Lumbar Decompression and Fusion with Instrumentation, Bone Graft and Partial Facetectomies

Example Operative Note

Procedural Billing Options

- **63047**: *Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; lumbar.*
- **22612**: *Arthrodesis, posterior or posterolateral technique, single level; lumbar (with lateral transverse technique, when performed) (Primary)*
- **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); (Instrumentation/device insertion) (List separately in addition to code for primary procedure) (Secondary)*
- **22899**: *Unlisted procedure, spine. *May be required for inserting an interspinous fixation device instead of **22840** by a commercial insurance provider.*
- **20930**: *Allograft, morselized, or placement of osteopromotive material, for spine surgery only (List separately in addition to code for primary procedure) (Secondary)*
- **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) (Secondary)*

HCPCS Code

- **C1713**: *Anchor/screw for opposing bone-to-bone or soft tissue-to-bone (implantable)*

This is an example of an operative report of a LESS Exposure Spine Surgery (LESS) lumbar decompression and fusion with instrumentation using a titanium implant and bone graft.

Preoperative Diagnosis:

- Lumbar degenerative disc disease
- Lumbar spinal stenosis- central, lateral recess, foraminal
- Neurogenic claudication
- Lumbar facet tropism
- Painful degenerative facets- osteophytes, hypertrophy, cyst, fluid
- Instability
- Spondylolisthesis/Retrolisthesis

Postoperative Diagnosis:

- Same

Procedure:

- **L4-5** decompression with partial facetectomies and instrumented fusion
- Posterior and posterolateral decortication of the facet joints and spinous processes at **L4-5**
- Placement of posterior and posterolateral bone graft at **L4-5** for fusion
- Use of fluoroscopy

Instrumentation: InSpan titanium implant measuring size **XX** mm
Bone graft: Nanofuse Biologics.
Surgeon: Assistant: Anesthesia: MAC | IV Sedation | Local | General anesthesia
Complications: None
Blood loss: Minimal

Indication
Refer to patient's history, physical examination, and radiological findings.

Operation:
Patient Position
The surgical site mark was made prior to entering the operating room. The patient was brought to the operating room, and adequate general endotracheal anesthesia was established. The patient was positioned prone on the operative table with careful padding to all bony prominences. The lower back and buttock area was prepped and draped in the standard sterile surgical fashion. The preoperative surgical site mark was visible within the operative field. All team members participated in a timeout consisting of patient name, operative level, procedure, and equipment verification.

Exposure
The operative level at **L4-5** was identified using AP fluoroscopic views, and the skin was marked at **L4-5** after confirmation. A midline incision was made with a surgical blade through the skin. Dissection proceeded using bovie electrocautery for hemostasis, exposing the subcutaneous layer down to the lumbodorsal fascia overlying the spinous processes. The lumbodorsal fascia was incised along the spinous processes and elevated, along with the multifidus muscles, off the spinous processes. The bovie electrocautery and the flat-blade InSpan dilator (also known as a decompression knife) were used to dissect lateral to the **L4** and **L5** spinous processes in an avascular plane. The remaining lumbodorsal fascia was dissected off the spinous processes cephalad and caudally under fluoroscopic guidance, starting on the right side. This created a plane allowing for the index finger to dissect the muscles laterally from the spinous processes to the facets, clearing off the lamina. Ray-tec sponges were used to aid in hemostasis. The same steps were repeated on the opposite side.

Decompression And Partial Facetectomy (63047)
Decompression began under lateral fluoroscopic imaging, with confirmation of the spinous processes at **L4** and **L5**. A broach was positioned, aiming at the **L4-5** interspinous space. Using a mallet, the broach was carefully hammered down to the lamina under fluoroscopic guidance. This decompressed the area between the spinous processes by removing the supraspinous and infraspinous ligaments, the caudal border of the **L4** spinous process, posterior margins of the laminas (hemilaminectomy), and the cephalad border of the base of the **L5** spinous process. The Leksell rongeur was used under live fluoroscopy to further the decompression. This included debulking the posterior ligamentum flavum and removing residual supraspinous and interspinous ligaments, as well as portions of the spinous processes. Lateral dissection removed the posteromedial aspect of the facet joints, achieving a partial facetectomy. Debulking the posterior ligamentum flavum relieved pressure on the dural sac to address central stenosis. The InSpan

broach was utilized to remove the posteromedial facet complex decorticating the facet joints, facilitating segment release for distraction and creating bleeding bony surfaces for posterolateral fusion with bone graft. A finger was used to palpate the ligamentum flavum to ensure adequate debulking and a flat surface for subsequent implant placement. Placement of the InSpan implant relieved posterior compression caused by ligamentum hypertrophy, increased the posterior disc height, opened the foramen, and reduced nerve compression.

*Placing The Titanium Implant (**22840, C1713**) And Foraminal Decompression*
Using lateral fluoroscopy, a sizer was employed to create distraction between the spinous processes and laminas at **L4-5**. The appropriate-sized interspinous fixation titanium implant was measured and placed between the spinous processes and laminas to maintain distraction and stability without causing undue kyphosis. A mallet was used under fluoroscopic guidance to position the implant flush against the laminas. This decompressed the canal, increased posterior disc height, released the facets, opened the foramen, relieved nerve compression, and unbuckled the ligamentum flavum, tightened the posterior longitudinal ligament and annulus. This tightening is to allow for a trampoline-like effect, pushing posteriorly displaced disc material anteriorly into the disc space for indirect decompression. Inserters attached to the implant were compressed together to ensure firm penetration of the implant's teeth within the lateral bony surfaces of the spinous processes. Set screws were locked, securing the implant and providing rigid fixation. Final AP and lateral fluoroscopic views confirmed satisfactory positioning of the implant.

*Posterior And Posterolateral Fusion (**22612, 20930**)*
We placed bone graft over the decorticated facet joints for posterior and posterolateral fusion. Bone graft was also placed within the interspinous fixation titanium implant reservoir and between the spinous processes. This facilitated interspinous, posterior, and posterolateral fusion.

Bone marrow aspiration for bone grafting/separate incision **(20939)**
Make a small stab incision with a #11 blade. Insert a 18G hypodermic needle (1 or 3-1/2 inch) through the skin and the top of the iliac crest. Aspirate the bone marrow volume as needed. You may also use a Jamshidi needle.

Closure
We achieved hemostasis. The wound was closed in layers and a dry sterile dressing was applied.