Cohere Medical Policy - Lumbar Spinal Fusion

Clinical Guidelines for Medical Necessity Review

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Guideline Information:

Specialty Area: Diseases & Disorders of the Musculoskeletal System (M00-M99)
Guideline Name: Lumbar Spinal Fusion (Single Service)

Date of last literature review: 2/18/2025
Document last updated: 2/18/2025
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17 yo)

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Medical Necessity Criteria

Service: Lumbar Spinal Fusion

Recommended Clinical Approach

Surgery provides more rapid relief than non-surgical treatment options. Surgery can also prevent further spinal cord dysfunction and neurological deficits, particularly in moderate or severe cases.[1] Advanced imaging is recommended prior to surgical intervention.[2-4]

Medical Necessity Criteria

Indications

- ➔ **Lumbar spinal fusion** is considered appropriate if **ALL** of the following are **TRUE**:
  - ◆ **ANY** of the following:
    - Current nicotine user with no product use for 6 weeks, and **ANY** of the following:
      - Negative lab test within 30 days; **OR**
      - Surgery is urgently required for progressive neurologic deficit; **OR**
    - No history of nicotine product use within the last 12 months; **OR**
    - No lifetime history of nicotine product use; **AND**
  - ◆ **ANY** of the following is **TRUE**:
    - The procedure is lumbar fusion with/without decompression**,** and **ALL** of the following is **TRUE**:
      - Radiographic evidence of kyphosis/scoliosis greater than 40 degrees; **AND**
      - Failure of conservative management for greater than 6 weeks, including **ALL** of the following:
        - ◆ Oral steroids, anti-inflammatory medications, or analgesics; **AND**
        - ◆ Physical therapy, including a self-directed home exercise program; **AND**
        - ◆ Facet injections, medial branch blocks (MBBs), or epidural steroid injections (ESIs); **AND**

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        - **ANY** of the following:
            - Corticosteroid injection if medically appropriate; **OR**
            - Corticosteroid injection is contraindicated; **OR**
- The procedure is lumbar fusion with/without decompression with radiographic evidence of instability or iatrogenic instability caused by the decompression at all levels planned to be fused and **ANY** of the following is **TRUE**[5-6]:
    - The patient has signs or symptoms of a potential cauda equina syndrome and **ALL** of the following[7]:
        - MRI reveals compressive pathology; **AND**
        - **ANY** of the following symptoms:
            - Bowel, bladder, and erectile dysfunction; **OR**
            - Diffuse motor weakness; **OR**
            - Saddle-distribution anesthesia; **OR**
    - Fracture or instability on radiographic films measuring **ANY** of the following:
        - Sagittal plane angulation greater than 11° at a single level; **OR**
        - Greater than 3.5 mm of anterior subluxation in association with radicular/cord dysfunction; **OR**
        - Subluxation at the (C1) level at the atlantodental interval of more than 3 mm in an adult and 5 mm in a child[8]; **OR**
    - Primary or metastatic tumor[7,9]; **OR**
    - The patient has lumbar stenosis and **ALL** of the following are **TRUE**:
        - **ANY** of the following **l**umbar stenosis symptoms[5]:
            - Lower extremity pain, weakness, fatigue, paresthesias, and sensory changes; **OR**
            - Gluteal and low back pain (LBP); **OR**
            - Bilateral or unilateral symptoms; **OR**
            - Symptoms may present only with activity; **OR**

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- Exacerbating factors include standing, walking, and other upright exercises; **OR**
- Pain may relieve in a sitting or supine position or with forward flexion at the waist; **OR**
- Lower extremity pain that is made worse by walking; **AND**

◆ **ANY** of the following lumbar stenosis physical examination findings[10,11]:
- Focal motor weakness or sensory deficit; **OR**
- Decreased or absent lower extremity reflexes; **OR**
- Wide-based gait; **OR**
- Positive Romberg's test (poor standing balance with eyes closed); **OR**
- Positive straight leg raise (SLR; reproduction of lower extremity pain upon extension at the knee); **AND**

◆ MRI reveals compressive pathology and **ANY** of the following[12]:
- Failure of conservative management for greater than 6 weeks, including **ALL** of the following:
  - Oral steroids, anti-inflammatory medications, or analgesics; **AND**
  - Physical therapy, including a self-directed home exercise program; **AND**
  - Facet injections, MBBs, or ESIs; **AND**
  - **ANY** of the following:
    - ◆ Corticosteroid injection if medically appropriate; **OR**
    - ◆ Corticosteroid injection is contraindicated; **OR**
- The patient has severe pain or disability affecting their quality of life and limiting their daily life (including working and unable to provide self-care); **OR**

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        - The patient has progressive neurological motor deficits; **OR**
    - The patient has lumbar radiculopathy and **ALL** of the following are **TRUE**:
        - **ANY** of the following lumbar radiculopathy symptoms[10]:
            - Lower extremity pain, paresthesia, weakness, or numbness in a myotomal or dermatome distribution; **OR**
            - Increased pain with coughing, sneezing or straining; **OR**
            - Low back pain; **AND**
        - **ANY** of the following lumbar radiculopathy physical examination findings[10,11]:
            - Sensory disturbance (i.e., loss of sensation or decreased sensory response) or weakness in a dermatomal/myotomal distribution; **OR**
            - Absent or decreased Achilles reflex; **OR**
            - Reduced spinal mobility; **OR**
            - **ANY** of the following positive specialty tests:
                - Straight leg raise; **OR**
                - Crossed Lasègue's (or crossed straight leg raise); **OR**
                - Femoral nerve stretch; **OR**
                - Slump; **AND**
        - MRI reveals compressive pathology and **ANY** of the following[12]:
            - The patient fails to show significant improvement in pain or disability level due to symptoms, despite receiving non-surgical management for more than six (6) weeks, including **ALL** of the following (unless medically contraindicated):
                - Physical therapy, including home exercise program; **AND**

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    - Anti-inflammatory medications or oral steroids; **AND**
    - Facet injections, MBBs, or ESIs; **OR**
- The patient has severe pain or disability affecting their quality of life and limiting their daily life (including working and being unable to provide self-care); **OR**
- The patient has progressive neurological motor deficits.

Non-Indications

➔ **Lumbar spinal fusion** may not be considered appropriate if **ANY** of the following is **TRUE**:

- ◆ Current laboratory-confirmed nicotine use (unless surgery is urgently required for progressive neurologic deficit).

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (CPT/HCPCS)

CPT/HCPCS Code	Code Description
20999	Unlisted procedure, musculoskeletal system, general
22532	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22533	Arthrodesis, lateral, lumbar
22534	Each additional, thoracic or lumbar, (add-on code)
22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar

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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)
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
22610	Arthrodesis, posterior or posterolateral technique, single interspace; thoracic (with lateral transverse technique, when performed)
22612	Arthrodesis, posterior or posterolateral technique, single interspace; lumbar (with lateral transverse technique, when performed)
22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (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, lumbar; 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, lumbar
22634	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including

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	laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)
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
22830	Exploration of spinal fusion
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)
22843	Posterior segmental instrumentation (eg, pedicle fixation, dual rods with multiple hooks and sublaminar

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	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)
22849	Reinsertion of spinal fixation device
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)

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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)
22899	Unlisted procedure, spine

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Medical Evidence

In a systematic review by Lannon et al. (2021), degenerative cervical myelopathy (DCM) is described as a leading cause of spinal cord injury and spinal stenosis with increasing incidence. Early surgical referral is recommended along with conservative management to prevent progressive neurologic compromise. Surgical treatment may be recommended with clinically progressive myelopathic symptoms and cord compression as evidenced by imaging studies. A large retrospective, multicenter study with 2156 patients. Notable improvement was found in 18.8% of the patients (2-point improvement in mJOAscores) at 3-month follow-up. Among patients with severe baseline scores, improvement was noted at 12-month follow-up.[13]

In a 2020 clinical review, McCormick et al. discuss cervical spondylotic myelopathy including patient presentation of symptoms, preference of MRI as primary imaging, with CT myelography as an alternative in patients with contraindications, and necessity of surgery in moderate to severe cases. Prompt surgical referral is recommended.[14]

Kreiner et al (2020) published a systematic review of guidelines for low back pain diagnosis and treatment. Insufficient evidence was found to recommend for or against a particular fusion technique for the treatment of low back pain. No literature evidence was found to adequately address differences in clinical outcomes or functional status for single-level vs. multilevel fusions. No studies were found to address the effectiveness of fusion over discectomy, discectomy with rhizotomy or decompression alone.[15]

The American College of Radiology (ACR) Expert Panel on Neurological Imaging has published appropriateness criteria related to myelopathic evaluation. Agarwal et al. (2021) updated the previous criteria for myelopathy with MRI recommended as initial imaging for acute onset myelopathy. MRI is also recommended for chronic or progressive myelopathy due to its superior resolution of soft tissue and ability to evaluate surrounding structures. CT may be appropriate, with CT myelography of possible use prior to surgical intervention.[2] Non-contrast MRI is usually appropriate for low back pain (LBP); radiography and CT may be appropriate for LBP with and without radiculopathy. This applies to surgical candidates with persistence or progression of symptoms having failed six weeks of medical management.

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MRI, CT, and CT myelography are recommended for suspected cauda equina syndrome. In cases of osteoporosis or chronic steroid use, radiography, non-contrast MRI, or CT is usually appropriate.[3]

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Clinical Guideline Revision History/Information

Original Date: September 29, 2023		
Review History		
Version 2	7/25/2024	Updated language regarding conservative treatment and nicotine use.
Version 2A	9/20/2024	Added CPT code 22840.
Version 3	2/20/2025	Annual Review • Updated nicotine language to read: "Current nicotine user with no product use for 6 weeks, and **ANY** of the following: Negative lab test within 30 days; **OR** Surgery is urgently required for progressive neurologic deficit; **OR** No history of nicotine product use within the last 12 months; **OR** No lifetime history of nicotine product use" • Added "Fracture or instability on radiographic films" and **"**Primary or metastatic tumor" indications. • Reworded nicotine use non-indication to read, "Current laboratory-confirmed nicotine use (unless surgery is urgently required for progressive neurologic deficit)" • Added References (8,9)

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