Priority Health

MEDICAL POLICY
No. 91581-R22

SPINE PROCEDURES

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Related policies: *Neuroablation for Pain Management* # 91647

Summary of Changes

- Deletions: Moved radiofrequency ablation for back pain criteria to *Neuroablation for Pain Management* medical policy#91647

I. POLICY/CRITERIA

A. Artificial Intervertebral Discs

1. **Artificial intervertebral cervical discs** are medically necessary according to TurningPoint
2. **Artificial lumbar discs** are medically necessary when TurningPoint criteria are met.

B. Cervical Decompression with or without fusion: The following are medically necessary according to TurningPoint criteria:

1. Anterior Cervical Discectomy and Fusion (ACDF)
2. Cervical Corpectomy
3. Cervical Fusion
4. Cervical Hemilaminectomy (Laminotomy) with or without Discectomy
5. Cervical Laminectomy
6. Cervical Laminoplasty

C. Cervical Spine Fusion procedures are medically necessary according to TurningPoint criteria.

D. Kyphoplasty or Vertebroplasty: Percutaneous Vertebroplasty and Kyphoplasty are medically necessary according to TurningPoint criteria.

E. Lumbar Decompression with or without Fusion: The following are medically necessary according to TurningPoint criteria:

1. Lumbar Fusion
2. Lumbar Hemilaminectomy (Laminotomy) with or without Discectomy
3. Lumbar Laminectomy

F. Lumbar Spine Fusion procedures are medically necessary according to TurningPoint criteria.

G. Sacroiliac Joint (SI) Fusion:

1. Sacroiliac joint fusion (open or minimally invasive percutaneous procedure including implants (e.g., iFuse implant system) are medically necessary according to TurningPoint criteria.
2. Posterior sacroiliac joint fusion with placement of intra-articular implant (e.g. CornerLoc, TransFasten, LinQ, allograft) without the placement of transfixation device is experimental and investigation and not medically necessary.

H. Scoliosis

1. Surgery for adults and pediatric members are medically necessary according to TurningPoint criteria.
2. The Tether - Vertebral Body Tethering System is medically necessary according to TurningPoint criteria.

I. Thoracic Spine Fusion is medically necessary according to TurningPoint criteria.

J. Thoracic Decompression with or without fusion: The following are medically necessary according to TurningPoint criteria.

1. Thoracic Fusion
2. Thoracic Laminectomy

K. Automated Percutaneous Lumbar Discectomy (APLD) and Lumbar Discectomy procedures listed below are medically necessary according to TurningPoint criteria:

1. Automated percutaneous lumbar discectomy (APLD)
2. Percutaneous discectomies at levels other than lumbar (i.e., cervical or thoracic), and done manually or with a laser.
3. DISC Nucleoplasty
4. Intradiscal Thermal Annuloplasty
5. Microendoscopic discectomy (MED) procedure for decompression of lumbar spine stenosis, lumbar disc herniation, or other indications
6. Percutaneous endoscopic diskectomy with or without laser (PELD) (also known as arthroscopic microdiskectomy or Yeung Endoscopic Spinal Surgery System (Y.E.S.S.)
7. Percutaneous lumbar discectomy or laser-assisted disc decompression (LADD)
8. Percutaneous HydroDiskectomy Surgical Technique /HydroCision/SpineJet HydroSurgery System

L. AxiaLIF® Axial Lumbar Interbody Fusion: The AxiaLIF® axial lumbar interbody fusion system is medically necessary according to TurningPoint criteria.

M. Coflex® Interlaminar Stabilization Device for lumbar spinal stenosis is medically necessary according to TurningPoint criteria.

N. **Superion Interspinous Spacer** (Vertiflex) is medically necessary according to TurningPoint criteria.

O. **Concentrated Bone Marrow Aspirate for Spinal Surgery**: Concentrated bone marrow aspirate for spinal surgery is medically necessary according to TurningPoint criteria

P. **Intradiscal electrothermal therapy (IDET) and other Thermal Intradiscal Procedures (TIPs)** procedures including but not limited to the following are medically necessary according to TurningPoint criteria:

1. Intradiscal electrothermal therapy (IDET)
2. Intradiscal electrothermal annuloplasty (IEA)
3. Intradiscal thermal annuloplasty (IDTA)
4. Percutaneous intradiscal radiofrequency thermocoagulation (PIRFT)
5. Percutaneous radiofrequency thermomodulation
6. Coblation percutaneous disc decompression
7. Nucleoplasty
8. Radiofrequency annuloplasty (RA)
9. Intradiscal biacuplasty (IDB)
10. Percutaneous (or plasma) disc decompression (PDD)
11. Targeted disc decompression (TDD)

TIPs may also be identified or labeled based on the name of the catheter/probe that is used (e.g., SpineCath, discTRODE, Accuthem, or TransDiscal electrodes)

II. MEDICAL NECESSITY REVIEW

Prior authorization for certain drug, services, and procedures may or may not be required. In cases where prior authorization is required, providers will submit a request demonstrating that a drug, service, or procedure is medically necessary. For more information, please refer to the Priority Health Provider Manual.

To access TurningPoint guidelines: Log into Priority Health Prism → Authorizations → Authorization Criteria Lookup.

III. APPLICATION TO PRODUCTS

Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

- **HMO/EPO:** ***This policy applies to insured HMO/EPO plans.***
- **POS:** ***This policy applies to insured POS plans.***
- **PPO:** ***This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.***

- **ASO:** ***For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.***
- **INDIVIDUAL:** ***For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.***
- **MEDICARE:** ***Coverage is determined by the Centers for Medicare and Medicaid Services (CMS) and/or the Evidence of Coverage (EOC); if a coverage determination has not been adopted by CMS, this policy applies.***
- **MEDICAID/HEALTHY MICHIGAN PLAN:** ***For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.***

IV. BACKGROUND

Artificial Intervertebral Discs

When conservative treatment of degenerative disc disease fails, a common surgical approach is spinal fusion; over 200,000 spinal fusions are performed each year. However, the outcomes of spinal fusion have been controversial over the years, in part due to the difficulty in determining whether a patient's back pain is related to degenerative disc disease, and in part due to the success of the procedure itself. Additionally, spinal fusion alters the biomechanics of the back, potentially leading to premature disc degeneration at adjacent levels, a particular concern for younger patients. As an alternative, a variety of artificial intervertebral discs have been investigated over the past thirty years. This approach, also referred to as total disc replacement or spinal arthroplasty, is intended to maintain motion at the operative level once the damaged disc has been removed, and to maintain the normal biomechanics of the adjacent vertebrae.

The major potential advantage of a prosthetic intervertebral disc over current therapies for degenerated disks (such as spinal fusion or diskectomy) is that the prosthetic intervertebral disk is intended to restore or preserve the natural biomechanics of the intervertebral segment and to reduce further degeneration of adjacent levels. Investigators have found, however, that creation of an intervertebral disc prosthesis poses significant challenges with respect to prosthetic design and materials:

- The biomechanics of the intervertebral segment are difficult to replicate.
- It is a challenge to find materials that are both biocompatible and effective.
- The prosthetic disc should achieve long-term mechanical fixation.

Several moderate-size randomized controlled trials (RCTs) comparing different types of artificial cervical discs with anterior cervical discectomy and fusion (ACDF) have been published. Evidence to date demonstrates that total disc replacement (TDR) is at least as effective as ACDF in improving signs and symptoms associated with degenerative disease and improving quality of life (QOL) for up to 2 years. The evidence also shows that total disc replacement (TDR) reduces the need for reoperation. Low-quality evidence suggests that TDR reduces the risk of new adjacent segment disease (ASD) but may have higher rates of intraoperative and perioperative complications. Reliable follow-up data for more than 3 years are lacking, which is an especially serious limitation regarding the evidence for the intended advantage of TDR (reduction in long-term ASD).

LTDR is supposed to restore disc height and relieves pain without restricting motion at the diseased spinal level. Unlike, single-level LTDR, multilevel LTDR is controversial due to inconsistent long-term results. Trincat et al (2015) evaluated the perioperative complications and functional outcomes in patients who underwent two-level LTDR after a minimum follow-up of 2 years. The authors concluded that two-level LTDR resulted in satisfactory functional outcomes, while preserving motion in the operated segment in most patients. The range of motion was similar at L3/L4 and L4/L5 but was less at L5/S1. However, prospective randomized studies are needed to properly compare multilevel TDR with hybrid constructs (Trincat, 2015). Long-term treatment durability is still unknown and requires further investigation.

Cervical Spine Fusion and Decompression

Spinal cord compression may occur because of an acute central herniated disc, trauma, tumor, infection, or hematoma and usually causes bilateral symptoms. Spinal nerve roots and compression are associated with a specific spinal column level. Compression of the C5 nerve root occurs at the C4−C5 level; C6 compression at C5−C6; C7 compression at C6−C7; and C8 compression occurs at the C7−T1 level. Compression of the nerve may be described as neural compression, nerve root impingement, or nerve root entrapment. Spinal neurologic deficits are sensory or motor abnormalities due to neurocompression of either the spinal cord or nerve root and can include muscle weakness, paralysis, or paresthesias. Unlike lumbar radiculopathy, the pain of cervical nerve root compression is usually not well−localized to the distribution of a particular nerve root. When present, decompression of the affected nerve should be considered. Decompressive surgery may be accompanied by a spinal fusion when the decompression causes instability or there is documentation of instability.

Laminectomy (lamina removal), with or without fusion, and laminoplasty (making a hinge on one side of the lamina to create more space) are surgical options for the treatment of cervical spinal cord compression; outcomes following both procedures are similar. Laminoplasty allows for direct posterior decompression, preserving the lamina and dorsal elements to avoid instability. It is used for the treatment of ossification of the

posterior longitudinal ligament, spondylotic myelopathy (i.e., osteophytes), congenital spinal stenosis with posterior compression, spinal malformations, or tumors. Hemilaminectomy and laminectomy include any concomitant procedure needed to ensure a successful decompression, including facetectomy, foraminotomy, or discectomy.

Kyphoplasty and Vertebroplasty

Percutaneous vertebroplasty is an interventional radiologic procedure that involves injection of bone cement into an osteolytic or osteoporotic vertebral body compression fracture with the goal of relieving pain, improving mobility, and preventing further collapse of the bone.

Two RCTs published in the *New England Journal of Medicine* have found no significant benefit with vertebroplasty. In the Investigational Vertebroplasty Safety and Efficacy Trial (INVEST), Kallmes et al (2009) reported that pain and disability outcomes at 1 month in a group of patients who underwent vertebroplasty were similar to those in a control group that underwent a sham procedure. In the other trial, Buchbinder et al (2009) measured pain, quality of life, and functional status at 1 week and at 1, 3, and 6 months after sham and active vertebroplasty and found there were no significant between-group differences at any time point. As in INVEST, patients in the 2 study groups had improvement in pain.

In Lancet (2010) VERTOSS 2 trial found vertebroplasty resulted in greater pain relief than did conservative treatment with a difference in mean VAS score between baseline and 1 month was -5.2 (95% CI -5.88 to -4.72) after vertebroplasty and -2.7 (-3.22 to -1.98) after conservative treatment, and between baseline and 1 year was -5.7 (-6.22 to -4.89) after vertebroplasty and -3.7 (-4.35 to -3.05) after conservative treatment. The difference between groups in reduction of mean VAS score from baseline was 2.6 (95% CI 1.74-3.37, $p<0.00001$) at 1 month and 2.0 (1.13-2.80, $p<0.00001$) at 1 year. No serious complications or adverse events were reported. Researchers conclude pain relief after vertebroplasty is immediate, sustained, and greater than achieved with conservative treatment.

Kyphoplasty is a modification of the vertebroplasty procedure that involves use of an inflatable bone tamp to reduce the fracture prior to injection of the bone cement. The goal of this additional step is to restore height to the bone, thus reducing deformity of the spine.

Lumbar Decompression and Fusion

Spinal fusion involves placing a bone graft between spinal vertebrae to promote healing, often using plates, screws, or rods to hold the vertebrae and graft in place. A substrate of healthy bone is necessary to assure success of a bone fusion. Once the bone graft heals, the vertebrae are permanently connected and motion between them is eliminated. Anterior, posterior, and lateral spinal fusion are performed for instability.

Lumbar spinal fusion for painful degenerative disc disease became an alternative to conservative treatment when early studies suggested that fusion reduced pain and decreased disability; however, there continues to be debate and a lack of consensus regarding the efficacy of fusion compared to conservative treatment. Even with careful patient selection, there is disagreement in the literature about performing lumbar fusion for degenerative disc disease and a lack of high-quality evidence regarding its efficacy compared to conservative treatment. The North American Spine Society acknowledges the controversy surrounding surgery but concluded that fusion may be moderately effective treatment after careful patient selection and only recommends it for single level degenerative disc disease that is unresponsive to conservative treatment.

Scoliosis

Scoliosis can affect multiple levels in both the lumbar and thoracic spine. The goal of scoliosis surgery is to correct a lateral curvature by fusing the vertebrae along the curve using interbody bone grafts that are supported by a variety of hardware, including pedicle screws, hooks, wires, and rods of various stiffness and strength characteristics. Larger, more rigid curves may require a staged anterior fusion without instrumentation followed by a posterior spinal fusion with instrumentation.

Adults with scoliosis typically present with back pain that is localized over the convexity of the curve and is believed to be caused by muscle spasm and fatigue. Standing anterior-posterior (AP) and lateral x−rays of the entire spine should be done in the initial imaging evaluation of scoliosis.

The radiographs are measured in degrees using the Cobb method to determine the magnitude of the curve. A straight spine has a curve of 0 degrees; any curve greater than 10 degrees is considered to be scoliosis. Patients with a Cobb angle of 45 degrees or more are at higher risk of health problems, decreased quality of life, disability, pain, and progressive functional limitations and are usually treated with surgery. Adolescents with a Cobb angle 25 degrees or greater but less than 45 degrees are initially treated with bracing to halt curve progression. Patients are followed at regular intervals, especially during growth spurts, to check for curve progression. Adolescents whose scoliotic curve is increasing despite the use of a brace, when tolerated, may require surgery to prevent further deformity. Most studies comparing bracing with observation report that bracing prevents curve progression, but the strength of the evidence is weak.

Thoracic Decompression and Fusion

Thoracic myelopathy is far less commonly seen than cervical myelopathy but can result from disc herniation or spinal stenosis. The essential finding of thoracic myelopathy is muscle weakness distal to the lesion. A common manifestation is gait disturbance. Corroborative neurologic symptoms and findings are hyperreflexia, clonus, numbness, or paresthesias in the legs. Acute progressive neurological symptoms require immediate

surgical intervention and laminectomy, with or without fusion, is most frequently done. The inherent stability provided by the thoracic rib cage makes fusion for thoracic disc disease unnecessary for most patients. However, when decompressive surgery causes instability, fusion may accompany the surgery. Fusion is recommended when decompression surgery involves multiple levels or when posterior stabilizing bone is resected.

Automated Percutaneous Lumbar Discectomy (APLD)
Percutaneous discectomy is a minimally invasive approach performed for disc herniation causing neurocompression. The percutaneous technique typically is compared with open discectomy or microdiscectomy, procedures that may or may not utilize microscope or loupe magnification to visualize disc pathology and access the site of nerve root compression.

Automated percutaneous lumbar discectomy (APLD) is a minimally invasive surgical technique for treatment of herniated lumbar intervertebral discs. For this procedure, a thin, blunt-tipped suction and cutting probe is inserted through the skin, and the end of the probe is placed into the middle of the herniated disc under fluoroscopic guidance. This device is then used to remove some or all of the degenerated portion of the center of the disc. The goal of this procedure is to relieve pressure on nerve roots without damaging surrounding tissues, thereby minimizing postoperative complications and morbidity. APLD is intended as an alternative to chemonucleolysis, open discectomy, or other types of percutaneous discectomy for individuals who have a relatively small degree of lumbar disc protrusion without fragmentation or complete extrusion of disc material and who have failed conservative therapy.

The Stryker DeKompressor Percutaneous Discectomy Probe (Stryker) and the Nucleotome (Clarus Medical) are examples of percutaneous discectomy devices that received clearance from the U.S. Food and Drug Administration (FDA) through the 510(k) process. Both have the same labeled intended use, i.e., “for use in aspiration of disc material during percutaneous discectomies in the lumbar, thoracic and cervical regions of the spine.”

The overall quality of evidence regarding the efficacy of APLD is relatively poor, consisting primarily of uncontrolled studies, retrospective studies, and case series reports, with only two randomized trials comparing APLD with other treatment methods.

Some of the uncontrolled prospective studies and large case series reports describe a relatively high initial success rate for APLD in patients with herniated lumbar discs and no free disc fragments. However, other studies report much lower success rates in similar patient groups. Moreover, results with APLD were clearly inferior when directly compared with results obtained with chemonucleolysis or microdiscectomy. In

addition, several studies with periodic scheduled follow-up documented a decline in treatment effect over the first year, suggesting that the benefits of APLD may not be long lasting. The immediate benefits described after APLD may result from a reduction in inflammatory substances at the herniation site after the saline lavage that occurs during the procedure. This hypothesis is supported by reports that there is an immuno-competent cellular response at the epidural interface of lumbar herniations and the identification of high levels of phospholipase A_2, an inflammatory enzyme, in herniated and degenerative discs (Saal, 1995). Therefore, the action of APLD may be to remove inflammatory mediators, at least temporarily, and thereby reduce the symptoms associated with the herniated disc rather than to reduce significantly the bulk of the herniated disc material. Further studies of APLD, with appropriate controls and length of follow-up, are needed before conclusions regarding efficacy can be made.

An important issue that was not addressed in any of the reviewed studies is the outcome of lumbar disc herniation in patients who are treated with medical therapy alone. Since the studies evaluating APLD did not include a control group of medically treated patients, and, in some cases, patients had received only 6 to 8 weeks of some kind of conservative therapy, it is not known if APLD improved the outcome or enhanced the speed of recovery compared with medical treatment alone. This issue is relevant in evaluation of all surgical treatments for disc herniation and will only be resolved by randomized trials that include a medical treatment control group.

AxiaLIF™ Axial Lumbar Interbody Fusion

The AxiaLIF™ axial lumbar interbody fusion system is manufactured by TranS1® Inc. of Wilmington, NC. The system consists of instruments designed to allow minimally invasive presacral access to the lumbar spine. The AxiaLIF™ System enables surgeons to access the surgical area via small incisions, decreasing the degree of soft-tissue injury and trauma to the patient. The system includes stainless steel and titanium surgical instruments, titanium alloy implantable devices, and a proprietary anterior fixation rod (3D Axial Rod™). AxiaLIF™ is used for decompression, distraction and spinal fusion at the L5-S1 junction in conjunction with facet and pedicle screw systems. It is used to treat a variety of disorders including pseudoarthrosis, spinal stenosis, Grade 1 or 2 spondylolisthesis, unsuccessful previous fusion, or degenerative disc disease.

The FDA issued 510(k) approval (K050965) for the TranS1® AxiaLIF™ System on June 14, 2005. It is listed as substantially equivalent to another product developed by TranS1, the TranS1 Axial Fixation System (K040426), which was approved on December 17, 2004. According to the FDA approval summary, the AxiaLIF™ system is an anterior spinal fixation device intended for patients requiring spinal fusion to treat pseudoarthrosis, unsuccessful previous fusion, spinal stenosis, spondylolisthesis (Grade 1or 2), or degenerative disc disease defined as back pain of discogenic origin with degeneration of the disc confirmed by history and radiographic studies. The device is not intended to treat severe scoliosis, severe spondylolisthesis (Grades 3 and 4), tumor

or trauma. Its usage is limited to anterior supplemental fixation of the lumbar spine at L5-S1 in conjunction with legally marketed facet and pedicle screw systems.

IDET and Other Thermal Intradiscal Procedures (TIPs)
Intradiscal electrothermal annuloplasty (IDET) is a minimally invasive surgical procedure developed for the treatment of chronic discogenic low back pain. Thermocoagulation of one or more defective intervertebral discs is accomplished using a percutaneously inserted catheter with a heating element enclosed in the tip. IDET is an outpatient procedure done under local anesthetic. The goal of the procedure is shrinkage of the disc material and destruction of the annular nerve receptors with the desired result of decreasing nerve root compression and pain from the degenerative discs.

In addition to IDET, other thermal intradiscal procedures (TIPs) are available including PIRFT (percutaneous intradiscal radiofrequency thermocoagulation), annuloplasty (electrothermal or thermal), nucleoplasty, and disc biacuplasty. These various TIPs techniques use heat and/or disruption, seeking the same desired outcome of pain relief. Numerous catheters have FDA approval for use in intradiscal thermal procedures. The devices for discogenic back pain in the TIPs' category utilize the transfer of energy to heat
and/or disruption in the cartilaginous disc to treat back pain. All of these devices passed through the FDA under 510(K), meaning that they were found to be substantially equivalent to previous devices without the requirement of clinical trials.
The Centers for Medicare and Medicaid Services (CMS) issued a national noncoverage determination for IDET and other TIPs in September 2008. Noncoverage decision was made by CMS following review of the clinical evidence and determination that the mechanism of action of the TIPs is unclear and the evidence did not demonstrate improved outcomes. (Decision Memo for Thermal Intradiscal Procedures, September 29, 2008.)

Interlaminar Stabilization
The Coflex Interlaminar Stabilization device is a functionally dynamic, implantable, titanium interspinous process device (IPD) that is intended to limit lumbar spinal extension in order to maintain direct neurological decompression, unload the facet joints, and stabilize the motion segment at the treated vertebral level(s). The coflex is a U-shaped implant with 2 pairs of serrated wings extending from the upper and lower long arms of the U. The U portion is inserted horizontally between 2 adjacent spinous processes. The wings are crimped over bone to hold the implant in place. The device is implanted on the lamina after decompression of stenosis at the affected level(s) (Hayes, Inc. 2018).

Interspinous spacer devices or interspinous process fixation devices (IPFDs) are placed between adjacent spinous processes via a minimally invasive spinal fusion procedure to separate the processes, with the intention of reducing compression of the nerves between them, restoring the height of the intervertebral space, and providing similar

stabilization to pedicle screws but with less tissue dissection and vertebral trauma (Lopez et al., 2017; Pintauro et al., 2017). IPFDs are made of strong, lightweight materials (e.g., titanium) and implanted between vertebral spinous processes to limit painful motion while enabling normal motion for the treatment of lumbar spine pathologies, including herniations, degenerative disc diseases, facet syndrome, and nontraumatic instability. IPFDs are intended to replace pedicle screws and rods to augment spinal fusion procedures. IPFDs are not intended as a stand-alone procedure but as a component of spinal fusion.

Interspinous Spacer Devices

In lumbar spinal stenosis, the dural sac and nerve roots are often compressed by one or a combination of bulging intervertebral discs, facet joint hypertrophy, and ligamentum flavum hypertrophy (Urban, 2003). For patients who are refractory to conservative or medical therapy, the traditional surgical approach has been bony decompression, such as via a laminectomy using an open or minimally invasive access (Phan, 2016). The Superion Interspinous Spacer System or the Vertiflex Procedure for the treatment of lumbar spinal stenosis is a one-piece, fully assembled implant designed to fit between the spinous processes of the lumbar spine. Once the implant is in place, an actuation mechanism opens the implant to provide distraction and minimize flexion in the targeted spinal region. The device may be implanted at 1 or 2 adjacent levels from lumbar vertebrae 1 (L1) to L5 to expand the space between the vertebral spinous processes. It is intended to create space between the spinous processes and limit extension, thereby enlarging the neural foramen to reduce symptoms of neural claudication and thereby relieving pain in patients with spinal stenosis and neurogenic claudication (Hayes, 2023). Boston Scientific Corporation acquired Vertiflex Inc in June of 2019. Boston Scientific brands the procedure as the "Vertiflex Procedure." One comparative study compared Superion Interspinous Spacer with X-Stop (Medtronic), which is no longer commercially available in the United States (Bini, 2012). Currently published studies do not demonstrate equal or superior benefits or advantages over commercially available alternatives or fusion surgery (Bini et al. (2011); Shabat et al. (2011); Tekmyster et al. (2019). Welton et al (2021) conducted a retrospective review to compared the short-term complications of the Superion interspinous spacer (SISS) with laminectomy or laminotomy and highlight device-specific long-term outcomes with SISS. The authors concluded that rates of 30-day complications in the SISS group were not significantly different from patients undergoing laminectomy or laminotomy.

Percutaneous Image-Guided Lumbar Decompression (PILD) and minimally invasive lumbar decompression (MILD®)

Percutaneous Image-Guided Lumbar Decompression (PILD) is a posterior decompression of the lumbar spine performed under indirect image guidance without any direct visualization of the surgical area. The procedure proposed is as a treatment for symptomatic lumbar spinal stenosis (LSS) unresponsive to conservative therapy.

This procedure is generally described as a non-invasive procedure using specially designed instruments to percutaneously remove a portion of the lamina and debulk the ligamentum flavum. The procedure is performed under x-ray guidance (e.g., fluoroscopic, CT) with the assistance of contrast media to identify and monitor the compressed area via epiduragram. According to Centers for Medicare & Medicaid Services (CMS) National Coverage Determination (NCD)**:** Percutaneous Image-Guided Lumbar Decompression for Lumbar Spinal Stenosis (150.13) CMS will cover percutaneous image-guided lumbar decompression (PILD) when provided in the setting of a clinical study. CMS will cover through a prospective, longitudinal study PILD procedures using a Food and Drug Administration (FDA)-approved/cleared device that completed a CMS-approved randomized control trial meeting certain criteria.

Minimally invasive lumbar decompression (MILD®) procedure is a PILD method that uses a proprietary surgical kit by Vertos Medical Inc. to increase the dimensions of the spinal canal by debulking the hypertrophied ligamentum flavum and possibly small amounts of the lamina, thereby achieving nerve or canal decompression. The mild procedure is a fluoroscopically guided surgery that uses a small portal to access the spine. The debulking reduces pressure, which alleviates symptoms such as pain, numbness, and muscle weakness. MILD is intended for the treatment of adults who are symptomatic for lumbar spinal stenosis (LSS) primarily due to hypertrophy of the ligamentum flavum (HLF). Patients had statistically significant and clinically significant improvement in pain, disability, and function compared with baseline that lasted for up to 1 to 2 years, but it is uncertain whether there is a longer durability of effect or whether mild improved quality of life. More long-term research comparing minimally invasive decompression to open surgical approaches is needed to determine the clinical benefit.

Posterior Sacroiliac Joint Fusion

Minimally invasive posterior SIJ fusion attempts to stabilize the joint by fusing the sacrum to the ilium with bone allografts or metallic implant by limiting movement of the joint with the intent of reducing disability and pain (Lorio et al., 2020; Martin et al., 2020; Himstead et al., 2021). The posterior (dorsal) SIJ fusion procedure is distinct from lateral and posterolateral transiliac surgical approaches to minimally invasive or open SIJ fusion. The International Society for the Advancement of Spine Surgery (ISASS) (Lorio et al., 2020) states, "There is no safety or effectiveness literature supporting the use of the latest generation of bone allograft products for posterior [minimally invasive surgery(surgical) (MIS)] [sacroiliac joint fusion (SIJF)]". Current studies lacked a control or comparator group and do not inform how minimally invasive posterior SIJ fusion using engineered bone allografts compares with other minimally invasive and open surgical approaches.

V. CODING INFORMATION

A. Artificial Intervertebral Discs

ICD-10 Codes that may apply:

G54.2	Cervical root disorders, not elsewhere classified
G54.9	Nerve root and plexus disorder, unspecified
M46.41 – M46.43	Discitis, unspecified
M47.011 – M47.029	Anterior spinal artery compression syndromes
M47.11 – M47.13	Other spondylosis with myelopathy, head and neck
M48.01 – M48.03	Spinal stenosis, head and neck
M50.00 – M50.93	Cervical disc
M99.20	Subluxation stenosis of neural canal of head region
M99.21	Subluxation stenosis of neural canal of cervical region
M99.30	Osseous stenosis of neural canal of head region
M99.31	Osseous stenosis of neural canal of cervical region
M99.40	Connective tissue stenosis of neural canal of head region
M99.41	Connective tissue stenosis of neural canal of cervical region
M99.50	Intervertebral disc stenosis of neural canal of head region
M99.51	Intervertebral disc stenosis of neural canal of cervical region
M99.60	Osseous and subluxation stenosis of intervertebral foramina of head region
M99.61	Osseous and subluxation stenosis of intervertebral foramina of cervical region
M99.70	Connective tissue and disc stenosis of intervertebral foramina of head region
M99.71	Connective tissue and disc stenosis of intervertebral foramina of cervical region

CPT/HCPCS Codes

22849	Reinsertion of spinal fixation device
22856	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection), single interspace, cervical
22857	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression); single interspace, lumbar
22858	Total disc arthroplasty (artificial disc), anterior approach, including discectomy with end plate preparation (includes osteophytectomy for nerve root or spinal cord decompression and microdissection); second level, cervical (List separately in addition to code for primary procedure)
22860	Total disc arthroplasty (artificial disc), anterior approach, including discectomy to prepare interspace (other than for decompression); second interspace, lumbar (List separately in addition to code for primary procedure)
22861	Revision including replacement of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical
22862	Revision including replacement of total disc arthroplasty (artificial disc) anterior approach, lumbar, single interspace
22864	Removal of total disc arthroplasty (artificial disc), anterior approach, single interspace; cervical
22865	Removal of total disc arthroplasty (artificial disc), anterior approach, lumbar, single interspace

0095T	Removal of total disc arthroplasty, anterior approach, each additional interspace, cervical (List separately in addition to code for primary procedure) *(Not covered for Priority Medicaid) (No prior authorization required)*
0098T	Revision including replacement of total disc arthroplasty, anterior approach, each additional interspace, cervical (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)

B. Cervical Spine Decompression and Fusion

20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (List separately in addition to code for primary procedure)
20931	Allograft, structural, for spine surgery only (List separately in addition to code for primary procedure)
20936	Autograft for spine surgery only (includes harvesting the graft); local (eg, ribs, spinous process, or laminar fragments) obtained from same incision (List separately in addition to code for primary procedure)
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
20938	Autograft for spine surgery only (includes harvesting the graft); structural, bicortical or tricortical (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
22100	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; cervical
22110	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; cervical
22548	Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), with or without excision of odontoid process
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2
22552	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2, each additional interspace (List separately in addition to code for separate procedure)
22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below c2
22590	Arthrodesis, posterior technique, craniocervical (occiput-C2)
22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)
22600	Arthrodesis, posterior or posterolateral technique, single level; cervical below c2 segment
22840	Posterior non-segmental instrumentation (eg, Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation,

	sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841	Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure)
22846	Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22853	Insertion of interbody biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854	Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
63001	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), 1 or 2 vertebral segments; cervical
63020	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical
63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, including open and endoscopically-assisted approaches; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure)
63040	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; cervical
63043	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, forminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional cervical interspace (list separately in addition to code for primary procedure)
63045	Laminectomy, facetectomy and forminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis], single vertebral segment; cervical
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)
63050	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments
63051	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; with reconstruction of the posterior bony elements (including

	the application of bridging bone graft and non-segmental fixation devices (e.g., wire, suture, mini-plates), when performed)
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)
63075	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, single interspace
63076	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, each additional interspace (list separately in addition to code for primary procedure)
63081	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment
63082	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, each additional segment (List separately in addition to code for primary procedure)
63250	Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; cervical
63265	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; cervical
63270	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; cervical
63275	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, cervical
63280	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, cervical
63285	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, cervical
63304	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, cervical

C. Kyphoplasty and Vertebroplasty

ICD-10 Codes that <u>may</u> apply:

C79.52	Secondary malignant neoplasm of bone marrow
D18.09	Hemangioma of other sites
D47.Z9	Other specified neoplasms of uncertain behavior of lymphoid, hematopoietic and related tissue
C88.8	Other malignant immunoproliferative diseases
C94.40	Acute panmyelosis with myelofibrosis not having achieved remission
C94.41	Acute panmyelosis with myelofibrosis, in remission
C94.42	Acute panmyelosis with myelofibrosis, in relapse
C94.6	Myelodysplastic disease, not classified
D47.1	Chronic myeloproliferative disease
D47.9	Neoplasm of uncertain behavior of lymphoid, hematopoietic and related tissue, unspecified
D47.Z9	Other specified neoplasms of uncertain behavior of lymphoid, hematopoietic and related tissue
M48.50xA – M48.58	Collapsed vertebra

M80.08xA – M80.08xS	Age-related osteoporosis with current pathological fracture, vertebra(e)
M80.88xA – M80.88xS	Other osteoporosis with current pathological fracture, vertebra(e)
M81.0 – M81.8	Age-related osteoporosis without current pathological fracture
M84.48xA – M84.48xS	Pathological fracture, other site
M84.58xA - M84.58xS	Pathological fracture in neoplastic disease
M84.68xA - M84.68xS	Pathological fracture in other disease
S22.000A – S22.089S	Fracture of vertebrae, thoracic
S23.100A – S23.100A	Subluxation and dislocation, thoracic vertebrae
S32.000A – S32.059S	Fracture of vertebrae, lumbar
T50.905	Adverse effect of unspecified drugs, medicaments and biological substances

CPT/HCPCS Codes:

Kyphoplasty:

22513 Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; thoracic

22514 Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; lumbar

22515 Percutaneous vertebral augmentation, including cavity creation (fracture reduction and bone biopsy included when performed) using mechanical device (e.g., kyphoplasty), 1 vertebral body, unilateral or bilateral cannulation, inclusive of all imaging guidance; each additional thoracic or lumbar vertebral body (List separately in addition to code for primary procedure)

D. Vertebroplasty:

22510 Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; cervicothoracic

22511 Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; lumbosacral

22512 Percutaneous vertebroplasty (bone biopsy included when performed), 1 vertebral body, unilateral or bilateral injection, inclusive of all imaging guidance; each additional cervicothoracic or lumbosacral vertebral body (List separately in addition to code for primary procedure)

0200T Percutaneous sacral augmentation (sacroplasty), unilateral injection(s), including the use of a balloon or mechanical device, when used, 1 or more needles includes imaging guidance and bone biopsy, when performed

0201T Percutaneous sacral augmentation (sacroplasty), bilateral injections, including the use of a balloon or mechanical device , when used, 2 or more needles, includes imaging guidance and bone biopsy, when performed

C1062 Intravertebral body fracture augmentation with implant (e.g., metal, polymer)

E. Sacroiliac (SI) Joint fusion & SI Joint injection

ICD-10 Codes that may apply:

M46.1	Sacroiliitis, not elsewhere classified
M99.14	Subluxation complex (vertebral) of sacral region
M53.88	Other specified dorsopathies, sacral and sacrococcygeal region
S33.6XXS	Sprain of sacroiliac joint, sequela
S33.2XXS	Dislocation of sacroiliac and sacrococcygeal joint, sequela

CPT/HCPCS Codes

27278 Arthrodesis, sacroiliac joint, percutaneous, with image guidance, including placement of intra-articular implant(s) (eg, bone allograft[s], synthetic device[s]), without placement of transfixation device

27279 Arthrodesis, sacroiliac joint, percutaneous or minimally invasive (indirect visualization), with image guidance, includes obtaining bone graft when performed, and placement of transfixing device

27280 Arthrodesis, sacroiliac joint, open, includes obtaining bone graft, including instrumentation, when performed

64451 Injection(s), anesthetic agent(s) and/or steroid; nerves innervating the sacroiliac joint, with image guidance (i.e., fluoroscopy or computed tomography)
(No Prior Authorization required)

C1737 Joint fusion and fixation device(s), sacroiliac and pelvis, including all system components (implantable)

Not covered

64625 Radiofrequency ablation, nerves innervating the sacroiliac joint, with image guidance (i.e., fluoroscopy or computed tomography)

F. Scoliosis Surgery

22800 Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments

22802 Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments

22804 Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments

22808 Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments

22810 Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments

22812 Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments

22818 Kyphectomy, circumferential exposure of spine and resection of vertebral segment(s) (including body and posterior elements); single or 2 segments

22819 Kyphectomy, circumferential exposure of spine and resection of vertebral segment(s) (including body and posterior elements); 3 or more segments

22830 Exploration of spinal fusion

22836 Anterior thoracic vertebral body tethering, including thoracoscopy, when performed; up to 7 vertebral segments

22837 Anterior thoracic vertebral body tethering, including thoracoscopy, when performed; 8 or more vertebral segments

22838 Revision (eg, augmentation, division of tether), replacement, or removal of thoracic vertebral body tethering, including thoracoscopy, when performed
22840 Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841 Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842 Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure)
22843 Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure)
22844 Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar wires); 13 or more vertebral segments (List separately in addition to code for primary procedure)
22845 Anterior instrumentation; 2 to 3 vertebral segments (List separately in addition to code for primary procedure)
22846 Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22847 Anterior instrumentation; 8 or more vertebral segments (List separately in addition to code for primary procedure)
22848 Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum (List separately in addition to code for primary procedure)
22853 Insertion of interbody biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854 Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (eg, screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
22859 Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh, methylmethacrylate) to intervertebral disc space or vertebral body defect without interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
0656T Vertebral body tethering, anterior; up to 7 vertebral segments *(Not Covered for Medicaid)*
0657T Vertebral body tethering, anterior; 8 or more vertebral segments *(Not Covered for Medicaid)*
0790T Revision (eg, augmentation, division of tether), replacement, or removal of thoracolumbar or lumbar vertebral body tethering, including thoracoscopy, when performed *(Not covered for Medicaid)*

G. Lumbar Spine Decompression and Fusion

20930	Allograft, morselized, or placement of osteopromotive material, for spine surgery only (List separately in addition to code for primary procedure)
20931	Allograft, structural, for spine surgery only (List separately in addition to code for primary procedure)
20936	Autograft for spine surgery only (includes harvesting the graft); local (eg, ribs, spinous process, or laminar fragments) obtained from same incision (List separately in addition to code for primary procedure)
20937	Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
20938	Autograft for spine surgery only (includes harvesting the graft); structural, bicortical or tricortical (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
22102	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; lumbar
22103	Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; each additional Segment
22114	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; lumbar
22116	Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; each additional vertebral segment
22533	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22612	Arthrodesis, posterior or posterolateral technique, single level; lumbar (with or without lateral transverse technique)
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace and segment; lumbar
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841	Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure).
22843	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure)

22844	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 13 or more vertebral segments (List separately in addition to code for primary procedure)
22846	Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22853	Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854	Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
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)
63015	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (e.g., spinal stenosis), more than 2 vertebral segments; cervical
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
63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, including open and endoscopically assisted approaches; 1 interspace, lumbar
63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, including open and endoscopically-assisted approaches; 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)

63052 Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; single vertebral segment (List separately in addition to code for primary procedure)

63053 Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional segment (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)

63102 Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (eg, for tumor or retropulsed bone fragments); lumbar, single segment

63103 Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (eg, for tumor or retropulsed bone fragments); thoracic or lumbar, each additional segment

63170 Laminectomy with myelotomy (eg, Bischof or DREZ type), cervical, thoracic, or thoracolumbar

63267 Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; lumbar

63272 Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; lumbar

63277 Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, lumbar

63282 Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, lumbar

63287 Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, thoracolumbar

63307 Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, lumbar or sacral by transperitoneal or retroperitoneal approach

H. Thoracic Spine Decompression and Fusion

20930 Allograft, morselized, or placement of osteopromotive material, for spine surgery only (List separately in addition to code for primary procedure)

20931 Allograft, structural, for spine surgery only (List separately in addition to code for primary procedure)

20936 Autograft for spine surgery only (includes harvesting the graft); local (eg, ribs, spinous process, or laminar fragments) obtained from same incision (List separately in addition to code for primary procedure)

20937 Autograft for spine surgery only (includes harvesting the graft); morselized (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
20938 Autograft for spine surgery only (includes harvesting the graft); structural, bicortical or tricortical (through separate skin or fascial incision) (List separately in addition to code for primary procedure)
22101 Partial excision of posterior vertebral component (eg, spinous process, lamina or facet) for intrinsic bony lesion, single vertebral segment; thoracic
22112 Partial excision of vertebral body, for intrinsic bony lesion, without decompression of spinal cord or nerve root(s), single vertebral segment; thoracic
22532 Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22556 Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22610 Arthrodesis, posterior or posterolateral technique, single level; thoracic (with lateral transverse technique, when performed)
22840 Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841 Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842 Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure)
22843 Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure)
22846 Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22847 Anterior instrumentation; 8 or more vertebral segments (List separately in addition to code for primary procedure)
22853 Insertion of interbody biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854 Insertion of intervertebral biomechanical device(s) (e.g., synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
63003 Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; thoracic

63016 Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; thoracic

63046 Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [e.g., spinal or lateral recess stenosis]), single vertebral segment; thoracic

63048 Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [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)

63055 Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; thoracic

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)

63064 Costovertebral approach with decompression of spinal cord or nerve root(s) (eg, herniated intervertebral disc), thoracic; single segment

63066 Costovertebral approach with decompression of spinal cord or nerve root(s) (eg, herniated intervertebral disc), thoracic; each additional segment

63077 Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, single interspace

63078 Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, each additional interspace63085 Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, single segment

63086 Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, each additional segment

63087 Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; single segment

63088 Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; each additional segment

63090 Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; single segment

63091 Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; each additional segment

63101 Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (eg, for tumor or retropulsed bone fragments); thoracic, single segmen
63197 Laminectomy with cordotomy, with section of both spinothalamic tracts, 1 stage; thoracic
63200 Laminectomy, with release of tethered spinal cord, lumbar
63251 Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; thoracic
63252 Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; thoracolumbar
63266 Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; thoracic
63271 Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; thoracic
63276 Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, thoracic
63281 Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, thoracic
63286 Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, thoracic
63303 Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, lumbar or sacral by transperitoneal or retroperitoneal approach
63305 Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by transthoracic approach
63306 Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by thoracolumbar approach

I. Automated Percutaneous Lumbar Discectomy (APLD)
CPT/HCPCS Codes:

62287 Aspiration or decompression procedure, percutaneous, of nucleus pulposus of intervertebral disk, any method, single or multiple levels, lumbar (e.g., manual or automated percutaneous diskectomy, percutaneous laser diskectomy)
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
C2614 Probe, percutaneous lumbar discectomy *(Not Covered)*
S2348 Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, using radiofrequency energy, single or multiple levels, lumbar
S2350 Diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; lumbar, single interspace
S2351 Diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; lumbar, each additional interspace (list separately in addition to code for primary procedure)
22899 Unlisted procedure of the spine
64999 Unlisted procedure, nervous system
(Explanatory notes must accompany unlisted codes.)

J. AxiaLIF™ Axial Lumbar Interbody Fusion
CPT/HCPCS Codes:
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
22899 Unlisted procedure of the spine
(Explanatory notes must accompany unlisted codes.)

K. Coflex® Interlaminar Stabilization Device
22867 Insertion of interlaminar/interspinous process stabilization/distraction device, without fusion, including image guidance when performed, with open decompression, lumbar; single level
22868 Insertion of interlaminar/interspinous process stabilization/distraction device, without fusion, including image guidance when performed, with open decompression, lumbar; second level (List separately in addition to code for primary procedure)

L. Concentrated Bone Marrow Aspirate
20939 Bone marrow aspiration for bone grafting, spine surgery only, through separate skin or fascial incision (List separately in addition to code for primary procedure)
IDET and Other Thermal Intradiscal Procedures (TIPs)
ICD-10 Codes that may support medical necessity
Not applicable

HCPCS/CPT Codes
22526 Percutaneous intradiscal electrothermal annuloplasty, unilateral or bilateral including fluoroscopic guidance; single level
22527 Percutaneous intradiscal electrothermal annuloplasty, unilateral or bilateral including fluoroscopic guidance; one or more additional levels (List separately in addition to code for primary procedure)
S2348 Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, using radiofrequency energy, single or multiple levels, lumbar

M. Interspinous Spacer Devices
22869 Insertion of interlaminar/interspinous process stabilization/distraction device, without open decompression or fusion, including image guidance when performed, lumbar; single level
22870 Insertion of interlaminar/interspinous process stabilization/distraction device, without open decompression or fusion, including image guidance when performed, lumbar; second level (List separately in addition to code for primary procedure)

N. Other codes managed by TurningPoint:
0202T Posterior vertebral joint(s) arthroplasty (e.g. facet joint(s) replacement) inc facetectomy, laminectomy, foraminotomy and vertebral column fixation, with or without injection of bone cement, inc fluoroscopy, single level, lumbar spine

0219T	Placement of posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; cervical
0220T	Placement of posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; thoracic
0221T	Posterior vertebral joint(s) arthroplasty (e.g., facet joint[s] replacement) including facetectomy, laminectomy, foraminotomy and vertebral column fixation, with or without injection of bone cement, including fluoroscopy, single level, lumbar spine
0222T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), each additional vertebral segment (List separately in addition to code for primary procedure)
0274T	Percutaneous laminotomy/laminectomy (intralaminar approach) for decompression of neural elements, (with or without ligamentous resection, discectomy, facetectomy and/or foraminotomy) any method under indirect image guidance (e.g., fluoroscopic, CT), single or multiple levels, unilateral or bilateral; cervical or thoracic
0275T	Percutaneous laminotomy/laminectomy (intralaminar approach) for decompression of neural elements, (with or without ligamentous resection, discectomy, facetectomy and/or foraminotomy) any method under indirect image guidance (e.g., fluoroscopic, CT), single or multiple levels, unilateral or bilateral; lumbar
C9757	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and excision of herniated intervertebral disc, and repair of annular defect with implantation of bone anchored annular closure device, including annular defect measurement, alignment and sizing assessment, and image guidance; 1 interspace, lumbar
22206	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (eg, pedicle/vertebral body subtraction); thoracic
22207	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (eg, pedicle/vertebral body subtraction); lumbar
22208	Osteotomy of spine, posterior or posterolateral approach, 3 columns, 1 vertebral segment (eg, pedicle/vertebral body subtraction); each additional vertebral segment
22210	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; cervical
22212	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; thoracic
22214	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; lumbar
22216	Osteotomy of spine, posterior or posterolateral approach, 1 vertebral segment; each additional vertebral segment
22220	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; cervical
22222	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; thoracic

22224	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; lumbar
22226	Osteotomy of spine, including discectomy, anterior approach, single vertebral segment; each additional vertebral segment
22505	Manipulation of spine requiring anesthesia, any region
22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace
22614	Arthrodesis, posterior or posterolateral technique, single level; each additional vertebral segment
22632	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; each additional interspace
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
22850	Removal of posterior nonsegmental instrumentation (eg, Harrington rod)
22852	Removal of posterior segmental instrumentation
22855	Removal of anterior instrumentation
63011	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; sacral
63172	Laminectomy with drainage of intramedullary cyst/syrinx; to subarachnoid space
63173	Laminectomy with drainage of intramedullary cyst/syrinx; to peritoneal or pleural space
63185	Laminectomy with rhizotomy; 1 or 2 segments
63190	Laminectomy with rhizotomy; more than 2 segments
63191	Laminectomy with section of spinal accessory nerve
63268	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; sacral
63273	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; sacral
63278	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, sacral
63283	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, sacral
63290	Laminectomy for biopsy/excision of intraspinal neoplasm; combined extradural-intradural lesion, any level
63295	Osteoplastic reconstruction of dorsal spinal elements, following primary intraspinal procedure (List separately in addition to code for primary procedure)
63300	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, cervical
63301	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by transthoracic approach

63302 Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by thoracolumbar approach
63308 Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; each additional segment

O. Other Not Covered Procedures

G0276 Blinded procedure for lumbar stenosis, percutaneous image-guided lumbar decompression (PILD) or placebo-control (*Exception: Covered for Medicare ONLY when performed in an approved evidence development (CED) clinical trial – notification required)*
0627T Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with fluoroscopic guidance, lumbar; first level
0628T Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with fluoroscopic guidance, lumbar; each additional level (List separately in addition to code for primary procedure)
0629T Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with CT guidance, lumbar; first level
0630T Percutaneous injection of allogeneic cellular and/or tissue-based product, intervertebral disc, unilateral or bilateral injection, with CT guidance, lumbar; each additional level (List separately in addition to code for primary procedure)
0719T Posterior vertebral joint replacement, including bilateral facetectomy, laminectomy, and radical discectomy, including imaging guidance, lumbar spine, single segment
0869T Injection(s), bone-substitute material for bone and/or soft tissue hardware fixation augmentation, including intraoperative imaging guidance, when performed

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