

National Imaging Associates, Inc.	
Clinical guidelines: LUMBAR SPINE SURGERY	Original Date: June 2013
CPT Codes**: <ul style="list-style-type: none"> - Lumbar Microdiscectomy: 62380, 63030, +63035 - Lumbar Decompression: 63005, 63012, 63017, 63042, +63044, 63047, +63048, 63056, +63057 - Lumbar Fusion - Single Level: 22533, 22558, 22612, 22630, 22633, +63052, +63053 - Lumbar Fusion - Multiple Levels: +22534, +22585, +22614, +22632, +22634, +63052, +63053 <p><i>**See UM Matrix for allowable billed groupings and additional covered codes</i></p>	Last Revised Date: May 2022 May 2023
Guideline Number: NIA_CG_304	Implementation Date: January 202423

GENERAL INFORMATION

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

INDICATIONS FOR LUMBAR SPINE SURGERY¹

Lumbar Discectomy/Microdiscectomy: Surgical indications for inter-vertebral disc herniation*

- When **ALL of the following** are present:
 - Primary radicular symptoms noted upon clinical exam that significantly hinders daily activities²⁻⁷
 - Failure to improve with at least 6 consecutive weeks in the last 6 months of documented, physician directed appropriate conservative treatment to include at least 2 of the following^{3, 7, 8}:

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- Analgesics, steroids, and/or NSAIDs
- Structured program of physical therapy
- Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
- Epidural steroid injections and or selective nerve root block **AND**
- Imaging studies showing evidence of inter-vertebral disc herniation that correlate exactly with the individual's symptoms/signs^{3, 7, 9, 10} **OR**

***Other Indications:** Microdiscectomy may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios³:

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

NOTE: Percutaneous lumbar discectomy, radiofrequency disc decompression, and related procedures are deemed investigational procedures and are not approved. Discectomy and microdiscectomy are the gold standards.

Lumbar Decompression: Laminectomy, Laminotomy, Facetectomy, and Foraminotomy.

These procedures allow decompression by partial or total removal of various parts of vertebral bone and ligaments. Surgical indications for spinal canal decompression due to lumbar spinal stenosis*:

- When **ALL of the following** are present:
 - Neurogenic claudication, and/or radicular leg pain that impairs daily activities^{2-7, 9-14}
 - Failure to improve with at least 6 consecutive weeks in the last 6 months of documented, physician directed appropriate conservative therapy to include **at least two (2) of the following**^{3, 8}:
 - Analgesics, steroids, and/or NSAIDs
 - Structured program of physical therapy
 - Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
 - Epidural steroid injections and or selective nerve root block
 - Imaging findings demonstrating moderate to severe stenosis consistent with clinical signs/symptoms^{3, 13, 14} **OR**

***Other Indications:** Lumbar decompression may be used as the first line of treatment (*no conservative treatment required*) in any of the following clinical scenarios^{3, 7}:

- Progressive nerve compression resulting in an acute neurologic (motor) deficit. The neurological deficits should be significant: 0-2/5 on the motor function scale for L5 or S1 roots

OR 0-3/5 for L3 or L4 roots. Lesser degrees of motor dysfunction may resolve with conservative treatment and are not considered an indication for early surgery **OR**

- Cauda equina syndrome (loss of bowel or bladder control) **OR**
- Spinal stenosis due to tumor, infection, or trauma

NOTE: Percutaneous decompressions, endoscopic decompression, and related procedures (laser, etc.) are deemed investigational procedures and are not approved. Open or microdecompression via laminectomy or laminotomy are the gold standards.^{3, 7}

Lumbar Spine Fusion

Single Level Fusion with or without Decompression

Because of variable outcomes with fusion surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

- When **ALL of the following** are present*:
 - Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities **for at least 6 months**^{2-7, 12, 13, 15-22}
 - Failure to improve with at least 6 consecutive weeks in the last 6 months of documented, physician directed appropriate conservative therapy (6 months for isolated low back pain to include **at least two (2) of the following**^{2, 3, 5, 7, 8, 15, 18-21}:
 - Analgesics, steroids, and/or NSAIDs
 - Structured program of physical therapy
 - Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
 - Epidural steroid injections and or facet injections/selective nerve root block
 - Imaging studies corresponding to the clinical findings^{3, 13-15, 18, 19, 21}
 - **At least ONE of the following** clinical conditions:
 - Spondylolisthesis (neural arch defect - spondylolytic spondylolisthesis, degenerative spondylolisthesis, and congenital unilateral neural arch hypoplasia)^{13, 18, 19, 21-25}
 - Evidence of segmental instability - Excessive motion, as in degenerative spondylolisthesis, segmental instability, and surgically induced segmental instability^{13, 18, 19, 21-25}
 - Revision surgery for failed previous operation(s) for pseudoarthrosis at the same level at least 6-12 months from prior surgery** if significant functional gains are anticipated²⁶
 - Revision surgery for failed previous operation(s) repeat disk herniations if significant functional gains are anticipated (Note: Many recurrent disc herniations can be treated with discectomy alone, so specific indications for the addition of fusion will be required)³
 - Fusion for the treatment of spinal tumor, cancer, or infection²⁶

- Chronic low back pain or degenerative disc disease (disc degeneration without significant neurological compression presenting with low back pain) must have failed at least 6 months of appropriate active non-operative treatment **(completion of a comprehensive cognitive -behavioral rehabilitation program is mandatory)** and must be evaluated on a case-by-case basis^{2, 5, 7, 9, 10, 16, 17, 20, 23, 25}

NOTE: The results of several randomized trials suggests that in many degenerative cases uninstrumented posterolateral intertransverse fusion has similar results to larger instrumented (PLIF, TLIF, etc.) fusion techniques with fewer morbidities and less likelihood of revision surgery. Accordingly, specific findings suggesting more significant instability should be present when larger techniques are used (gaping of facets, gross motion on flexion/extension radiographs, wide disc spaces)^{22, 23, 25, 27-29} **OR**

***Other Indications:** Lumbar spinal fusion may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios^{3, 7}:

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

**** REPEAT LUMBAR SPINE FUSION OPERATIONS:** Repeat lumbar fusion operations will be reviewed on a case-by-case basis upon submission of medical records and imaging studies that demonstrate remediable pathology. The below must also be **documented and available for review of repeat fusion requests**^{2, 5, 7, 17, 20, 23, 25}:

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

Multi-level Fusion with or without decompression (all multi-level fusion surgeries will be reviewed on a case-by-case basis):

Because of variable outcomes with fusion surgery, individuals should be actively involved in the decision-making process and provided appropriate decision-support materials explaining potential risks/benefits and treatment alternatives when considering this intervention.

- When **ALL of the following** are present*:
 - Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for **at least 6 months**^{2, 4-7, 12, 13, 16, 17, 20}
 - Failure to improve with at least 6 consecutive weeks in the last 6 months of documented, physician directed appropriate conservative therapy to include **at least two (2)** of the following^{8, 18-21}:
 - Analgesics, steroids, and/or NSAIDs
 - Structured program of physical therapy
 - Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician
 - Epidural steroid injections and or facet injections/selective nerve root block
 - Imaging studies corresponding to the clinical findings^{3, 13-15, 18, 19, 21}
 - **At least ONE of the following** clinical conditions^{18, 19, 21-25}:
 - Multiple level spondylolisthesis (Note: Fusions in cases with single level spondylolisthesis should be limited to the unstable level)
 - Fusion for the treatment of spinal tumor, trauma, cancer, or infection affecting multiple levels
 - Intra-operative segmental instability **OR**

***Other Indications:** Lumbar spinal fusion may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios^{3, 7}:

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

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

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

NOTE: Pre-sacral, axial lumbar interbody fusion (AxiaLIF) is not an approved surgical approach due to insufficient evidence.

RELATIVE CONTRAINDICATIONS FOR SPINE SURGERY (NOTE: Cases may not be approved if the below contraindications exist):

- **Medical contraindications** to surgery (e.g., severe osteoporosis; infection of soft tissue adjacent to the spine and may be at risk for spreading to the spine; severe cardiopulmonary disease; anemia; malnutrition and systemic infection).^{30, 31}
- **Psychosocial risk factors.** It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention.^{3, 7} Individuals with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be reviewed on a case-by-case basis and the surgery may be denied for risk of failure.
- **Active Tobacco or Nicotine** use prior to fusion surgery. Individuals must be free from smoking and/or nicotine use for at least six weeks prior to surgery and during the entire period of fusion healing.³²⁻³⁷
- **Morbid Obesity.** Contraindication to surgery in cases where there is significant risk and concern for improper post-operative healing, post-operative complications related to morbid obesity, and/or an inability to participate in post-operative rehabilitation.³⁸ These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure.

BACKGROUND

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

Lumbar Decompression (Laminectomy, Laminotomy, Facetectomy, and Foraminotomy):

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

Lumbar Fusion Surgery: Lumbar spinal fusion (arthrodesis) is a surgical procedure used to treat spinal conditions of the lumbar, e.g., degenerative disc disease, spinal stenosis, injuries/fractures of the spine, spinal instability, and spondylolisthesis. Spinal fusion is a “welding” process that

permanently fuses or joins together two or more adjacent bones in the spine, immobilizing the vertebrae and restricting motion at a painful joint. It is usually performed after other surgical procedures of the spine, such as discectomy or laminectomy. The goal of fusion is to increase spinal stability, reduce irritation of the affected nerve roots, compression on the spinal cord, disability, and pain and/or numbness. Clinical criteria for single level fusion versus multiple level fusions are outlined under the indications section.

OVERVIEW

This guideline outlines the key surgical treatments and indications for common lumbar spinal disorders and is a consensus document based upon the best available evidence. Spine surgery is a complex area of medicine, and this document breaks out the treatment modalities for lumbar spine disorders into surgical categories: **lumbar discectomy/microdiscectomy, lumbar decompression, and lumbar fusion surgery**. See below for procedures considered not medically necessary.

- **Spinal surgeries should be performed only by those with extensive surgical training (neurosurgery, orthopedic surgery)**
- **Services Not Covered:** The following procedures are considered either still under investigation or are not recommended based upon the current evidence: Percutaneous lumbar discectomy; Laser discectomy; percutaneous radiofrequency disc decompression; intradiscal electrothermal annuloplasty (IDEA) or more commonly called IDET (intradiscal electrothermal therapy); nucleus pulposus replacement; and pre-sacral fusion.
 - *PERCUTANEOUS DISCECTOMY* is an invasive operative procedure to accomplish partial removal of the disc through a needle which allows aspiration of a portion of the disc under imaging control. Its only indication is to obtain diagnostic tissue, such as, for a biopsy for discitis. Its effectiveness has not been fully established.
 - *LASER DISCECTOMY* is a procedure which involves the delivery of laser energy into the center of the nucleus pulposus using a fluoroscopically guided laser fiber under local anesthesia. The energy denatures protein in the nucleus, causing a structural change which is intended to reduce intradiscal pressure. Its effectiveness has not been fully established.
 - *INTRADISCAL ELECTROTHERMAL ANNULOPLASTY (IDEA) (more commonly called IDET, or Intradiscal Electrothermal therapy)* is an outpatient non-operative procedure in which a wire is guided into the identified painful disc using fluoroscopy. The wire is then heated at the nuclear-annular junction within the disc. It has not been shown to be effective.
 - *NUCLEUS PULPOSUS REPLACEMENT* Involves the introduction of a prosthetic implant into the intervertebral disc, replacing the nucleus pulposus while preserving the annulus fibrosus. It has not been shown to be effective relative to other gold standard interventions.
- **Conservative Therapy:** (Musculoskeletal) includes primarily physical therapy and/or injections; and a combination of modalities, such as rest, ice, heat, modified activities, medical devices (such as braces), medications, diathermy, chiropractic treatments, or physician supervised home exercise program.

- **Home Exercise Program - (HEP)** – the following two elements are required to meet guidelines for completion of conservative therapy:
 - Documentation provided of an exercise prescription/plan **AND**
 - Follow up with member with information provided regarding completion of HEP (after suitable ~~4-6-week~~**4-6-week** period) or inability to complete HEP due to physical reason- i.e., increased pain, inability to physically perform exercises. (Inconvenience or noncompliance without explanation does not constitute “inability to complete” HEP).
- **Isolated Low Back Pain** - Pain isolated to the lumbar region of the spine and the surrounding paraspinal musculature. Also referred to ‘mechanical low back pain’ or ‘discogenic pain’. No associated neurogenic claudication or radiculopathy.
- ~~**Claims Billing & Coding:**~~
 - ~~NIA uses a combination of internally developed edits in addition to an enhanced set of industry standard editing. NIA’s Claims Edit Module is a group of system edits that run multiple times per day. Edits that are part of this module include industry standard edits that apply to spine surgery services and NIA custom edits developed specifically for spine surgery. The following describes each of the edits, NIA applies:~~
- ~~**Outpatient Code Editor (OCE):**~~
 - ~~This edit performs all functions that require specific reference to HCPCS codes, HCPCS modifiers, and ICD 9 CM diagnosis codes. The OCE only functions on a single claim and does not have any cross claim capabilities. NIA is consistent with CMS.~~
- ~~**National Correct Coding Initiative (NCCI) editing:-**~~
 - ~~The edit prevents improper payment when incorrect code combinations are reported. The NCCI contains two tables of edits. The Column One/Column Two Correct Coding Edits table and the Mutually Exclusive Edits table include code pairs that should not be reported together for a number of reasons explained in the Coding Policy Manual. NIA is consistent with CMS.~~
 - ~~Incidental edits: This edit applies if a procedure being billed is a component of another procedure that occurred on the same date of service for the same provider and tax ID and claimant.~~
 - ~~Mutually exclusive editing: This edit applies if a procedure being billed is mutually exclusive with a procedure that occurred on the same date of service for the same provider tax ID and claimant.~~
- ~~**Multiple Procedure Discounts (MPD):-**~~
 - ~~This edit applies a reduction to the second and any other subsequent services by the same provider, in the same setting, for the same member. We typically apply a 50% reduction. NIA follows the CMS methodology that began in January 2011 which allows for application of MPD to codes within CMS’s two specific advanced imaging code families. However, NIA differs from CMS in that we apply MPD to all provider types unless health plan contracts prohibit this.~~
- **Lumbar Fusion** - Fusions can be performed either anteriorly, laterally, or posteriorly, or via a combined approach, although simple posterolateral fusions are indicated in the great majority of cases requiring fusion. Aggressive surgical approaches to fusion may be an

indication for denial of cases (when such techniques have not been demonstrated to be superior to less morbid techniques) or recommendation for alternative procedure. These are the surgical approaches:

- Intertransverse fusion or posterolateral fusion
- Anterior interbody fusion (ALIF)
- Lateral or transpsoas interbody fusion (XLIF)
- Posterior or trans-foraminal interbody fusion (PLIF or TLIF)
- Anterior/posterior fusion (360-degree)
- Pre-sacral, axial lumbar interbody fusion (AxiaLIF) is still being investigated and is not recommended.
 - Use of bone grafts including autologous or allograft which might be combined with metal or biocompatible devices to produce a rigid, bony connection between two or more adjacent vertebrae are common. Bone formation or grafting materials including biologics should be used at the surgeon's discretion; however, use of biologics should be limited to FDA approved indications in order to limit complications (especially BMP).
 - All operative interventions must be based upon positive correlation of clinical findings, clinical course, and diagnostic tests and must be performed by surgeons with appropriate training (neurosurgery, orthopedic surgery). A comprehensive assimilation of these factors must lead to a specific diagnosis with positive identification of pathologic condition(s). A failure of accurate correlation may be an indication for denial of cases. It is imperative to rule out non-physiologic modifiers of pain presentation or non-operative conditions mimicking radiculopathy or instability (e.g., peripheral neuropathy, piriformis syndrome, myofascial pain, sympathetically mediated pain syndromes, sacroiliac dysfunction, psychological conditions, etc.) prior to consideration of elective surgical intervention.
 - Operative treatment is indicated when the natural history of surgically treated lesions is better than the natural history for non-operatively treated lesions.
 - All individuals being considered for surgical intervention should first undergo a comprehensive neuro-musculoskeletal examination to identify mechanical pain generators that may respond to non-surgical techniques or may be refractory to surgical intervention.
 - While sufficient time allowances for non-operative treatment are required to determine the natural cause and response to non-operative treatment of low back pain disorders, timely decision making for operative intervention is critical to avoid de-conditioning and increased disability (exclusive of "emergent" or urgent pathology such as cauda equina syndrome or associated rapidly progressive neurologic loss).
- In general, if the program of non-operative treatment fails, operative treatment is indicated when:

- Improvement of the symptoms has plateaued or failed to occur, and the residual symptoms of pain and functional disability are unacceptable at the end of 6 to 12 weeks of active treatment, or at the end of longer duration of non-operative programs for debilitated individuals with complex problems; and/or
- Frequent recurrences of symptoms cause serious functional limitations even if a non-operative active treatment program provides satisfactory relief of symptoms, and restoration of function on each recurrence.

~~**Lumbar spinal stenosis and associated lumbar spondylolisthesis**—Spinal stenosis is narrowing of the spinal column or of the neural foramina where spinal nerves leave the spinal column. The most common cause is degenerative change in the lumbar spine. Neurogenic claudication is the most common symptom, referring to “leg symptoms encompassing the buttock, groin and anterior thigh, as well as radiation down the posterior part of the leg to the feet.” In addition to pain, leg symptoms can include fatigue, heaviness, weakness and/or paresthesia. Some individuals may also suffer from accompanying back pain. Symptoms are worse when standing or walking and are relieved by sitting. Lumbar spinal stenosis is often a disabling condition, and it is the most common reason for lumbar spinal surgery in adults over 65 years.~~

~~**Degenerative lumbar spondylolisthesis**—is the displacement of a vertebra in the lower part of the spine; one lumbar vertebra slips forward on another with an intact neural arch and begins to press on nerves. The slippage occurs at the L4–L5 level most commonly. The most common cause, in adults, is degenerative disease although it may also result from bone diseases and fractures. Spondylolisthesis seldom occurs before the age of 50 years and it disproportionately affects women, especially black women. Degenerative spondylolisthesis is not always symptomatic. The indications for fusion in this group are evolving and as more evidence emerges, changes to the accepted indications and acceptable techniques used may be made.~~

~~**Lumbar degenerative disease without stenosis or spondylolisthesis**—Spondylosis is an umbrella term describing age-related degeneration of the spine. Lumbar degenerative disease without stenosis or spondylolisthesis is characterized by disabling low back pain and spondylosis at L4–5, L5–S1, or both levels.~~

POLICY HISTORY

Date	Summary
<u>2023</u>	
May 2022	Replaced “patients” with “individuals” where appropriate
January 2022	Added CPT Codes +63052, +63053
June 2021	LADR and Perc SII Fusion procedures removed from Lumbar Surgery GL and moved to separate GL’s

October 2020	<ul style="list-style-type: none"> • 2 level LADR now permitted • New reference added
October 2019	<ul style="list-style-type: none"> • “In the last 6 months” added to further define the conservative care requirement • Added section: Lumbar artificial disc replacement with supporting references; added SI Joint Fusion section • Modified contraindication section to include ‘relative’
November 2018	<ul style="list-style-type: none"> • Lumbar Discectomy/Microdiscectomy and Lumbar Decompression: Removed ‘sensory’ from neurological deficit • Added and updated references

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

POLICY HISTORY

<u>Date</u>	<u>Summary</u>
<u>May 2023</u>	<ul style="list-style-type: none">• <u>Updated references</u>• <u>Removed Claims Billing/Coding from background</u>
<u>May 2022</u>	<u>Replaced “patients” with “individuals” where appropriate</u>
<u>January 2022</u>	<u>Added CPT Codes +63052, +63053</u>

GENERAL INFORMATION

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