
Revised	05/26/2021	11/07/2021	IMPP review. Clarification allows for use of an additional FDA-approved device (Simplify Disc) for two-level cervical artificial disc replacement. Updated references.
Revised	12/03/2020	09/12/2021	IMPP review. Aligned conservative care definitions across musculoskeletal surgery and spine imaging guidelines. Added a more rigorous definition of the supervised home PT requirement for cervical and lumbar surgery and removed cognitive behavioral therapy as a conservative care modality. Added standard conservative management requirement for instability to align with spinal stenosis indications. New comprehensive indication for tethered cord syndrome.
Revised	07/08/2020	03/14/2021	IMPP review. Added exclusion for use of bone-anchored annular closure devices (lumbar discectomy/foraminotomy/laminotomy). Added HCPCS code C9757.
Updated	–	01/01/2021	2021 Annual CPT code update: removed 63180 and 63182.
Revised	–	05/17/2020	Added CPT codes 0200T and 0201T.
Revised	06/10/2019	02/09/2020	IMPP review. Modified conservative management requirements to include physical therapy or home therapy plus a complementary modality for all spine procedures. Decreased duration of conservative management requirement and added age, level, and sign/symptom requirements for lumbar disc arthroplasty. Decreased duration of conservative management requirement for lumbar fusion and lumbar laminectomy in patients with spinal stenosis. Added active nicotine use as a risk factor for pseudoarthrosis in graft failure (bone growth stimulation and bone graft substitutes). Added thoracic fusion for noninvasive electric stimulation. For lumbar fusion, added indication for implant/instrumentation failure, added juvenile and congenital to adolescent idiopathic scoliosis, and added exclusion for anterior lumbar interbody fusion for foraminal stenosis without evidence of instability. For lumbar laminectomy, aligned lumbar disc herniation criteria with discectomy and added indication for synovial cyst.
Revised	–	01/01/2020	2020 Annual CPT code update: removed 0375T.
Revised	09/12/2018	05/18/2019	IMPP review. Reporting of symptom severity expanded to include instrumental ADLs. Removed nicotine-free documentation requirement from tobacco cessation. Added exclusions for cervical/thoracic laminectomy and lumbar laminectomy when criteria not met. Added radicular pain clarification to initial lumbar herniated disc criteria (lumbar discectomy/foraminotomy/laminotomy). For lumbar fusion, added criteria for flat back deformity and isthmic spondylolisthesis; added indication for Scheuermann's kyphosis. Added risk factor criteria for cervical noninvasive bone growth stimulation.

Status	Review Date	Effective Date	Action
Revised	09/12/2018	01/01/2019	IMPP review. Added indications for non-traumatic atlantoaxial instability (cervical decompression). Added indications/criteria for the appropriate use of laminectomy for cordotomy (cervical laminectomy); biopsy, excision, or evacuation (cervical/lumbar laminectomy); and dorsal rhizotomy (lumbar laminectomy). Code updates: added 0095T, 22210, 22216, 22220, 22226, 22532, 22548, 22556, 22590, 22595, 63003, 63016, 63046, 63055, 63180, 63182, 63185, 63190, 63191, 63194, 63196, 63198, 63250, 63265, 63270, 63275, 63280, 63285, 63300, 63304, 63308 (cervical decompression); added 0095T, 0098T, 0375T (cervical disc arthroplasty); added 0163T, 0164T, 0165T (lumbar disc arthroplasty); added 0164T and removed 22210, 22220, 63300, 63304 (lumbar fusion); added 63185, 63190, 63200, 63252, 63267, 63272, 63277, 63282, 63287, 63290 (lumbar laminectomy); added 20932, 20933, 20934, 20939, C9359, C9362 (bone graft substitutes).
Revised	07/11/2018	03/09/2019	IMPP review. Added the General Clinical Guideline.
Revised	12/12/2017	07/01/2018	IMPP review. Added osteotomy and corpectomy to definitions and clarified instrumentation failure to include implants and imaging evidence for cervical decompression and lumbar fusion. Added <i>anterolisthesis</i> to specify source of instability and removed <i>need for bilateral or wide decompression</i> for lumbar fusion in treatment of spinal stenosis.
Created	06/13/2017	11/01/2017	IMPP review. Original effective date.