

<b>BSC_NIA_CG_304 Lumbar Spine Surgery</b>			
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<b>Section:</b>	7.0 Surgery	<b>Page:</b>	Page 1 of 27

## Policy Statement

### INDICATIONS FOR LUMBAR SPINE SURGERY:

#### 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 activities (Chou, 2009; Kreiner, 2014; Tosteson, 2011); **AND**
  - Failure to improve with at least six (6) consecutive weeks in the last 6 months of documented, physician directed appropriate conservative treatment to include at least 2 of the following (Delitto, 2015; Kreiner, 2014, 2013):
    - 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 patient's symptoms/signs (Fardon, 2014; Kreiner, 2014);

**OR**

**\*Other Indications:** Microdiscectomy may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios (Kreiner, 2014):

- 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; 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 (Atlas, 2005; Chou, 2009; Genevay, 2010; Kreiner, 2013; Tosteson, 2011, 2008; Weinstein, 2007); **AND**
  - 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 (Delitto, 2015; Kreiner, 2013):
    - 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**

- o Imaging findings demonstrating moderate to severe stenosis consistent with clinical signs/symptoms (Genevay, 2010; Kreiner, 2013; Weinstein, 2007);

**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 (Kreiner, 2014, 2013):

- 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; 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 microdecompressions via laminectomy or laminotomy are the gold standards (Kreiner, 2014).

### Lumbar Spine Fusion:

#### Single Level Fusion with or without Decompression:

Because of variable outcomes with fusion surgery, patients 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\*:
  - o Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for at least 6 months (Bogduk, 2009; Brox, 2010; Carreon, 2008; Chou, 2009; Eck, 2014; Fritzell, 2001; Kreiner, 2013; Mannion, 2016; Matz, 2014, 2016; NASS, 2009; Tosteson, 2011, 2008; Weinstein, 2007);
- AND**
- o 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 LBP) to include at least two (2) of the following (Brox, 2010; Chou, 2009; Delitto, 2015; Eck, 2014; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009):
  - 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; **AND**
- o Imaging studies corresponding to the clinical findings (Eck, 2014; Genevay, 2010; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007); **AND**
- o At least one of the following clinical conditions:
  - Spondylolisthesis [Neural Arch Defect -Spondylolytic spondylolisthesis, degenerative spondylolisthesis, and congenital unilateral neural arch hypoplasia] (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007; Yavin, 2017); **OR**
  - Evidence of segmental instability -Excessive motion, as in degenerative spondylolisthesis, segmental instability, and surgically induced segmental instability (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007; Yavin, 2017); **OR**
  - 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 anticipated (Trumees, 2017) ; **OR**

- 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) (Kreiner, 2014); **OR**
- Fusion for the treatment of spinal tumor, cancer, or infection (Trumees, 2017); **OR**
- 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 (Bogduk, 2009; Brox, 2010; Chou, 2009; Fardon, 2014; Fritzell, 2001; Mannion, 2016; Yavin, 2017).

**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) (Carreon, 2008; Deyo, 2010; Endler, 2017; Yavin, 2017);

### **OR**

**\*Other Indications:** Lumbar spinal fusion may be used as the first line of treatment (*no conservative treatment required*) in the following clinical scenarios (Kreiner, 2014):

- 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 (Bogduk, 2009; Chou, 2009; Mannion, 2016; Yavin, 2017):

- Rationale as to why surgery is preferred over other non-invasive or less invasive treatment procedures.
- Signed documentation that the patient 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, patients 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 (Bogduk, 2009; Brox, 2010; Chou, 2009; Fritzell, 2001; Mannion, 2016; Tosteson, 2011, 2008; Weinstein, 2007); **AND**
  - 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 (Brox, 2010; Delitto, 2015; Matz, 2014, 2016; NASS, 2009):
    - 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; **AND**
- Imaging studies corresponding to the clinical findings (Eck, 2014; Genevay, 2010; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007); **AND**
- At least one of the following clinical conditions (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Yavin, 2017):
  - Multiple level spondylolisthesis (Note: Fusions in cases with single level spondylolisthesis should be limited to the unstable level); **OR**
  - Fusion for the treatment of spinal tumor, trauma, cancer, or infection affecting multiple levels; **OR**
  - 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 (Kreiner, 2014):

- 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.

### Lumbar Artificial Disc Replacement

Because of variable outcomes with lumbar artificial disc replacement surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials when considering this intervention.

Lumbar total disc arthroplasty (artificial disc replacement) may be considered **medically necessary** when **ALL** of the following indications are met (Jacobs, 2013; NASS, 2019; Radcliff, 2018; Zigler, 2012, 2017):

- The individual is between the ages of 18 to 60
- Degenerative disc disease or significant discogenic back pain with disc degeneration, is confirmed by documented patient history, physical examination, and key radiographic studies, with no more than Grade 1 (low level) spondylolisthesis demonstrated on x-ray at the operative level
- Imaging confirms absence of significant facet arthropathy at operative level
- At least six months of non-operative (conservative) treatment have failed to resolve symptoms (See Note\*)
- Disc reconstruction with the device is performed at one or two consecutive levels in the lumbar spine from L3-S1 using an anterior retroperitoneal approach
- The device used as the disc replacement device is FDA-approved for lumbar disc replacement and is used in accordance with FDA labelling
- There are no contraindications to lumbar artificial disc replacement, including but not limited to (see Note\*\*):
  - Disease above L3-4
  - Active systemic or local infection
  - Osteoporosis or osteopenia (DEXA bone mineral density T-score less than or equal to -1.0), or vertebral bodies compromised by disease or prior trauma

- o Allergy or sensitivity to implant materials
- o Isolated lumbar radiculopathy (especially due to herniated disc), or chronic radiculopathy (unremitting especially leg symptoms lasting over 1 year)
- o Spinal stenosis, or spinal deformity (scoliosis)
- o Spondylolisthesis greater than Grade 1
- o Disc degeneration requiring treatment at more than two levels
- o Severe facet arthrosis or joint degeneration
- o Presence of free disc fragment
- o Poorly managed psychiatric disorder

Artificial lumbar disc replacement is considered **not medically necessary** in all other circumstances, including artificial disc arthroplasty done at more than two spinal levels, and hybrid (combination artificial disc and fusion) procedures.

**NOTE\***: Conservative care is focused multi-modal nonoperative treatment that must include a physical therapy/rehabilitation program with cognitive-behavioral components. Treatment may also include pain management injections and active exercise programs. This must be clearly outlined in the medical record.

**NOTE\*\***: Contraindications are related to the levels being considered for surgery.

### Percutaneous Sacroiliac Joint (SIJ) Fusion

(all SIJ fusion surgeries will be reviewed on a case-by-case basis):

Because of variable outcomes with fusion surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials when considering this intervention.

- When **ALL** of the following are present (NASS, 2015; Polly, 2016; Whang, 2019):
  - o Low back/buttock pain that is typically unilateral and caudal to the lumbar spine localized over the SIJ that impairs daily activities for at least 6 months; **AND**
  - o Failure to improve with at least 6 months of appropriate active non-operative treatment that must include medications, PT, and a home exercise program; **AND**
  - o Physical exam demonstrating pain to palpation over the sacral sulcus in the absence of tenderness of similar severity elsewhere; **AND**
  - o Absence of generalized pain behavior; **AND**
  - o Positive pain response to a cluster of 3 provocative tests (e.g., thigh thrust, compression test, Gaenslen's test, distraction test, Faber test); **AND**
  - o Diagnostic imaging studies that include **ALL** of the following:
    - Imaging (plain radiographs and a CT or MRI) of the SI joint that excludes the presence of destructive lesions (e.g., tumor, infection) or inflammatory arthropathy that would not be properly addressed by percutaneous SIJ fusion
    - Imaging of the pelvis (AP plain radiograph) to rule out concomitant hip pathology
    - Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain
    - Imaging of the SI joint that indicates evidence of injury and/or degeneration; **AND**
  - o At least 75% reduction of pain for the expected duration of the anesthetic used following an image-guided, contrast-enhanced intra-articular SIJ injection on 2 separate occasions; **AND**
  - o A trial of at least one therapeutic intra-articular SIJ injection (i.e., corticosteroid injection)

**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 (Puvanesarajah, 2016).
- **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 (Kreiner, 2014). Patients 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. Patients 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 (Andersen, 2001; Glassman, 2000; Hermann, 2016; Jackson, 2016; Patel, 2013).
- **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 (Epstein, 2017). These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure

**NOTE:** Refer to [Appendix A](#) to see the policy statement changes (if any) from the previous version.

## Policy Guidelines

Spinal surgeries should be performed only by those with extensive surgical training (neurosurgery, orthopaedic surgery).

**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 period), or inability to complete HEP due to physical reason- i.e. increased pain, inability to physically perform exercises. (Patient inconvenience or noncompliance without explanation does not constitute "inability to complete" HEP).

### 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-10-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.

#### Key Primary CPT Codes:

##### Lumbar Fusion (Single level)

- 22533, 22558, 22612, 22630, 22633 *Plus Decompression*

##### Lumbar Fusion (Multiple levels)

- 22533, +22534, 22558, +22585, 22612, +22614, 22630, +22632, 22633, +22634 (+indicates multiple levels) *Plus Decompression*

##### Lumbar Decompression

- 63030, +63035, 63005, 63012, 63017, 63042, +63044, 63047, +63048, 63056, +63057

##### Lumbar Discectomy/Microdiscectomy

- 63030, +63035, 62380

##### Lumbar Artificial Disc Replacement

- 22857, 22862, 22865

### Description

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, lumbar fusion surgery, and lumbar artificial disc replacement. See the additional information section for procedures considered not medically necessary.

### Related Policies

- N/A

## Benefit Application

Benefit determinations should be based in all cases on the applicable contract language. To the extent there are any conflicts between these guidelines and the contract language, the contract language will control. Please refer to the member's contract benefits in effect at the time of service to determine coverage or non-coverage of these services as it applies to an individual member.

Some state or federal mandates (e.g., Federal Employee Program [FEP]) prohibits plans from denying Food and Drug Administration (FDA)-approved technologies as investigational. In these instances, plans may have to consider the coverage eligibility of FDA-approved technologies on the basis of medical necessity alone.

## Regulatory Status

- N/A

## Rationale

### Introduction

- 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, Facetomy, 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.
- Lumbar Artificial Disc Replacement:** Lumbar artificial disc replacement (LADR) is a surgical procedure used to treat low back pain from lumbar degenerative disc disease. The degenerative lumbar disc is replaced with an artificial disc that maintains motion at the surgical level. Studies have shown the results of LADR to be at least equivalent to spinal fusion for the treatment of discogenic low back pain. LADR is a technically challenging operation and proper training should be obtained before performing the procedure.

### Additional Information 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 Pulpous 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.

**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.

**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 (AxialLIF) 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, orthopaedic 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 patients 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 patients 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 patients 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.

## References

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## Documentation for Clinical Review

### Please provide the following documentation:

- History and physical and/or consultation notes including:
  - Reason for procedure

- Clinical findings
- Conservative treatments and duration
- Activity limitations
- Duration of back pain
- Comorbidities
- Radiology report(s) (i.e., MRI, CT, discogram)

**Post Service (in addition to the above, please include the following):**

- Procedure report(s)

## Coding

*This Policy relates only to the services or supplies described herein. Benefits may vary according to product design; therefore, contract language should be reviewed before applying the terms of the Policy. Inclusion or exclusion of codes does not constitute or imply member coverage or provider reimbursement.*

Type	Code	Description
CPT®	0163T	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression), each additional interspace, lumbar (List separately in addition to code for primary procedure)
	0164T	Removal of total disc arthroplasty, (artificial disc), anterior approach, each additional interspace, lumbar (List separately in addition to code for primary procedure)
	0165T	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, each additional interspace, lumbar (List separately in addition to code for primary procedure)
	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 (List separately in addition to code for primary procedure)
	22526	Percutaneous intradiscal electrothermal annuloplasty, unilateral or bilateral including fluoroscopic guidance; single level
	22527	Percutaneous intradiscal electrothermal annuloplasty, unilateral or bilateral including fluoroscopic guidance; 1 or more additional levels (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)	

Type	Code	Description
	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)
	22614	Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment (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 and segment; 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 and segment; each additional interspace and segment (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
	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
	22899	Unlisted procedure, spine
	62287	Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, any method utilizing needle based technique to remove disc material under fluoroscopic imaging or other form of indirect visualization, with discography and/or epidural injection(s) at the treated level(s), when performed, single or multiple levels, lumbar
	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 (e.g., 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 (e.g., spinal stenosis), more than 2 vertebral segments; lumbar

Type	Code	Description
	63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar
	63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure)
	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)
	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
	63048	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; each additional segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure)
	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)
	63057	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; each additional segment, thoracic or lumbar (List separately in addition to code for primary procedure)
HCPCS	S2348	Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, using radiofrequency energy, single or multiple levels, lumbar
	S2350	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; lumbar, single interspace
	S2351	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; lumbar, single interspace

## Policy History

This section provides a chronological history of the activities, updates and changes that have occurred with this Medical Policy.

Effective Date	Action
01/01/2017	Adoption of National Imaging Associates (NIA) Clinical Guidelines
07/01/2018	NIA Clinical Guideline update
01/01/2019	Coding update
07/01/2019	NIA Clinical Guideline update
07/01/2020	Annual NIA clinical guideline update
03/01/2021	Annual NIA clinical guideline update. Policy title changed from Lumbar Spinal Surgery to current one.

## Definitions of Decision Determinations

**Medically Necessary:** Services that are Medically Necessary include only those which have been established as safe and effective, are furnished under generally accepted professional standards to treat illness, injury or medical condition, and which, as determined by Blue Shield, are: (a) consistent with Blue Shield medical policy; (b) consistent with the symptoms or diagnosis; (c) not furnished primarily for the convenience of the patient, the attending Physician or other provider; (d) furnished at the most appropriate level which can be provided safely and effectively to the patient; and (e) not more costly than an alternative service or sequence of services at least as likely to produce equivalent therapeutic or diagnostic results as to the diagnosis or treatment of the Member's illness, injury, or disease.

**Investigational/Experimental:** A treatment, procedure, or drug is investigational when it has not been recognized as safe and effective for use in treating the particular condition in accordance with generally accepted professional medical standards. This includes services where approval by the federal or state governmental is required prior to use, but has not yet been granted.

**Split Evaluation:** Blue Shield of California/Blue Shield of California Life & Health Insurance Company (Blue Shield) policy review can result in a split evaluation, where a treatment, procedure, or drug will be considered to be investigational for certain indications or conditions, but will be deemed safe and effective for other indications or conditions, and therefore potentially medically necessary in those instances.

## Prior Authorization Requirements (as applicable to your plan)

Within five days before the actual date of service, the provider must confirm with Blue Shield that the member's health plan coverage is still in effect. Blue Shield reserves the right to revoke an authorization prior to services being rendered based on cancellation of the member's eligibility. Final determination of benefits will be made after review of the claim for limitations or exclusions.

Questions regarding the applicability of this policy should be directed to the Prior Authorization Department at (800) 541-6652, or the Transplant Case Management Department at (800) 637-2066 ext. 3507708 or visit the provider portal at [www.blueshieldca.com/provider](http://www.blueshieldca.com/provider).

*Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. Blue Shield of California may consider published peer-reviewed scientific literature, national guidelines, and local standards of practice in developing its medical policy. Federal and state law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over medical policy and must be considered first in determining covered services. Member contracts may differ in their benefits. Blue Shield reserves the right to review and update policies as appropriate.*



**Appendix A**

POLICY STATEMENT	
BEFORE <i>Red font: Verbiage removed</i>	AFTER <i>Blue font: Verbiage Changes/Additions</i>
<p>Lumbar <b>Spinal</b> Surgery BSC_NIA_CG_304</p> <p><b>Policy Statement:</b>  <b>INDICATIONS FOR LUMBAR SPINE SURGERY:</b>  <b>Lumbar Discectomy/Microdiscectomy: Surgical indications for inter-vertebral disc herniation*:</b></p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present: <ul style="list-style-type: none"> <li>o Primary radicular symptoms noted upon clinical exam that significantly hinders daily activities (Chou, 2009; Kreiner, 2014; Tosteson, 2011); <b>AND</b></li> <li>o Failure to improve with at least six (6) consecutive weeks in the last 6 months of documented, physician directed appropriate conservative treatment to include at least 2 of the following (Kreiner, 2014, 2013; <b>Delitto, 2015</b>): <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or selective nerve root block; <b>AND</b></li> </ul> </li> <li>o Imaging studies showing evidence of inter-vertebral disc herniation that correlate exactly with the patient’s symptoms/signs (Fardon, 2014; Kreiner, 2014);</li> </ul> </li> </ul> <p><b>OR</b></p> <p><b>*Other Indications:</b> Microdiscectomy may be used as the first line of treatment (<i>no conservative treatment required</i>) in the following clinical scenarios (Kreiner, 2014):</p> <ul style="list-style-type: none"> <li>• 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; 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;</li> </ul> <p><b>OR</b></p>	<p>Lumbar <b>Spine</b> Surgery BSC_NIA_CG_304</p> <p><b>Policy Statement:</b>  <b>INDICATIONS FOR LUMBAR SPINE SURGERY:</b>  <b>Lumbar Discectomy/Microdiscectomy: Surgical indications for inter-vertebral disc herniation*:</b></p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present: <ul style="list-style-type: none"> <li>o Primary radicular symptoms noted upon clinical exam that significantly hinders daily activities (Chou, 2009; Kreiner, 2014; Tosteson, 2011); <b>AND</b></li> <li>o Failure to improve with at least six (6) consecutive weeks in the last 6 months of documented, physician directed appropriate conservative treatment to include at least 2 of the following (<b>Delitto, 2015</b>; Kreiner, 2014, 2013): <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or selective nerve root block; <b>AND</b></li> </ul> </li> <li>o Imaging studies showing evidence of inter-vertebral disc herniation that correlate exactly with the patient’s symptoms/signs (Fardon, 2014; Kreiner, 2014);</li> </ul> </li> </ul> <p><b>OR</b></p> <p><b>*Other Indications:</b> Microdiscectomy may be used as the first line of treatment (<i>no conservative treatment required</i>) in the following clinical scenarios (Kreiner, 2014):</p> <ul style="list-style-type: none"> <li>• 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; 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;</li> </ul> <p><b>OR</b></p>

POLICY STATEMENT

BEFORE <b>Red font: Verbiage removed</b>	AFTER <b>Blue font: Verbiage Changes/Additions</b>
<ul style="list-style-type: none"> <li>• Cauda equina syndrome (loss of bowel or bladder control).</li> </ul> <p><b>NOTE:</b> Percutaneous lumbar discectomy, radiofrequency disc decompression, and related procedures are deemed investigational procedures and are not approved. Discectomy and microdiscectomy are the gold standards.</p> <p><b>Lumbar Decompression: Laminectomy, Laminotomy, Facetectomy, and Foraminotomy:</b> 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*:</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present:             <ul style="list-style-type: none"> <li>o Neurogenic claudication, and/or radicular leg pain that impairs daily activities (Atlas, 2005; Chou, 2009; Genevay, 2010; Kreiner, 2013; Tosteson, 2011; <b>Tosteson</b>, 2008; Weinstein, 2007); <b>AND</b></li> <li>o 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 (Kreiner, 2013; <b>Delitto</b>, 2015):                 <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or selective nerve root block; <b>AND</b></li> </ul> </li> <li>o Imaging findings demonstrating moderate to severe stenosis consistent with clinical signs/symptoms (Genevay, 2010; Kreiner, 2013; Weinstein, 2007);</li> </ul> </li> </ul> <p><b>OR</b></p> <p><b>*Other Indications:</b> Lumbar decompression may be used as the first line of treatment (<i>no conservative treatment required</i>) in any of the following clinical scenarios (Kreiner, 2014, 2013):</p> <ul style="list-style-type: none"> <li>• Progressive nerve compression resulting in an acute neurologic (motor) deficit. The neurological deficits should be significant: 0-</li> </ul>	<ul style="list-style-type: none"> <li>• Cauda equina syndrome (loss of bowel or bladder control).</li> </ul> <p><b>NOTE:</b> Percutaneous lumbar discectomy, radiofrequency disc decompression, and related procedures are deemed investigational procedures and are not approved. Discectomy and microdiscectomy are the gold standards.</p> <p><b>Lumbar Decompression: Laminectomy, Laminotomy, Facetectomy, and Foraminotomy:</b> 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*:</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present:             <ul style="list-style-type: none"> <li>o Neurogenic claudication, and/or radicular leg pain that impairs daily activities (Atlas, 2005; Chou, 2009; Genevay, 2010; Kreiner, 2013; Tosteson, 2011, 2008; Weinstein, 2007); <b>AND</b></li> <li>o 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 (<b>Delitto</b>, 2015; Kreiner, 2013):                 <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or selective nerve root block; <b>AND</b></li> </ul> </li> <li>o Imaging findings demonstrating moderate to severe stenosis consistent with clinical signs/symptoms (Genevay, 2010; Kreiner, 2013; Weinstein, 2007);</li> </ul> </li> </ul> <p><b>OR</b></p> <p><b>*Other Indications:</b> Lumbar decompression may be used as the first line of treatment (<i>no conservative treatment required</i>) in any of the following clinical scenarios (Kreiner, 2014, 2013):</p> <ul style="list-style-type: none"> <li>• Progressive nerve compression resulting in an acute neurologic (motor) deficit. The neurological deficits should be significant: 0-</li> </ul>

POLICY STATEMENT

<p style="text-align: center;"><b>BEFORE</b></p> <p style="text-align: center;"><b>Red font: Verbiage removed</b></p>	<p style="text-align: center;"><b>AFTER</b></p> <p style="text-align: center;"><b>Blue font: Verbiage Changes/Additions</b></p>
<p>2/5 on the motor function scale for L5 or S1 roots; 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;</p> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Cauda equina syndrome (loss of bowel or bladder control);</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Spinal stenosis due to tumor, infection, or trauma.</li> </ul> <p><b>NOTE:</b> Percutaneous decompressions, endoscopic decompression, and related procedures (laser, etc.) are deemed investigational procedures and are not approved. Open or microdecompressions via laminectomy or laminotomy are the gold standards (Kreiner, 2014).</p> <p><b>Lumbar Spine Fusion:</b>  <b>Single Level Fusion with or without Decompression:</b>                      Because of variable outcomes with fusion surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials when considering this intervention.</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present*:                             <ul style="list-style-type: none"> <li>○ Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for at least 6 months (Bogduk, 2009; Brox, 2010; Carreon, 2008; Chou, 2009; Fritzell, 2001; Kreiner, 2013; Mannion, 2016; Matz, 2014, 2016; NASS, 2009; <b>Eck, 2014</b>; Tosteson, 2011, 2008; Weinstein 2007); <b>AND</b></li> <li>○ 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 LBP) to include at least two (2) of the following (Brox, 2010; Chou, 2009; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; <b>Eck, 2014</b>; <b>Delitto, 2015</b>):                                     <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> </ul> </li> </ul> </li> </ul>	<p>2/5 on the motor function scale for L5 or S1 roots; 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;</p> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Cauda equina syndrome (loss of bowel or bladder control);</li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Spinal stenosis due to tumor, infection, or trauma.</li> </ul> <p><b>NOTE:</b> Percutaneous decompressions, endoscopic decompression, and related procedures (laser, etc.) are deemed investigational procedures and are not approved. Open or microdecompressions via laminectomy or laminotomy are the gold standards (Kreiner, 2014).</p> <p><b>Lumbar Spine Fusion:</b>  <b>Single Level Fusion with or without Decompression:</b>                      Because of variable outcomes with fusion surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials <b>explaining potential risks/ benefits/ and treatment alternatives</b> when considering this intervention.</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present*:                             <ul style="list-style-type: none"> <li>○ Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for at least 6 months (Bogduk, 2009; Brox, 2010; Carreon, 2008; Chou, 2009; <b>Eck, 2014</b>; Fritzell, 2001; Kreiner, 2013; Mannion, 2016; Matz, 2014, 2016; NASS, 2009; Tosteson, 2011, 2008; Weinstein, 2007); <b>AND</b></li> <li>○ 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 LBP) to include at least two (2) of the following (Brox, 2010; Chou, 2009; <b>Delitto, 2015</b>; <b>Eck, 2014</b>; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009):                                     <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> </ul> </li> </ul> </li> </ul>

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<ul style="list-style-type: none"> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or facet injections/selective nerve root block; <b>AND</b></li> <li>○ Imaging studies corresponding to the clinical findings (Genevay, 2010; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; <b>Eck, 2014</b>; Weinstein, 2007); <b>AND</b></li> <li>○ At least one of the following clinical conditions:             <ul style="list-style-type: none"> <li>▪ Spondylolisthesis [Neural Arch Defect -Spondylolytic spondylolisthesis, degenerative spondylolisthesis, and congenital unilateral neural arch hypoplasia] (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007; Yavin, 2017); <b>OR</b></li> <li>▪ Evidence of segmental instability -Excessive motion, as in degenerative spondylolisthesis, segmental instability, and surgically induced segmental instability (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007; Yavin, 2017); <b>OR</b></li> <li>▪ 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 anticipated (Trumees, 2017) ; <b>OR</b></li> <li>▪ 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) (Kreiner, 2014); <b>OR</b></li> <li>▪ Fusion for the treatment of spinal tumor, cancer, or infection (Trumees, 2017); <b>OR</b></li> <li>▪ <i>Chronic low back pain or degenerative disc disease</i> (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</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or facet injections/selective nerve root block; <b>AND</b></li> <li>○ Imaging studies corresponding to the clinical findings (<b>Eck, 2014</b>; Genevay, 2010; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007); <b>AND</b></li> <li>○ At least one of the following clinical conditions:             <ul style="list-style-type: none"> <li>▪ Spondylolisthesis [Neural Arch Defect -Spondylolytic spondylolisthesis, degenerative spondylolisthesis, and congenital unilateral neural arch hypoplasia] (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007; Yavin, 2017); <b>OR</b></li> <li>▪ Evidence of segmental instability -Excessive motion, as in degenerative spondylolisthesis, segmental instability, and surgically induced segmental instability (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007; Yavin, 2017); <b>OR</b></li> <li>▪ 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 anticipated (Trumees, 2017) ; <b>OR</b></li> <li>▪ 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) (Kreiner, 2014); <b>OR</b></li> <li>▪ Fusion for the treatment of spinal tumor, cancer, or infection (Trumees, 2017); <b>OR</b></li> <li>▪ <i>Chronic low back pain or degenerative disc disease</i> (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</li> </ul> </li> </ul>

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<p>basis (Bogduk, 2009; Brox, 2010; Chou, 2009; Fardon, 2014; Fritzell, 2001; Mannion, 2016; Yavin, 2017).</p> <p><b>NOTE:</b> 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) (Carreon, 2008; Deyo, 2010; Endler, 2017; Yavin, 2017);</p> <p><b>OR</b></p> <p><b>*Other Indications:</b> Lumbar spinal fusion may be used as the first line of treatment (<i>no conservative treatment required</i>) in the following clinical scenarios (Kreiner, 2014):</p> <ul style="list-style-type: none"> <li>• Progressive nerve compression resulting in an acute neurologic deficit (motor); <b>AND</b> <ul style="list-style-type: none"> <li>○ One of the aforementioned clinical conditions, <u>except</u> 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.</li> </ul> </li> <li>• Cauda equina syndrome (loss of bowel or bladder control); <b>AND</b> <ul style="list-style-type: none"> <li>○ One of the aforementioned clinical conditions, <u>except</u> chronic low back pain or degenerative disc disease.</li> </ul> </li> </ul> <p><b>** Repeat Lumbar Spine Fusion Operations:</b> Repeat lumbar fusion operations will be reviewed on a <u>case-by-case</u> 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 (Bogduk, 2009; Chou, 2009; Mannion, 2016; Yavin, 2017):</p>	<p>basis (Bogduk, 2009; Brox, 2010; Chou, 2009; Fardon, 2014; Fritzell, 2001; Mannion, 2016; Yavin, 2017).</p> <p><b>NOTE:</b> 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) (Carreon, 2008; Deyo, 2010; Endler, 2017; Yavin, 2017);</p> <p><b>OR</b></p> <p><b>*Other Indications:</b> Lumbar spinal fusion may be used as the first line of treatment (<i>no conservative treatment required</i>) in the following clinical scenarios (Kreiner, 2014):</p> <ul style="list-style-type: none"> <li>• Progressive nerve compression resulting in an acute neurologic deficit (motor); <b>AND</b> <ul style="list-style-type: none"> <li>○ One of the aforementioned clinical conditions, <u>except</u> 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.</li> </ul> </li> <li>• Cauda equina syndrome (loss of bowel or bladder control); <b>AND</b> <ul style="list-style-type: none"> <li>○ One of the aforementioned clinical conditions, <u>except</u> chronic low back pain or degenerative disc disease.</li> </ul> </li> </ul> <p><b>** Repeat Lumbar Spine Fusion Operations:</b> Repeat lumbar fusion operations will be reviewed on a <u>case-by-case</u> 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 (Bogduk, 2009; Chou, 2009; Mannion, 2016; Yavin, 2017):</p>

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<ul style="list-style-type: none"> <li>• Rationale as to why surgery is preferred over other non-invasive or less invasive treatment procedures.</li> <li>• Signed documentation that the patient has participated in the decision-making process and understands the high rate of failure/complications.</li> </ul> <p><b>Multi-level Fusion with or without decompression</b> (all multi-level fusion surgeries will be reviewed on a case-by-case basis): Because of variable outcomes with fusion surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials when considering this intervention.</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present*:             <ul style="list-style-type: none"> <li>o Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for at least 6 months (Bogduk, 2009; Brox, 2010; Chou, 2009; Fritzell, 2001; Mannion, 2016; Tosteson, 2011, 2008; Weinstein, 2007); <b>AND</b></li> <li>o 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 (Brox, 2010; Matz, 2014, 2016; NASS, 2009; <b>Delitto, 2015</b>):                 <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or facet injections/selective nerve root block; <b>AND</b></li> </ul> </li> <li>o Imaging studies corresponding to the clinical findings (Genevay, 2010; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; <b>Eck, 2014</b>; Weinstein, 2007); <b>AND</b></li> <li>o At least one of the following clinical conditions (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Yavin, 2017):                 <ul style="list-style-type: none"> <li>▪ Multiple level spondylolisthesis (Note: Fusions in cases with single level spondylolisthesis should be limited to the unstable level); <b>OR</b></li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Rationale as to why surgery is preferred over other non-invasive or less invasive treatment procedures.</li> <li>• Signed documentation that the patient has participated in the decision-making process and understands the high rate of failure/complications.</li> </ul> <p><b>Multi-level Fusion with or without decompression</b> (all multi-level fusion surgeries will be reviewed on a case-by-case basis): Because of variable outcomes with fusion surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials <b>explaining potential risks/ benefits/ and treatment alternatives</b> when considering this intervention.</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present*:             <ul style="list-style-type: none"> <li>o Lumbar back pain, neurogenic claudication, and/or radicular leg pain without sensory or motor deficit that impairs daily activities for at least 6 months (Bogduk, 2009; Brox, 2010; Chou, 2009; Fritzell, 2001; Mannion, 2016; Tosteson, 2011, 2008; Weinstein, 2007); <b>AND</b></li> <li>o 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 (Brox, 2010; <b>Delitto, 2015</b>; Matz, 2014, 2016; NASS, 2009):                 <ul style="list-style-type: none"> <li>▪ Analgesics, steroids, and/or NSAIDs</li> <li>▪ Structured program of physical therapy</li> <li>▪ Structured home exercise program prescribed by a physical therapist, chiropractic provider or physician</li> <li>▪ Epidural steroid injections and/or facet injections/selective nerve root block; <b>AND</b></li> </ul> </li> <li>o Imaging studies corresponding to the clinical findings (<b>Eck, 2014</b>; Genevay, 2010; Kreiner, 2013; Matz, 2014, 2016; NASS, 2009; Weinstein, 2007); <b>AND</b></li> <li>o At least one of the following clinical conditions (Carreon, 2008; Kwon, 2005; Matz, 2014, 2016; NASS, 2009; Yavin, 2017):                 <ul style="list-style-type: none"> <li>▪ Multiple level spondylolisthesis (Note: Fusions in cases with single level spondylolisthesis should be limited to the unstable level); <b>OR</b></li> </ul> </li> </ul> </li> </ul>

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<ul style="list-style-type: none"> <li>▪ Fusion for the treatment of spinal tumor, trauma, cancer, or infection affecting multiple levels; <b>OR</b></li> <li>▪ Intra-operative segmental instability;</li> </ul> <p><b>OR</b></p> <p><b>*Other Indications:</b> Lumbar spinal fusion may be used as the first line of treatment (<i>no conservative treatment required</i>) in the following clinical scenarios (Kreiner, 2014):</p> <ul style="list-style-type: none"> <li>• Progressive nerve compression resulting in an acute neurologic deficit (motor); <b>AND</b> <ul style="list-style-type: none"> <li>○ 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;</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Cauda equina syndrome (loss of bowel or bladder control); <b>AND</b> <ul style="list-style-type: none"> <li>○ One of the aforementioned clinical conditions, except chronic low back pain or degenerative disc disease.</li> </ul> </li> </ul> <p><b>Lumbar Artificial Disc Replacement</b> Because of variable outcomes with lumbar artificial disc replacement surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials when considering this intervention.</p> <p>Lumbar total disc arthroplasty (artificial disc replacement) may be considered <b>medically necessary</b> when <b>ALL</b> of the following indications are met (Jacobs, 2013; NASS, 2019; Zigler, 2012; <b>Zigler</b>, 2017):</p> <ul style="list-style-type: none"> <li>• The individual is between the ages of 18 to 60</li> <li>• Degenerative disc disease or significant discogenic back pain with disc degeneration, is confirmed by documented patient history, physical examination, and key radiographic studies, with no more than Grade 1 (low level) spondylolisthesis demonstrated on x-ray at the operative level</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fusion for the treatment of spinal tumor, trauma, cancer, or infection affecting multiple levels; <b>OR</b></li> <li>▪ Intra-operative segmental instability;</li> </ul> <p><b>OR</b></p> <p><b>*Other Indications:</b> Lumbar spinal fusion may be used as the first line of treatment (<i>no conservative treatment required</i>) in the following clinical scenarios (Kreiner, 2014):</p> <ul style="list-style-type: none"> <li>• Progressive nerve compression resulting in an acute neurologic deficit (motor); <b>AND</b> <ul style="list-style-type: none"> <li>○ 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;</li> </ul> </li> </ul> <p><b>OR</b></p> <ul style="list-style-type: none"> <li>• Cauda equina syndrome (loss of bowel or bladder control); <b>AND</b> <ul style="list-style-type: none"> <li>○ One of the aforementioned clinical conditions, except chronic low back pain or degenerative disc disease.</li> </ul> </li> </ul> <p><b>Lumbar Artificial Disc Replacement</b> Because of variable outcomes with lumbar artificial disc replacement surgery, patients should be actively involved in the decision-making process and provided appropriate decision-support materials when considering this intervention.</p> <p>Lumbar total disc arthroplasty (artificial disc replacement) may be considered <b>medically necessary</b> when <b>ALL</b> of the following indications are met (Jacobs, 2013; NASS, 2019; <b>Radcliff</b>, 2018; Zigler, 2012, 2017):</p> <ul style="list-style-type: none"> <li>• The individual is between the ages of 18 to 60</li> <li>• Degenerative disc disease or significant discogenic back pain with disc degeneration, is confirmed by documented patient history, physical examination, and key radiographic studies, with no more than Grade 1 (low level) spondylolisthesis demonstrated on x-ray at the operative level</li> </ul>

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<ul style="list-style-type: none"> <li>• Imaging confirms absence of significant facet arthropathy at operative level</li> <li>• At least six months of non-operative (conservative) treatment have failed to resolve symptoms (See Note*)</li> <li>• Disc reconstruction with the device is performed at <b>only one (single)</b> level using an anterior retroperitoneal approach</li> <li>• The device used as the disc replacement device is FDA-approved for lumbar disc replacement and is used in accordance with FDA labelling</li> <li>• There are no contraindications to lumbar artificial disc replacement, including but not limited to (see Note**):             <ul style="list-style-type: none"> <li>○ Disease above L3-4</li> <li>○ Active systemic or local infection</li> <li>○ Osteoporosis or osteopenia (DEXA bone mineral density T-score less than or equal to - 1.0), or vertebral bodies compromised by disease or prior trauma</li> <li>○ Allergy or sensitivity to implant materials</li> <li>○ Isolated lumbar radiculopathy (especially due to herniated disc), or chronic radiculopathy (unremitting especially leg symptoms lasting over 1 year)</li> <li>○ Spinal stenosis, or spinal deformity (scoliosis)</li> <li>○ Spondylolisthesis greater than Grade 1</li> <li>○ Disc degeneration requiring treatment at more than <b>one</b> level</li> <li>○ Severe facet arthrosis or joint degeneration</li> <li>○ Presence of free disc fragment</li> <li>○ Poorly managed psychiatric disorder</li> </ul> </li> </ul> <p>Artificial lumbar disc replacement is considered <b>not medically necessary</b> in all other circumstances, including artificial disc arthroplasty done at more than <b>one</b> spinal level, and hybrid (combination artificial disc and fusion) procedures.</p> <p><b>NOTE*</b>: Conservative care is focused multi-modal nonoperative treatment that must include a physical therapy/rehabilitation program with cognitive-behavioral components. Treatment may also include</p>	<ul style="list-style-type: none"> <li>• Imaging confirms absence of significant facet arthropathy at operative level</li> <li>• At least six months of non-operative (conservative) treatment have failed to resolve symptoms (See Note*)</li> <li>• Disc reconstruction with the device is performed at one <b>or two consecutive levels in the lumbar spine from L3-S1</b> using an anterior retroperitoneal approach</li> <li>• The device used as the disc replacement device is FDA-approved for lumbar disc replacement and is used in accordance with FDA labelling</li> <li>• There are no contraindications to lumbar artificial disc replacement, including but not limited to (see Note**):             <ul style="list-style-type: none"> <li>○ Disease above L3-4</li> <li>○ Active systemic or local infection</li> <li>○ Osteoporosis or osteopenia (DEXA bone mineral density T-score less than or equal to - 1.0), or vertebral bodies compromised by disease or prior trauma</li> <li>○ Allergy or sensitivity to implant materials</li> <li>○ Isolated lumbar radiculopathy (especially due to herniated disc), or chronic radiculopathy (unremitting especially leg symptoms lasting over 1 year)</li> <li>○ Spinal stenosis, or spinal deformity (scoliosis)</li> <li>○ Spondylolisthesis greater than Grade 1</li> <li>○ Disc degeneration requiring treatment at more than <b>two levels</b></li> <li>○ Severe facet arthrosis or joint degeneration</li> <li>○ Presence of free disc fragment</li> <li>○ Poorly managed psychiatric disorder</li> </ul> </li> </ul> <p>Artificial lumbar disc replacement is considered <b>not medically necessary</b> in all other circumstances, including artificial disc arthroplasty done at more than <b>two</b> spinal levels, and hybrid (combination artificial disc and fusion) procedures.</p> <p><b>NOTE*</b>: Conservative care is focused multi-modal nonoperative treatment that must include a physical therapy/rehabilitation program with cognitive-behavioral components. Treatment may also include</p>



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<p>pain management injections and active exercise programs. This must be clearly outlined in the medical record.</p> <p><b>NOTE**:</b> Contraindications are related to the level being considered for surgery.</p> <p><b>Percutaneous Sacroiliac Joint (SIJ) Fusion</b> (all SIJ fusion surgeries will be reviewed on a case-by-case basis): Because of variable outcomes with fusion surgery, patients should be actively involved in the decision- making process and provided appropriate decision-support materials when considering this intervention.</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present (NASS, 2015; Polly, 2016; Whang, 2019):             <ul style="list-style-type: none"> <li>o Low back/buttock pain that is typically unilateral and caudal to the lumbar spine localized over the SIJ that impairs daily activities for at least 6 months; <b>AND</b></li> <li>o Failure to improve with at least 6 months of appropriate active non-operative treatment that must include medications, PT, and a home exercise program; <b>AND</b></li> <li>o Physical exam demonstrating pain to palpation over the sacral sulcus in the absence of tenderness of similar severity elsewhere; <b>AND</b></li> <li>o Absence of generalized pain behavior; <b>AND</b></li> <li>o Positive pain response to a cluster of 3 provocative tests (e.g., thigh thrust, compression test, Gaenslen’s test, distraction test, Faber test); <b>AND</b></li> <li>o Diagnostic imaging studies that include <b>ALL</b> of the following:                 <ul style="list-style-type: none"> <li>▪ Imaging (plain radiographs and a CT or MRI) of the SI joint that excludes the presence of destructive lesions (e.g., tumor, infection) or inflammatory arthropathy that would not be properly addressed by percutaneous SIJ fusion</li> <li>▪ Imaging of the pelvis (AP plain radiograph) to rule out concomitant hip pathology</li> <li>▪ Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain</li> </ul> </li> </ul> </li> </ul>	<p>pain management injections and active exercise programs. This must be clearly outlined in the medical record.</p> <p><b>NOTE**:</b> Contraindications are related to the levels being considered for surgery.</p> <p><b>Percutaneous Sacroiliac Joint (SIJ) Fusion</b> (all SIJ fusion surgeries will be reviewed on a case-by-case basis): Because of variable outcomes with fusion surgery, patients should be actively involved in the decision- making process and provided appropriate decision-support materials when considering this intervention.</p> <ul style="list-style-type: none"> <li>• When <b>ALL</b> of the following are present (NASS, 2015; Polly, 2016; Whang, 2019):             <ul style="list-style-type: none"> <li>o Low back/buttock pain that is typically unilateral and caudal to the lumbar spine localized over the SIJ that impairs daily activities for at least 6 months; <b>AND</b></li> <li>o Failure to improve with at least 6 months of appropriate active non-operative treatment that must include medications, PT, and a home exercise program; <b>AND</b></li> <li>o Physical exam demonstrating pain to palpation over the sacral sulcus in the absence of tenderness of similar severity elsewhere; <b>AND</b></li> <li>o Absence of generalized pain behavior; <b>AND</b></li> <li>o Positive pain response to a cluster of 3 provocative tests (e.g., thigh thrust, compression test, Gaenslen’s test, distraction test, Faber test); <b>AND</b></li> <li>o Diagnostic imaging studies that include <b>ALL</b> of the following:                 <ul style="list-style-type: none"> <li>▪ Imaging (plain radiographs and a CT or MRI) of the SI joint that excludes the presence of destructive lesions (e.g., tumor, infection) or inflammatory arthropathy that would not be properly addressed by percutaneous SIJ fusion</li> <li>▪ Imaging of the pelvis (AP plain radiograph) to rule out concomitant hip pathology</li> <li>▪ Imaging of the lumbar spine (CT or MRI) to rule out neural compression or other degenerative condition that can be causing low back or buttock pain</li> </ul> </li> </ul> </li> </ul>

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<ul style="list-style-type: none"> <li>▪ Imaging of the SI joint that indicates evidence of injury and/or degeneration; <b>AND</b></li> <li>○ At least 75% reduction of pain for the expected duration of the anesthetic used following an image-guided, contrast - enhanced intra-articular SIJ injection on 2 separate occasions; <b>AND</b></li> <li>○ A trial of at least one therapeutic intra-articular SIJ injection (i.e., corticosteroid injection)</li> </ul> <p><b>NOTE:</b> 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.</p> <p><b>NOTE:</b> This lumbar surgery guideline does not address spinal deformity surgeries or the clinical indications for spinal deformity surgery.</p> <p><b>NOTE:</b> Pre-sacral, axial lumbar interbody fusion (AxialIF) is not an approved surgical approach due to insufficient evidence.</p> <p><b>RELATIVE CONTRAINDICATIONS FOR SPINE SURGERY</b> (NOTE: Cases <b>will</b> not be approved if the below contraindications exist):</p> <ul style="list-style-type: none"> <li>• <b>Medical contraindications</b> 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 (Puvanesarajah, 2016).</li> <li>• <b>Psychosocial risk factors.</b> 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 (Kreiner, 2014). Patients with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be</li> </ul>	<ul style="list-style-type: none"> <li>▪ Imaging of the SI joint that indicates evidence of injury and/or degeneration; <b>AND</b></li> <li>○ At least 75% reduction of pain for the expected duration of the anesthetic used following an image-guided, contrast - enhanced intra-articular SIJ injection on 2 separate occasions; <b>AND</b></li> <li>○ A trial of at least one therapeutic intra-articular SIJ injection (i.e., corticosteroid injection)</li> </ul> <p><b>NOTE:</b> 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.</p> <p><b>NOTE:</b> This lumbar surgery guideline does not address spinal deformity surgeries or the clinical indications for spinal deformity surgery.</p> <p><b>NOTE:</b> Pre-sacral, axial lumbar interbody fusion (AxialIF) is not an approved surgical approach due to insufficient evidence.</p> <p><b>RELATIVE CONTRAINDICATIONS FOR SPINE SURGERY</b> (NOTE: Cases <b>may</b> not be approved if the below contraindications exist):</p> <ul style="list-style-type: none"> <li>• <b>Medical contraindications</b> 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 (Puvanesarajah, 2016).</li> <li>• <b>Psychosocial risk factors.</b> 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 (Kreiner, 2014). Patients with clinically significant depression or other psychiatric disorders being considered for elective spine surgery will be</li> </ul>

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<p>reviewed on a case-by-case basis and the surgery may be denied for risk of failure.</p> <ul style="list-style-type: none"> <li>• <b>Active Tobacco or Nicotine</b> use prior to fusion surgery. Patients 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 (Andersen, 2001; Glassman, 2000; Jackson, 2016; Patel, 2013; <b>Hermann, 2016</b>).</li> <li>• <b>Morbid Obesity</b>. 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 (Epstein, 2017). These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure</li> </ul>	<p>reviewed on a case-by-case basis and the surgery may be denied for risk of failure.</p> <ul style="list-style-type: none"> <li>• <b>Active Tobacco or Nicotine</b> use prior to fusion surgery. Patients 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 (Andersen, 2001; Glassman, 2000; <b>Hermann, 2016</b>; Jackson, 2016; Patel, 2013).</li> <li>• <b>Morbid Obesity</b>. 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 (Epstein, 2017). These cases will be reviewed on a case-by-case basis and may be denied given the risk of failure</li> </ul>