

**Rule Category**

AMGL IP

**Ref: No.**

0011

**Version Control**

Version No. 0.1

**Effective Date**

31-03-2023

**Revision Date**

NIL

# Cervical and Lumbar Spine procedures

## Guidelines

**Table of content**

<b>Definitions</b> Indications for cervical spine surgeries Radiculopathy: Page 1	<b>Myelopathy:</b> Page 2	<b>Coding</b> Page 07	<b>References</b> Page 10
--	------------------------------	--------------------------	------------------------------



المظلة هيلثكير مانجمنت  
ALMADALLAH  
HEALTHCARE MANAGEMENT

### Definitions

Cervical spine surgeries are usually performed to treat cervical disc diseases that include but not limited to nerve or spinal cord impingement, spinal instability, Cervical radiculopathy, and Cervical Myelopathy.

Lumbar spine surgery describes several surgical procedures used to repair diseases and defects of the lower back. Lumbar spine surgery is sometimes used when problems with the vertebrae that make up the lumbar spine cause pain, numbness, or other symptoms.

### Indications for cervical spine surgeries

Anterior Cervical Discectomy and Fusion (ACDF)

When ALL the following are met:

1. Recently (within 6 months) plain X-rays of the cervical spine have been performed.
2. Performed for EITHER of the following conditions:

#### A. Radiculopathy:

When ALL the following are met:

- i. Subjective symptoms including BOTH of the following:
  - a. Significant level of pain on a daily basis defined as EITHER of the following:
    - Visual Analog Scale (VAS)/Numeric Rating Scale (NRS) as  $\geq 7$ .
    - Severe, disabling, crippling, or incapacitating pain.
  - b. Unremitting radicular pain to shoulder girdle and/or upper extremity with or without concordant objective physical examination findings resulting in disability.
- II. Objective physical examination findings including ANY of the following:
  - Dermatomal sensory deficit
  - Motor deficit (e.g. biceps, triceps weakness)

**Prepared by :**

Dr. Hassan Ali

**Reviewed by :**

Dr. Hassan Ali

**Approved by :**

Dr. Islam Zakaria

**Disclaimer**

COPYRIGHT © 2023

Almadallah Healthcare Management

ALL RIGHTS RESERVED.

# Cervical and Lumbar Spine procedures

- Reflex changes
  - Shoulder Abduction Relief Sign
  - Nerve root tension sign (e.g. Spurling's maneuver)
  - Unremitting radicular pain to shoulder girdle and/or upper extremity without concordant objective physical examination findings.
- III. Less than clinically meaningful improvement with at least TWO of the following unless contraindicated:
- a. Prescription strength analgesics, steroids, and/or NSAIDs for 6 weeks
  - b. Exercise program prescribed by a physical therapist, for 6 weeks.
  - c. Epidural steroid injection(s)/selective nerve root block(s)
- IV. Recent (within 6 months) MRI/CT identifies nerve root impingement caused by herniated disc(s) and/or osteophytes that is concordant with the patient's symptoms and physical examination findings.

## B. Myelopathy:

when ALL the following are met:

- I. Subjective symptoms including ANY of the following:
  - a. Upper/lower extremity weakness, numbness, or pain.
  - b. Fine motor dysfunction (buttoning, handwriting, clumsiness of hands).
  - c. Gait disturbance.
  - d. New-onset bowel or bladder dysfunction.
  - e. Frequent falls.
- II. Objective physical examination findings including at least TWO of the following:
  - Grip and release test
  - Ataxic gait
  - Hyperreflexia
  - Hoffmann sign
  - Pathologic Babinski sign
  - Tandem walking test demonstrating ataxia.
  - Inverted brachial radial reflex.
  - Increased muscle tone or spasticity
  - Clonus
  - Myelopathic hand

- III. Recent (within 6 months) MRI/CT findings that are concordant with the patient's symptoms and physical examination findings including EITHER of the following:

- a. MRI/CT demonstrates cervical spinal cord compression.
- b. MRI/CT identifies cervical spinal stenosis.

## Cervical Total Disc Arthroplasty

when ALL the following are met:

- a. The patient has degenerative cervical disc disease with intractable radiculopathy and/or myelopathy, producing symptomatic nerve root and/or spinal cord compression due to herniated disc and/or osteophyte formation.
- b. The patient is skeletally mature.
- c. Cervical disc prosthesis approved by the FDA or for an FDA approved indication and in accordance with FDA labeling.
- d. No previous surgeries at the operative level
- e. No prior fusion at an adjacent cervical level
- f. The planned implant(s) will be used in the reconstruction of cervical disc(s) at C3- C7, following discectomy.
- g. The planned implant(s) is/are for a single level or simultaneous two contiguous level replacement(s)
- h. The patient is a candidate for single-level or two level anterior cervical decompression(s) and interbody fusion(s)
- i. Absence of clinically significant cervical instability on resting or lateral flexion/extension plain X-rays, defined as kyphotic deformity/significant reversal or lordosis or spondylolisthesis (e.g., > 3.5 mm sublaxation/translation or > 11 degrees angulation/rotational difference) from that of either adjacent spinal level.
- j. Performed for EITHER of the following conditions:
  - Radiculopathy (as described above).
  - Myelopathy (as described above).

# Cervical and Lumbar Spine procedures

## Posterior Cervical Decompression (Laminectomy/Hemilaminectomy/Laminoplasty) with or without Posterior Fusion

when ALL the following are met:

- I. Performed for ANY of the following conditions:
  - a. Radiculopathy (as described above).
  - b. Myelopathy (as described above).
  - c. A concurrent stabilization procedure with corpectomy, laminectomy, or other procedure at the cervicothoracic junction (i.e., C7 and T1)
  - d. A concurrent stabilization procedure with a laminectomy, especially at C2
  - e. Subluxation and/or spinal cord compression in patients with rheumatoid arthritis or clinical conditions with an increased incidence of congenital and/or acquired cervical spinal instability (e.g., Down syndrome, mucopolysaccharidoses, spondyloepiphyseal dysplasia, pseudo achondroplasia, etc.)
  - f. Multi-level spondylotic myelopathy without kyphosis
  - g. Primary or metastatic tumor with associated cord compression and/or instability
  - h. Other symptomatic instability or spinal cord/root compression requiring posterior fusion with BOTH of the following:
    - Patient unresponsive to a reasonable and medically appropriate course of conservative treatment (e.g., rest, medication, cervical collar)
    - Recent (within 6 months) imaging study demonstrating corresponding pathologic anatomy.

## Posterior Cervical Fusion without Decompression

when performed for ONE or MORE of the following:

1. Symptomatic pseudarthrosis from a prior anterior or posterior fusion procedure
2. Symptomatic cervical spondylosis with instability as evidenced radiographically by ONE or MORE of the following:
  - a. Subluxation or translation of more than 3.5 mm on static lateral views or dynamic flexion/extension lateral plain X-rays
  - b. Sagittal plane angulation of more than 11 degrees between adjacent spinal segments
  - c. More than 4 mm of motion (subluxation) between the tips of the spinous processes on flexion/extension lateral plain X-rays

3. Klippel-Feil syndrome
4. Cervical instability in patients with Down syndrome, skeletal dysplasia, or connective tissue disorders.

## Cervical Microdiscectomy

When performed for EITHER of the following conditions:

1. Radiculopathy (as described above).
2. Myelopathy (as described above).

## Lumbar Microdiscectomy (Laminotomy, Laminectomy or Hemilaminectomy)

when ALL the following are met:

- a. Performed for ANY of the following:
  1. Radiculopathy/neurogenic claudication secondary to herniated disc.
  2. Synovial cyst/arachnoid cyst
  3. Central/lateral/foraminal stenosis
- b. All other sources of pain have been excluded.
- c. Subjective symptoms including at least TWO of the following:
  1. Significant level of pain on a daily basis defined as EITHER of the following:
    - Visual Analog Scale (VAS)/Numeric Rating Scale (NRS) as  $\geq 7$
    - Severe, disabling, crippling, or incapacitating pain.
  2. Persistent radiating pain into the buttock(s) and/or lower extremity(ies) on a daily basis that has a documented negative impact on activities of daily living despite optimal conservative treatment as described below.
  3. Pain, cramping, weakness, or tingling in the lower back, buttock(s), and leg(s) brought about by walking or positions that cause thecal sac or nerve root compression (e.g. standing, extension).
- e. Objective physical examination findings including EITHER of the following:

# Cervical and Lumbar Spine procedures

- I. Nerve root tension sign including ANY of the following:
    - Positive straight leg raise
    - Crossed straight leg raise.
    - Femoral stretch test
  2. Neurologic deficit including ANY of the following:
    - Dermatomal sensory deficit
    - Functionally limiting motor weakness (e.g. foot drop, quadriceps weakness)
    - Reflex changes
- F. Recent (within 6 months) MRI/CT identifies nerve root impingement and/or thecal sac impingement that is concordant with patient symptoms and physical examination findings and is caused by ONE OR MORE of the following:
1. Herniated disc(s)
  2. Synovial cyst or arachnoid cyst
  3. Central/lateral/foraminal stenosis
- G. Less than clinically meaningful improvement with at least TWO of the following unless contraindicated:
1. Prescription strength analgesics, steroids, and/or NSAIDs for 6 weeks
  2. Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician for 6 weeks.
  3. Epidural steroid injection(s)/selective nerve root block(s).
3. Persistent radiating pain into the buttock(s) and/or lower extremity(ies) on a daily basis that has a documented negative impact on activities of daily living despite optimal conservative treatment as described below.
4. Pain, cramping, weakness, or tingling in the lower back, buttock(s), and leg(s) brought about by walking or positions that cause thecal sac or nerve root compression (e.g. standing, extension).
- D. Performed for EITHER of the following:
1. Neurogenic claudication secondary to central/lateral recess/foraminal stenosis when BOTH of the following are met:
    - a. Subjective symptoms including EITHER of the following:
      - Symptoms worsen with standing and/or walking.
      - Symptoms are alleviated with sitting and/or forward flexion.
    - b. Objective physical examination findings concordant with recent (within 6 months) MRI/CT
  2. Spondylolisthesis with neurogenic claudication symptoms or radicular pain from lateral recess or foraminal stenosis associated with listhesis demonstrated on plain x-rays and/or MRI/CT.
- E. Less than clinically meaningful improvement with at least TWO of the following unless contraindicated:
1. Prescription strength analgesics, steroids, and/or NSAIDs for 6 weeks
  2. Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician for 6 weeks.
  3. Epidural steroid injection(s)/selective nerve root block(s)
- F. Recent (within 6 months) MRI/CT identifies nerve root impingement and/or thecal sac impingement caused by stenosis/listhesis that is concordant with patient symptoms and/or physical examination findings.

## Lumbar Decompression

when ALL the following are met:

- A. All other sources of pain have been excluded.
- B. Subjective symptoms including at least TWO of the following:
  1. Significant level of pain on a daily basis defined as EITHER of the following:
    - Visual Analog Scale (VAS)/Numeric Rating Scale (NRS) as  $\geq 7$
    - Severe, disabling, crippling, or incapacitating pain.

# Cervical and Lumbar Spine procedures

## I. Lumbar Fusion (Arthrodesis) with Decompression

when ALL the following are met:

The patient is a candidate for lumbar decompression (refer to lumbar decompression indications).

Performed for actual or anticipated iatrogenic instability from decompression and when EITHER of the following are met:

1. Actual or anticipated instability identified intra-operatively created by disruption of the posterior elements due to facet joint excision that exceeds 50% bilaterally or 75% or more of a single facet during spinal decompression.
2. Confirmatory imaging including ANY of the following (not required when instability is created and/or identified intra-operatively):
  - a. Recent (within 6 months) imaging documenting postoperative instability created by the disruption of the posterior elements due to facet joint excision that exceeds 50% bilaterally or 75% or more of a single facet.
  - b. Removal of the pars interarticularis is performed that requires fusion to stabilize.
  - c. Pars fracture.
  - d. Previous spinal decompression resulted in iatrogenic spondylolisthesis.

## II. Lumbar Fusion (Arthrodesis) without Decompression

when ALL the following criteria are met:

- A. Significant level of pain on a daily basis defined as EITHER of the following:
  1. Visual Analog Scale (VAS) /Numeric Rating Scale (NRS)  $\geq 7$  on a daily basis.
  2. Severe, disabling, crippling, or incapacitating pain.
- B. Clinically significant functional impairment (e.g. inability to perform household chores, prolonged standing or essential job functions).
- C. Less than clinically meaningful improvement with EITHER of the following for at least 3 consecutive months unless contraindicated, except for discogenic lower back/degenerative disc disease (see specific criteria below):
  1. Prescription strength analgesics, steroids, and/or NSAIDs.
  2. Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician.

- D. Performed for ANY of the following:
  1. Degenerative spondylolisthesis without spondylolysis when confirmatory imaging results show EITHER of the following:
    - a. Dynamic segmental instability documented by flexion-extension plain X-rays OR comparison of a supine and upright image, with a difference in translational alignment between vertebrae greater than 3 mm between views.
    - b. Grade II or higher spondylolisthesis (i.e. instability) defined as at least 3 mm of anterolisthesis of the upper vertebra in relation to the lower vertebra, either isthmic (i.e. secondary to a posterior arch stress fracture) or degenerative type.
  2. Spondylolisthesis with spondylolysis when confirmatory imaging results show ANY of the following:
    - a. Multi-level spondylolysis on recent (within 6 months) plain X-rays.
    - b. Symptomatic Grade 1 or 2 spondylolisthesis (anterolisthesis) with recent (within 6 months) plain X-rays supporting progression of anterolisthesis.
    - c. Symptomatic Grade 3 or higher spondylolisthesis (anterolisthesis) demonstrated on recent (within 6 months) plain x-rays with 50% or more anterior slippage and plain X-rays supporting regression of anterolisthesis.
    - d. Progressive spinal pain without confirmatory imaging of progression of spondylolisthesis.
  3. Discogenic lower back/degenerative disc disease when ALL the following are met:
    - a. Presence of chronic, unremitting, discogenic axial lower back pain and associated disability secondary to single-level degenerative lumbar disc disease (DDD) for at least one year.

# Cervical and Lumbar Spine procedures

- b. Structured physician-supervised, multi-modal, nonoperative management of medical care with licensed healthcare professionals which includes regularly scheduled appointments, follow-up evaluation, and less than clinically meaningful improvement with at least TWO of the following for at least 12 consecutive months unless contraindicated:
- Prescription strength analgesics, steroids, and/or NSAIDs.
  - Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician.
  - Epidural steroid injection(s)/selective nerve root block(s).
  - Facet joint injection(s)/medial branch block(s)/radiofrequency ablation(s).
- c. Moderate to severe single-level disc degeneration has been confirmed on recent (within 6 months) plain X-rays and advanced diagnostic imaging studies (i.e., CT, MRI).
4. Initial disc herniation when BOTH of the following are met:
- a. This patient is a candidate for initial primary lumbar discectomy.
  - b. ANY of the following is present:
    - Primary extraforaminal disc herniation at L5-S1, in which a far lateral approach is not feasible because of the presence of the iliac wings.
    - Primary foraminal disc herniation for which facet resection is necessary to retrieve the disc, which will result in iatrogenic instability.
    - Primary disc herniation in the lumbar spine that is at the level of the spinal cord (i.e., low lying conus medullaris).
5. Recurrent disc herniation when BOTH of the following are met:
- a. The patient is a candidate for repeat lumbar discectomy.
  - b. Confirmatory plain X-rays including neural structure compression demonstrated by the most recent (within 6 months) imaging AND plain X-ray evidence of anterolisthesis resulting in EITHER of the following:
    - Segmental instability with 3 mm or more of anterior translation displacement of the vertebra on the adjacent vertebra below.
    - Grade II or higher spondylolisthesis (i.e., instability).
6. Isthmic spondylolisthesis when congenital or acquired pars defect is documented by recent (within 6 months) imaging studies.
- ### Lumbar Total Disc Arthroplasty
- when ALL the following are met:
1. An FDA approved implant is used in accordance with FDA requirements.
  2. Presence of chronic, unremitting, discogenic axial lower back pain and associated disability secondary to single-level degenerative lumbar disc disease (DDD) for at least one year.
  3. Age 18 to 60 years old.
  4. Significant level of pain on a daily basis defined as EITHER of the following:
    - a. Visual Analog Scale (VAS)/Numeric Rating Scale (NRS) as  $\geq 7$ .
    - b. Severe, disabling, crippling, or incapacitating pain.
  5. Clinically significant functional impairment (e.g. inability to perform household chores, prolonged standing or essential job functions).
  6. Structured physician-supervised, multi-modal, nonoperative management of medical care with licensed healthcare professionals which includes ALL the following:
    - a. Regularly scheduled appointments.
    - b. Follow-up evaluation.
    - c. Less than clinically meaningful improvement with BOTH of the following for at least 6 consecutive months unless contraindicated:
      - Prescription strength analgesics, steroids, and/or NSAIDs.
      - Provider-directed exercise program prescribed by a physical therapist, chiropractic provider, osteopathic or allopathic physician.

# Cervical and Lumbar Spine procedures

7. Moderate to severe single-level disc degeneration at L4-L5 or L5-S1 has been confirmed on recent (within 6 months) plain X-rays and advanced diagnostic imaging studies (i.e., CT, MRI).

Absence of significant facet arthropathy at the operative level.

## Experimental & investigational procedures

1. Cervical total disc arthroplasty is considered experimental, investigational, or unproven when ANY of the following are present:
  - Patient is under age 18 or over age 60.
  - The patient had prior surgery at the treated level.
  - The planned procedure includes the combined use of a prosthesis and spinal fusion (hybrid construct).
  - The patient had a prior fusion at an adjacent cervical level (hybrid construct).
  - The planned procedure will lead to cervical total disc arthroplasty at more than 2 levels.
  - Decreased bone mineral density defined by ANY of the following:
    - Revision of an infected cervical disc arthroplasty.
    - Rheumatoid arthritis or other autoimmune disease.
    - Paget's disease, osteomalacia or any other metabolic bone disease.
2. Endoscopic and/or percutaneous laser disc decompression of spinal cord nerve root(s).
3. Percutaneous lumbar discectomy.
  4. Percutaneous laser discectomy.
  5. Laser-assisted disc decompression.
  6. Minimally invasive lumbar decompression (MILD).
  7. Percutaneous nucleotomy.
  8. Minimally invasive thoracic discectomy for the treatment of axial spinal pain.
  9. Pre-sacral interbody fusion including AxiaLIF.
  10. Minimally invasive surgical approaches using only indirect visualization (e.g. endoscopic fusion, percutaneous fusion (video imaging)).
  11. Anterior interbody fusion or implantation of intervertebral body fusion devices using laparoscopic approach.
  12. Devices for disc annular repair.
  13. Dynamic (intervertebral) stabilization (e.g. Dynesys, Stabilimax NZ).
  14. Interlaminar lumbar instrumented fusion (e.g. ILIF).
  15. Interspinous and interlaminar distraction devices.
  16. Interspinous fixation/posterior non-pedicle supplemental fixation devices for spinal fusion (e.g. Affix, Aspen Spinous Process Fixation System, Coflex-F).
  17. Least invasive lumbar decompression interbody fusion (e.g. LINDIF).
  18. Isolated facet fusion, with or without instrumentation, including allograft bone graft substitutes used exclusively as stand-alone stabilization devices (e.g. TruFuse (any level), NuFix® (any level)).
  19. Total facet arthroplasty.

## Coding

Grade	Description
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.
22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2.
63075	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; cervical, single interspace.
22856	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection), single interspace, cervical.

## Cervical and Lumbar Spine procedures

Grade	Description
22856	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophyctomy for nerve root or spinal cord decompression and microdissection), single interspace, cervical.
22861	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical.
22864	Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical.
22590	Arthrodesis, posterior technique, craniocervical (occiput-C2).
22595	Arthrodesis, posterior technique, atlas-axis (C1-C2).
22600	Arthrodesis, posterior or posterolateral technique, single level; cervical below C2 segment.
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.
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.
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.
63050	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments.
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.
63020	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical.
63040	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, re-exploration, single interspace; cervical.
62380	Endoscopic decompression of spinal cord, nerve root(s), including laminotomy, partial facetectomy, foraminotomy, discectomy and/or excision of herniated intervertebral disc, 1 interspace, lumbar.
63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar.
63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar.
63042	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, re-exploration, single interspace; lumbar.



# Cervical and Lumbar Spine procedures

Grade	Description
63056	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g. herniated intervertebral disc), single segment; lumbar (including transfacet, or lateral extraforaminal approach) (e.g. far lateral herniated intervertebral disc).
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.
63005	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; lumbar, except for spondylolisthesis.
63011	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; sacral.
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 (e.g. 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), [e.g. Spinal or lateral recess stenosis]), single vertebral segment; lumbar.
22533	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar.
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar.
22586	Arthrodesis, pre-sacral interbody technique, including disc space preparation, discectomy, with posterior instrumentation, with image guidance, includes bone graft when performed, L5-S1 interspace.
22612	Arthrodesis, posterior or posterolateral technique, single level; lumbar (with lateral transverse technique, when performed).
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar.
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace and segment; lumbar.
22800	Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments.
22808	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments.

# Cervical and Lumbar Spine procedures

Grade	Description
22857	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression), single interspace, lumbar.
22862	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; lumbar.

## References

- Albert, Todd J., and Samuel E. Murrell. "Surgical Management of Cervical Radiculopathy." *JAAOS - Journal of the American Academy of Orthopaedic Surgeons*, vol. 7, no. 6, 1 Nov. 1999, p. 368, [journals.lww.com/jaaos/abstract/1999/11000/surgical\\_management\\_of\\_cervical\\_radiculopathy.3.aspx](http://journals.lww.com/jaaos/abstract/1999/11000/surgical_management_of_cervical_radiculopathy.3.aspx). Accessed 27 Sept. 2023.
- Buttermann, Glenn R. "Anterior Cervical Discectomy and Fusion Outcomes over 10 Years." *SPINE*, vol. 43, no. 3, Feb. 2018, pp. 207–214, <https://doi.org/10.1097/brs.0000000000002273>.
- Jang, Seo-Ryang, et al. "A Comparison of Anterior Cervical Discectomy and Fusion versus Fusion Combined with Artificial Disc Replacement for Treating 3-Level Cervical Spondylotic Disease." *Journal of Korean Neurosurgical Society*, vol. 60, no. 6, 1 Nov. 2017, pp. 676–683, <https://doi.org/10.3340/jkns.2016.1010.013>. Accessed 15 May 2022.
- Deora, Harsh, et al. "Anterior Surgical Techniques for Cervical Spondylotic Myelopathy: World Federation of Neurosurgical Societies Spine Committee Recommendations." *Neurospine*, vol. 16, no. 3, 30 Sept. 2019, pp. 408–420, <https://doi.org/10.14245/ns.1938250.125>. Accessed 2 Feb. 2021.
- inberg D, Chugh AJ, Gebhart JJ, et al. Magnetic resonance imaging of the cervical spine underrepresents sagittal plane deformity in degenerative myelopathy patients. *Int J Spine Surg*. 2016;10:32. doi: 10.14444/3032.
- Van Eck CF, Regan C, Donaldson WF, et al. The revisions rate and occurrence of adjacent segment disease after anterior cervical discectomy and fusion: a study of 672 consecutive patients. *Spine* 2014; 39: 2143-7.
- Raoi RD, Gore DR, Tang SJ, et al. Radiographic changes in the cervical spine following anterior arthrodesis: a long term analysis of 166 patients. *J Bone Joint Surg* 2016; 98: 1606-13.
- Peolsson A, Peolsson M. Predictive factors for long-term outcome of anterior cervical decompression and fusion: a multivariate data analysis. *Eur Spine J* 2008; 17: 406-14.
- Acosta FL, Ames CP. Cervical Disc Arthroplasty: General Information. *Neurosurg Clin N Am*. 2005; (16): 603-7.
- American Academy of Orthopaedic Surgeons. Technology Overview. Cervical Disc Arthroplasty. March 2010.
- Auerbach JD, Jones KJ, Fras CI, Balderston JR, Rushton SA, Chin KR. The prevalence of indications and contraindications to cervical total disc replacement. *Spine J*. 2008 Sep-Oct;8(5):711-6.
- Cunningham MR, Hershman S, Bendo J. Systematic review of cohort studies comparing surgical treatments for cervical spondylotic myelopathy. *Spine* 2010;35(5):537-43.
- Yi S, Lee DY, Ahn PG, Kim KN, Yoon do H, Shin HC. Radiologically documented adjacentsegment degeneration after cervical arthroplasty: characteristics and review of cases. *Surg Neurol*. 2009 Oct;72(4):325-9; discussion 329.
- Celestre PC, et al. Minimally invasive approaches to the cervical spine. *Orthopedic Clinics of North America* 2012;43(1):137-47.
- Guzman JZ, Feldman ZM, McAnany S, Hecht AC, Qureshi SA, Cho SK. Osteoporosis in Cervical Spine Surgery. *Spine* 2016; 41(8): 662-668.
- Hsu WK. Advanced techniques in cervical spine surgery. *Journal of Bone and Joint Surgery. American Volume* 2011;93(8):780-8.
- Komotar RJ, Mocco J, Kaiser MG. Surgical management of cervical myelopathy: indications and techniques for laminectomy and fusion. *Spine Journal* 2006;6(6 Suppl):252S-267S.
- Matz PG, et al. Cervical laminoplasty for the treatment of cervical degenerative myelopathy. *Journal of Neurosurgery: Spine* 2009;11(2):157-69.
- Rao RD, Gourab K, David KS. Operative treatment of cervical spondylotic myelopathy. *Journal of Bone and Joint Surgery. American Volume* 2006;88(7):1619-40.

## Cervical and Lumbar Spine procedures



20. Bono CM, et al. An evidence-based clinical guideline for the diagnosis and treatment of cervical radiculopathy from degenerative disorders. *Spine Journal* 2011;11(1):64-72
21. Heary RF, et al. Cervical laminoforaminotomy for the treatment of cervical degenerative radiculopathy. *Journal of Neurosurgery: Spine* 2009;11(2):198-202.
22. Brouwer, Patrick A., Brand, Ronald, Elske van den Akker-van Marle, M, Jacobs, Wilco C. H., Schenk, Barry, van den Berg-Huijsmans, Aneete A., Koes, Bart W., van Buchem, M. A., Arts, Mark P., Peul, Wilco C. Percutaneous laser disc decompression versus conventional microdiscectomy in sciatica: a randomized controlled trial. *The Spine Journal* 2015; (15) 857-865.
23. Jacobs WC. et al. Surgery versus conservative management of sciatica due to a lumbar herniated disc: a systematic review. *European Spine Journal* 2011.
24. Bae HW, Laurysen C, Maislin G, et al. Therapeutic sustainability and durability of coflex interlaminar stabilization after decompression for lumbar spinal stenosis: a four year assesement. *International Journal of Spine Surgery* 2015;9.
25. Kalichman L, Hunter DJ. Diagnosis and conservative management of degenerative lumbar spondylolisthesis. *European Spine Journal* 2008;17(3):327-35.
26. Watters WC, et al. An evidence-based clinical guideline for the diagnosis and treatment of degenerative lumbar spondylolisthesis. *Spine Journal* 2009;9(7):609-14.
27. American Association of Neurological Surgeons. *The Journal of Neurosurgical Spine* July 2014: 21: 48-53.
28. EviCore. *Spine Surgery Clinical Guidelines for Medical Necessity Review of Spine Surgery Services. CLINICAL GUIDELINES. 2020.*