AAVBC

American Academy
of Value Based Care

# Spondylopathy

## Quick Reference Guide

2026

# AAVBC Spondylopathy Quick Reference Guide

## 1. CLINICAL SNAPSHOT

**Definition: Spondylopathy** refers to any pathological condition affecting the vertebral column. It is a functional classification used to group disorders that cause structural degeneration, inflammation, or deformity of the spine.[1]

**ICD-10 Codes:** Use the **M47.x** series for general spondylosis and related degenerative conditions. This includes **M47.0x** for anterior spinal and vertebral artery compression syndromes, **M47.1x** for spondylosis with myelopathy (indicating spinal cord involvement), and **M47.2x** for spondylosis with radiculopathy (indicating nerve root involvement). If the condition is less specific, **M47.8x** for other spondylosis or **M47.9** for unspecified spondylosis may be used. Additionally, the **M48.x** series covers other spondylopathies such as spinal stenosis, spondylolisthesis, and Schmorl's nodes, while the **M49.x** series is reserved for spondylopathies occurring in diseases classified elsewhere, such as vertebral tuberculosis or brucellosis.

**HCC/RAF V28:** Spondylosis with Myelopathy (M47.1x). M47.12**,** and M48.062 maps to **HCC 93 (RAF 0.617)**. M47.2x, M48.061, M49.3x maps to **HCC 181 (RAF 0.385)**. M46.2x, M47.26**,** and M46.3X maps to **HCC 180 (RAF 0.421)**. M47.9 and M47.816 do not map to an HCC. M48.8X1-M48.8X9 map to **HCC 93 (RAF 0.617)**.

| Diagnosis Category | ICD-10 Series | V28 HCC | RAF Value | Clinical Documentation Requirement |
|---|---|---|---|---|
| **Inflammatory Spondylopathies** | M46.xx | 93/182 | 0.617/0.478 | Infection/Infarction. Document active Discitis, Osteomyelitis (M46.2), or Sacroiliitis (M46.1) |
| **Ankylosing Spondylitis** | M45.x | 93 | 0.617 | Systemic. Document HLA-B27+, morning stiffness, or bamboo spine |
| **Other Specified Spondylopathy** | M48.8X | 93 | 0.617 | Structural. Document OPLL, Baastrup's, or ligamentous ossification |
| **Spondylosis w/ Myelopathy** | M47.1x | 182 | 0.478 | Cord Signs. Must document ataxia, Hoffman's, or hyperreflexia |
| **Spinal Stenosis w/ Claudication** | M48.062 | 182 | 0.478 | Functional. Must document neurogenic claudication/walking limits |
| **Spondylosis w/ Radiculopathy** | M47.2x | 181 | 0.380 | Nerve Root. Must link root (e.g., L5) to objective deficit |

Abbreviations: AS, Ankylosing Spondylitis;; CDI, Clinical Documentation Improvement; CSF, Cerebrospinal Fluid; CT, Computed Tomography; DDD, Degenerative Disc Disease; DJD, Degenerative Joint Disease; DTR, Deep Tendon Reflex; EHL, Extensor Hallucis Longus; ESI, Epidural Steroid Injection; HCC, Hierarchical Condition Category; Hoffman's, Hoffman's Sign; LSS, Lumbar Spinal Stenosis;; Treat; MRI, Magnetic Resonance Imaging; NC, Neurogenic Claudication; ODI, Oswestry Disability Index; OPLL, Ossification of the Posterior Longitudinal Ligament; PT, Physical Therapy; RADV, Risk Adjustment Data Validation; RAF, Risk Adjustment Factor; Radic, Radiculopathy; ROM, Range of Motion; SIJ, Sacroiliac Joint; SLR, Straight Leg Raise; V28, Version 28 Risk Adjustment Model

**Prevalence:** ~3 million Americans are affected by spondylopathy. The costs vary with spondylosis costing ~$9,500 PMPY.

# 2. RECOGNITION & DIAGNOSIS

## Medicare Screening/Diagnostic Workup[2–6]

### Key Diagnostic Features

| Key Diagnostic Factors | Other Diagnostic Factors | Risk Factors |
|---|---|---|
| **Localized Spinal Pain:** Chronic, mechanical pain in the cervical (neck) or lumbar (low back) regions that typically worsens with movement or weight-bearing<br><br>**Radicular Symptoms:** Shooting pain, numbness, or "pins and needles" (paresthesia) that follows a specific dermatomal pattern, indicating nerve root compression<br><br>**Reduced Range of Motion (ROM):** Significant stiffness or physical inability to flex, extend, or rotate the spine comfortably<br><br>**Neurological Deficits:** Objective findings on physical exam, such as diminished deep vein reflexes, muscle weakness (myotomal distribution), or a positive Babinski/Hoffman sign indicating cord involvement | **Neurogenic Claudication:** Leg pain or heaviness that occurs while walking and is relieved by leaning forward (the "shopping cart sign"), highly suggestive of spinal stenosis<br><br>**Morning Stiffness:** Pain that is most severe upon waking and improves with activity, which may point toward an inflammatory spondylopathy like **Ankylosing Spondylitis**<br><br>**Crepitus:** Audible or palpable "grinding" sensations during spinal movement, indicating advanced joint surface degeneration<br><br>**Imaging Findings:** Presence of osteophytes (bone spurs), disc space narrowing, or vertebral slippage on **X-ray, CT,** or **MRI** | **Advancing Age:** The primary risk factor due to the cumulative "wear and tear" of the intervertebral discs and facet joints<br><br>**Repetitive Mechanical Stress:** Occupational hazards (heavy lifting, vibration exposure) or high-impact sports that place chronic load on the vertebral column<br><br>**Previous Spinal Trauma:** History of fractures or severe whiplash, which can accelerate degenerative changes in the affected segments<br><br>**Genetics:** A family history of early-onset osteoarthritis or specific HLA-B27 positive inflammatory conditions<br><br>**Obesity:** Increased body mass index **(BMI)** places higher axial load on the lumbar spine, accelerating the breakdown of the discs<br><br>**Congenital Anomalies:** Pre-existing narrow spinal canal (congenital stenosis) or vertebral malformations |
| Abbreviations: BMI, Body Mass Index; CT, Computed Tomography; MRI, Magnetic Resonance Imaging; ROM, Range of Motion | | |

### Key Diagnostic Tools

| Category | Diagnostic Tool | CPT Code (Medicare/MA) | Clinical Utility & Significance | Coverage (Typical Medicare/MA Context) |
|---|---|---|---|---|
| Primary Imaging | MRI Pelvis/SI Joints (with STIR sequences) | **72195** (without contrast)<br>**72196** (with contrast, if indicated) | Gold standard **for early axial spondyloarthropathy; detects bone marrow edema and active inflammation before radiographic changes** | **Covered when medically necessary** |

| Category | Diagnostic Tool | CPT Code (Medicare/MA) | Clinical Utility & Significance | Coverage (Typical Medicare/MA Context) |
|---|---|---|---|---|
| | X-ray Pelvis/SI Joints | 72170 | Identifies chronic structural changes: erosions, sclerosis, ankylosis ("bamboo spine") | **Covered** (often initial imaging or longitudinal assessment) |
| | CT Pelvis (SI joints focus) | 72192 | High-resolution evaluation of bony erosions and syndesmophytes when MRI is contraindicated | **Covered when MRI is contraindicated or nondiagnostic** |
| Laboratory Analysis | HLA-B27 Testing | 81374 | Genetic marker associated with axial spondyloarthropathy; **supportive but not diagnostic alone** | **Covered when medically necessary** (suspected inflammatory back pain or spondyloarthropathy) |
| | Erythrocyte Sedimentation Rate (ESR) | 85652 | Marker of systemic inflammation; elevated in ~40–50% of active disease | **Covered** |
| | C-Reactive Protein (CRP) | 86140 | Sensitive marker of inflammatory activity; used for diagnosis and monitoring | **Covered** |
| | Rheumatoid Factor (RF) | 86431 | Helps exclude rheumatoid arthritis; typically negative in spondyloarthropathy | **Covered** |
| | Anti-CCP Antibody | 86200 | Excludes seropositive RA when inflammatory arthritis is present | **Covered when inflammatory arthritis is suspected** |
| Physical Examination | Schober's Test | Quantifies lumbar flexion; <5 cm expansion suggests reduced spinal mobility | | |
| | Chest Expansion Measurement | <5cm expansion suggests thoracic cage involvement | | |
| | Occiput-to-Wall Distance | Assesses cervical/thoracic kyphosis and postural rigidity | | |

## Current Procedural Terminology (CPT) Codes for Diagnostic Tools

| Procedure Category | Specific Procedure | CPT Code | Clinical Application |
|---|---|---|---|
| **Magnetic Resonance** | MRI Cervical Spine (no contrast) | 72141 | Primary screen for Cervical Myelopathy/Stenosis |
| | MRI Thoracic Spine (no contrast) | 72146 | Screen for "Band" pain or thoracic cord compression |
| | MRI Lumbar Spine (no contrast) | 72148 | Assessment of cauda equina and lower root issues |
| | MRI Spine (with & without contrast) | 72156-58 | Used for tumors (MESCC) or inflammatory/MS plaques |
| | MR Angiography (MRA) Spine | 72159 | Visualizing spinal AVMs or vascular supply |
| **Radiography & CT** | X-ray Cervical Spine (3 views) | 72040 | Initial screening for alignment and bone spurs |
| | CT Spine (C/T/L) | 72125-31 | Used if MRI is contraindicated or for bony detail |
| | Myelography (Radiological Super) | 72240 | CT + contrast in the CSF to find cord compression |
| | CT Angiography (CTA) Pelvis/Spine | 72191 | Assessment of vascular infarction or AVMs |
| **Neurophysiology** | Needle EMG (one extremity) | 95886 | Differentiating cord issues from peripheral nerve decay |
| | Nerve Conduction Study (1-2) | 95907 | Measuring signal speed to rule out neuropathy |
| | Nerve Conduction Study (7-8) | 95910 | Comprehensive study for complex motor decay |
| **Functional & Invasive** | Lumbar Puncture (Spinal Tap) | 62270 | Diagnostic collection of CSF for analysis |
| | Urodynamics (Cystometrogram) | 51726 | Assessing neurogenic bladder/sphincter changes |
| | Bladder Ultrasound (PVR) | 51798 | Measuring urinary retention (post-void residual) |
| **Laboratory** | Vitamin B12 Level | 82607 | Screening for Subacute Combined Degeneration |

| Procedure Category | Specific Procedure | CPT Code | Clinical Application |
|---|---|---|---|
| **Analysis** | Methylmalonic Acid (MMA) | 83921 | Confirming functional B12 deficiency |
| | CSF Analysis (IgG Index/Bands) | 83872 | Specific testing for Multiple Sclerosis (MS) |

### Differential Diagnosis Flowchart: Mechanical vs. Inflammatory Spinal Pain

This algorithm helps clinical staff determine the appropriate diagnostic pathway and ICD-10 coding based on patient presentation and tool results.

| Step | Clinical Decision / Action | Mechanical Pathway | Inflammatory Pathway (Spondyloarthropathy) |
|---|---|---|---|
| **1. History** | **Pain Characteristics** | Improves with rest; worsens with activity | Improves with activity; worsens with rest |
| **2. Exam** | **Morning Stiffness** | Brief (<30 minutes) | Prolonged (>60 minutes) |
| **3. Labs** | **Inflammatory Markers** | **Normal** ESR and CRP | **Elevated** ESR and CRP (in ~50% of cases) |
| **4. Screening** | **Genetic/Serology** | HLA-B27 Negative; RF Negative | **HLA-B27 Positive** (strong indicator) |
| **5. Imaging** | **Initial X-ray** | Osteophytes; Disc space narrowing | Erosions; Sclerosis; Syndesmophytes |
| **6. Advanced** | **MRI Finding** | Modic changes; Herniated discs | **Bone Marrow Edema** (STIR+) in SI joints |
| **7. Finalize** | **Primary ICD-10** | **M47.x** (Spondylosis) **M48.8** (Other specified spondylopathies) | **M45.x / M46.x** (Spondylitis/Sacroiliitis) |

Abbreviations: AM stiffness, Morning Stiffness; BME, Bone Marrow Edema; CRP, C-Reactive Protein; DSN, Disc Space Narrowing; ESR, Erythrocyte Sedimentation Rate; HLA-B27, Human Leukocyte Antigen B27; MC, Modic Changes; MS, Morning Stiffness; Ost, Osteophytes; RF, Rheumatoid Factor; SIJ, Sacroiliac Joint; STIR+, Short Tau Inversion Recovery positive

## Subtle Early Signs

- **Morning Stiffness:** Mild stiffness in the neck or back that is typically most noticeable upon waking but improves throughout the day with movement
- **Localized Pain:** A dull, aching pain in the neck or lower back that may worsen during activities involving repetitive motion or prolonged stationary positions
- **Range of Motion Changes:** A slight, often unnoticeable decrease in flexibility or a feeling of restricted movement when turning the head or bending
- **Crepitus:** Audible or palpable "clicking," "popping," or "grinding" sounds (crepitus) during spinal movement, which rarely indicates immediate nerve damage but reflects joint surface changes

- **Positional Discomfort:** Increased pain when coughing, sneezing, or performing strenuous physical activity

## Risk Factors[7,8]

| Category | Specific Risk Factor | Subtle Early Signs (Red Flags) | Risk Signal (RR/AR) | Primary CPT Codes |
|---|---|---|---|---|
| **Anatomical/ Structural** | Narrow spinal canal (Spinal Stenosis) | Loss of fine motor skills; difficulty with buttons; "Clumsy Hand." | RR: 3.0–5.0 (if canal <13mm) | 72141 (MRI Cervical) |
| **Anatomical/ Structural** | Higher-level lesion (Prior Injury) | Increased spasticity; "stiff" muscle tone; exaggerated reflexes. | AR: 20–30% (Syrinx development) | 72146 (MRI Thoracic) |
| **Trauma/ External** | Spinal trauma or ischemia | Sudden "Sensory Level" (abrupt line of numbness on trunk). | OR: 2.5 (Trauma + Spondylosis) | 72125 (CT Spine) |
| **Demographics/ Age** | Extremes of age (Elderly Focus) | Wide-base gait; "magnetic" walking; unsteadiness in the dark. | Prevalence: 10–15% (Asymptomatic) | 72040 (X-ray); 95886 (EMG) |
| **Pre-existing (Autoimmune)** | Multiple Sclerosis (MS) | Patchy numbness; "Relapsing" deficits; Lhermitte's sign | AR: 80% (Cord involvement) | 62270 (LP); 83872 (CSF) |
| **Pre-existing (Nutrition)** | Vitamin B12 Deficiency | Deep midline spinal pain; loss of vibration/position sense. | Incidence: <1% (SCD of the cord) | 82607 (B12); 83921 (MMA) |
| **Pre-existing (Oncology)** | History of Cancer | Night pain (worse lying flat); Girdle/Band sensations. | Incidence: 5% – 10% (MESCC risk) | 72156-58 (MRI w/ Contrast) |
| **Pre-existing (Vascular)** | Hypertension/AVMs | "Thunderclap" back pain; sudden urgency or erectile dysfunction | RR: 2.0+ (Vascular infarction) | 72159 (MRA); 51726 (Urodynamics) |

Abbreviations: AP, Anteroposterior; AVM, Arteriovenous Malformation; CCS, Central Cord Syndrome; HTN, Hypertension; MESCC, Metastatic Epidural Spinal Cord Compression; MS, Multiple Sclerosis; OR, Odds Ratio; RR, Relative Risk; SCD, Subacute Combined Degeneration; SCL, Spinal Cord Lesion

## Red Flags[8–10]

- **Systemic Symptoms:** Presence of fever or unexplained weight loss
- **Pain Characteristics:**
  - Pain that is severe, constant, or steadily worsening
  - **Nocturnal pain:** Pain that occurs at night

  - **Morning stiffness:** Stiffness that lasts for more than 30 minutes
  - Pain that radiates below the buttocks
- **Neurological Status:** Any evidence of neurologic dysfunction or deficit
- **Trauma History:** A history of recent, higher-energy trauma associated with the onset of pain (e.g., falls from heights, skiing or bicycle accidents, or sports-related tackles such as in American football or rugby)
- **Medical History:**
  - Prior history of malignancy (cancer)
  - History of tuberculosis disease or known exposure to tuberculosis

## Diagnostic Thresholds[7,8,10,11]

### Clinical Presentation & Prevalence

| Symptom/Finding | Prevalence/Detail | Clinical Characteristics |
|---|---|---|
| Pain | 93% | Localized to low back, buttocks, and thighs; less common in lower legs/feet |
| Sensory Loss | 63% | Paresthesias, numbness, or tingling in the lower extremities |
| Weakness | 43% | Motor deficits in the lower extremities; can be intermittent or fixed |
| Symptom Distribution | 68% Bilateral | Often asymmetric; 78% involve the entire leg rather than localized segments |
| Radicular Pain | 6% | Pain following a single specific nerve root distribution is uncommon |
| Low Back Pain | 65% | Described as mechanical and mild; radiates to hips/buttocks but is not always linked to claudication |
| Local Tenderness | Uncommon | Bony or muscle tenderness in the lumbar region is typically absent in lumbar spinal stenosis |

### Neurogenic Claudication (Clinical Hallmark)

Present in 82% of patients, this is the most critical diagnostic indicator.

| Feature | Clinical Observation | Diagnostic Utility |
|---|---|---|
| Triggers | Walking, standing, or lumbar extension | High sensitivity for LSS |
| Relieving Factors | Sitting, lying down, or lumbar flexion (e.g., leaning over a cart) | Highly Specific: Sitting is the most specific finding |
| Flexion/Squatting | Relief with leaning forward or squatting | 84-92%: Specificity for LSS |
| Activity Level | Many patients are only symptomatic when active | Helps differentiate from fixed structural deficits |
| Abbreviations: LSS, lumbar spinal stenosis | | |

## Neurological Examination Findings

| Result | Findings & Details |
|---|---|
| Normal Exam | Present in over 50% of patients; a normal exam at rest does not rule out LSS |
| Straight Leg Raise | Positive in only 10% of cases; passive leg raising rarely elicits radicular pain in LSS |
| Radiculopathy | May show focal weakness or sensory loss in one or multiple nerve root distributions |
| Reflexes | Hypoactive muscle stretch reflexes may be present, corresponding to involved spinal levels |
| Deficits | Severe or prolonged involvement can lead to fixed and/or progressive neurologic deficits |
| Abbreviations: LSS, lumbar spinal stenosis | |

## Strength & Mobility Assessment

The approach described below is based primarily upon observational studies and our clinical experience.

| Assessment Category | Specific Test or Indicator | Clinical Significance & Benchmarks |
|---|---|---|
| Functional Core Strength | Timed Plank (90s) | Failure indicates core weakness |
| | Abdominal Crunch | Performed against resistance to evaluate anterior torso strength |
| Lower Body Power | One-Leg Squat | Primary test for assessing gluteal strength and pelvic stability |
| | Standard Strength Testing | Includes hip flexion/extension, knee flexion/extension, and ankle dorsi/plantar flexion |
| | Great Toe Extension | Specific test for L5 nerve root function and distal motor strength |
| Flexibility & Mobility | Popliteal Angle | Objective measurement of hamstring flexibility |
| | Psoas/Thoraco-lumbar | Evaluation of flexibility to ensure proper spinal and pelvic alignment |

## Imaging Protocol[10,12]

| Phase | Duration | Key Symptoms & Indicators | Recommended Action |
|---|---|---|---|
| Acute Phase | Weeks 0-6 | Localized low back pain, mild radiculopathy, or stiffness without "red flags" | Conservative Management: Physical therapy, core strengthening, and NSAIDs |
| Evaluation Point | ~6 Weeks | Persistent symptoms despite consistent physical therapy and medication compliance | Clinical Review: Re-assess neurological status and strength benchmarks (e.g., plank hold) |

| Phase | Duration | Key Symptoms & Indicators | Recommended Action |
|---|---|---|---|
| Diagnostic Phase | Beyond 6 Weeks | Worsening radicular pain, neurogenic claudication, or focal weakness | Order MRI (without contrast): Particularly if the patient is a candidate for injections or surgery<br>CT non-contrast: Used when MRI is contraindicated or nondiagnostic. CT Myelography: Typically reserved for cases where both MRI and CT results are inadequate or contraindicated |
| Immediate/Urgent | Day 0 (Anytime) | Red Flags: Fever, weight loss, saddle anesthesia, or bowel/bladder dysfunction | Urgent Imaging: Do not wait for the 6-week trial; order immediate X-ray or MRI |
| Abbreviations: B/B dysf, Bowel/Bladder dysfunction; CTM, CT Myelography; LBP, Low Back Pain; MRI w/o, MRI without contrast; NC, Neurogenic Claudication; NSAIDs, Non-Steroidal Anti-Inflammatory Drugs; PT, Physical Therapy; Radic, Radiculopathy; ROM, Range of Motion; SA, Saddle Anesthesia; SLR, Straight Leg Raise | | | |

## Clues to Dig Deeper

- **Bilateral but Asymmetric Symptoms:** Pain, numbness, or tingling that involves both legs (68% of cases) but may be more severe on one side
- **Nocturnal Symptoms:** Night pain or poor sleep quality may reflect overly aggressive therapy, but can also signal systemic conditions like bone tumors
- **Genetic/Ethnic Risk:** A history of first-degree relatives with isthmic spondylolysis or an ethnic background of Native Inuit ancestry increases clinical suspicion

**Focal Neurological Deficits:**

- **Motor:** Weakness in **great toe extension**, which is a specific marker for L5 nerve root involvement
- **Sensory:** Light touch deficits in specific dermatomal patterns (L1–S1)
- **Reflexes:** Hypoactive muscle stretch reflexes, such as diminished patellar (L4) or Achilles (S1) responses

## Common Oversights

- **Failing to Distinguish Radiculopathy from Myelopathy:** A critical oversight is treating radiating pain (radiculopathy) without screening for spinal cord involvement (myelopathy), which requires a different HCC code and more urgent intervention

| Feature | Radiculopathy (Nerve Root) | Myelopathy (Spinal Cord) |
|---|---|---|
| Pain Pattern | Sharp, shooting "electric" pain in a specific strip (Dermatome) | Often vague, deep aching; may have "Lhermitte's sign" (shock down back) |
| Weakness | Specific to one muscle group (e.g., just the thumb or just the foot). | Generalized weakness; "heavy" legs or "clumsy" hands |
| Reflexes | Diminished or Absent (Lower Motor Neuron). | Brisk or Hyperactive (Upper Motor Neuron) |

| Feature | Radiculopathy (Nerve Root) | Myelopathy (Spinal Cord) |
|---|---|---|
| Dexterity | Generally preserved. | Lost. Difficulty buttoning shirts or handwriting changes |
| Balance/Gait | Normal (unless pain causes a limp) | Ataxia. Broad-based, unsteady, "drunken" walk |
| Urgency | Usually elective/conservative care | Urgent. Often requires surgical decompression to prevent progression |

- **Ignoring the "Shopping Cart" Sign:** Overlooking the fact that a patient's pain is relieved by leaning forward (flexion) may lead to missing a diagnosis of Lumbar Spinal Stenosis (LSS)
- **Neglecting Core Strength Benchmarks:** Clinicians often overlook objective strength tests; for instance, an inability to hold a plank for 90 seconds is a primary indicator of core weakness linked to spondylolysis
- **Relying on Resting Exams:** Because LSS symptoms are often intermittent and provoked by walking or standing, a normal neurological exam at rest (which occurs in over 50% of patients) does not rule out the condition
- **Missing Subtle Neurological Deficits:** Failing to specifically test great toe extension can result in missing an L5 nerve root deficit

## Key Differentials[8,13,14]

| Category | Clinical Finding /Test | Lumbar Spinal Stenosis (LSS)/ Spondylosis | Primary Differentials & Mimics |
|---|---|---|---|
| Pain Pattern | Triggers | Exacerbated by standing or walking (extension) | Vascular (PVD): Triggered by walking distance regardless of posture |
| | Relief | Sitting, leaning forward ("Shopping Cart Sign"), or lying down | Inflammatory (SpA): Relief with exercise; worsens with rest |
| | Timing | Often mechanical; pain increases throughout the day | Malignancy: Constant, nocturnal pain; wakes patient from sleep |
| Physical Exam | Core Strength | Benchmark: Inability to hold a 90-second plank | General Deconditioning: Generalized weakness without spinal localized signs |
| | Neurological | Focal deficits (e.g., L5 great toe extension) or diminished reflexes | Peripheral Neuropathy: "Stocking-glove" sensory loss (common in Diabetes) |
| | Special Tests | Straight Leg Raise: Usually negative (only 10% positive in LSS) | Acute Disc Herniation: Frequently positive SLR with acute radicular pain |
| Risk Factors | History | Age >60, Native Inuit ancestry, or history of isthmic spondylolysis | Infection (TB/Abscess): History of TB exposure, fever, or weight loss |
| | Habits | Smoking: Accelerates disc dehydration and toxic cell damage | Post-Op: New symptoms after surgery suggest adjacent segment disease |
| Imaging Choice | First Line | None for 6 weeks unless "Red Flags" are present | X-Ray: Used immediately if fracture is suspected from trauma |
| | Gold Standard | MRI (without contrast) after 6 weeks of failed conservative care | CT/Myelogram: Reserved for MRI contraindications (e.g., metal implants) |

Abbreviations: ASD, Adjacent Segment Disease; B/B dysf, Bowel/Bladder dysfunction; BME, Bone Marrow Edema; BSI, Bone Scan Imaging; CLBP, Chronic Low Back Pain; CTM, CT Myelography; DSN, Disc Space Narrowing; DTRs, Deep Tendon Reflexes; Dx, Diagnostics; LSS, Lumbar Spinal Stenosis; MRI w/o, MRI without contrast; NC, Neurogenic Claudication; NCv, Neurogenic Claudication (vascular); PN, Peripheral Neuropathy; PVD, Peripheral Vascular Disease; ROM, Range of Motion; SA, Saddle Anesthesia; SCS, Shopping Cart Sign; SLR, Straight Leg Raise; SpA, Spondyloarthritis; STIR+, Short Tau Inversion Recovery positive; TB, Tuberculosis

## Comorbidity Screening

| Category | Screening Indicator | Clinical Goal |
|---|---|---|
| Metabolic | HbA1c/BMI | Reduce systemic inflammation and mechanical axial load |
| Lifestyle | Smoking Status | Cessation to restore blood flow/oxygen to spinal discs |
| Structural | Family History | Identify hereditary risk for isthmic spondylolysis |
| Infectious | TB Exposure | Rule out Pott's disease/spinal infection as a pain source |
| Psychosocial | Sleep/Mood | Identify distress related to loss of activity or sport |

Abbreviations: BMI, Body Mass Index; FHx, Family History; HbA1c, Hemoglobin A1c; TB, Tuberculosis

## Staging/Severity Matrix

### Hollenberg Classification (Spondylolysis Stage)

This system, based primarily on MRI or CT features, describes the stage of the stress injury to the pars interarticularis (the affected part of the vertebra). Early stages have a higher potential for healing with conservative treatment:

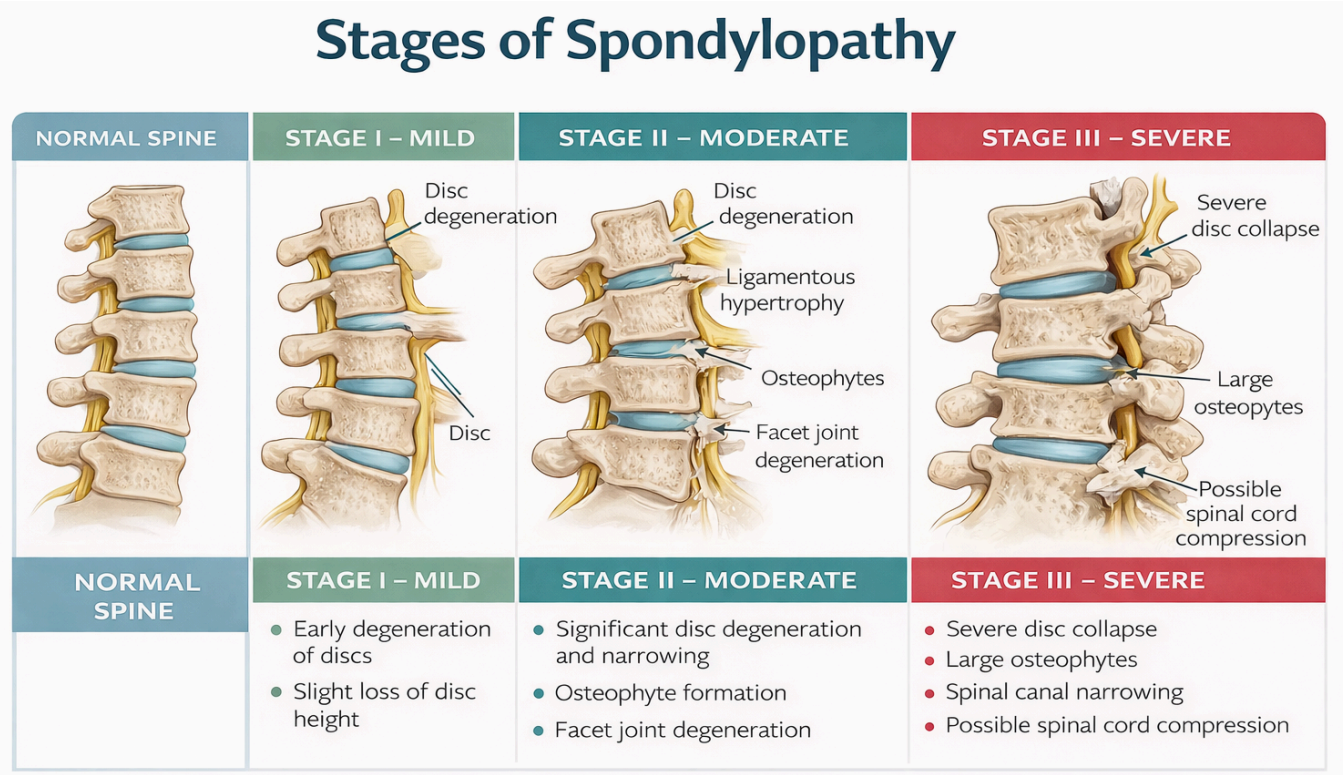
- **Grade 0 (Normal)**: Intact pars interarticularis with no signal abnormality
- **Grade I (Stress Reaction)**: Marrow edema (swelling within the bone) but intact cortical margins
- **Grade II (Incomplete Fracture)**: Marrow edema with an incomplete cortical fracture or fissure
- **Grade III (Acute Complete Fracture)**: Marrow edema with a complete fracture extending through the pars interarticularis
- **Grade IV (Chronic Stress Fracture)**: A complete fracture through the pars, but without marrow edema (indicating the injury is older and potentially stable)

### Meyerding Classification (Spondylolisthesis Severity)

If the pars defect causes one vertebral body to slip forward over the one below it (spondylolisthesis), the severity of the slip is graded using the Meyerding classification, which is the most common system for this purpose. It is based on the percentage of anterior translation of the superior vertebra relative to the inferior one:

- **Grade I**: 0–25% slippage (considered low-grade)
- **Grade II**: 26–50% slippage (considered low-grade)
- **Grade III**: 51–75% slippage (considered high-grade)
- **Grade IV**: 76–100% slippage (considered high-grade)

- **Grade V (Spondyloptosis)**: Greater than 100% slippage; the vertebra has completely fallen off the one below it




## Spinal Stenosis

Spinal stenosis typically progresses gradually through four stages, primarily categorized by the impact on a person's daily life and the presence of neurological symptoms.

- **Mild**: Patients may be asymptomatic or have only occasional, minimal discomfort or stiffness, often triggered by specific activities
- **Moderate**: Symptoms like pain, numbness, or tingling become more frequent and noticeable, starting to impact daily tasks and walking ability
- **Severe**: Persistent pain, significant mobility issues, and muscle weakness are prevalent. Walking may become difficult, often relieved by sitting or bending forward (a sign called neurogenic claudication)
- **End-Stage**: Characterized by intense, chronic pain, profound muscle weakness or potential paralysis, loss of balance/coordination, and in severe cases, loss of bladder or bowel control (a medical emergency known as cauda equina syndrome)

### Radiological Grading Systems

MRI can also be used to grade the anatomical narrowing of the spinal canal or nerve root compression. Several grading systems exist; two common ones are the Lee and Schizas systems for lumbar spinal stenosis.

| Grade | Severity | Description (Lee System) | Description (Schizas System) |
|---|---|---|---|
| 0 | Normal | No anterior cerebrospinal fluid (CSF) space obliteration | CSF is clearly visible around the nerve roots |
| 1 | Mild | Anterior CSF space is mildly obliterated; all nerve rootlets can be clearly separated | Rootlets occupy part of the dural sac, but CSF is still visible |
| 2 | Moderate | Anterior CSF space is moderately obliterated; some nerve rootlets are aggregated and hard to separate | Rootlets occupy the whole dural sac, giving a "grainy" appearance, but some CSF is present |
| 3 | Severe | Marked compression of the dural sac; the cauda equina appears as a single bundle with no rootlets separated. | No individual rootlets recognized; no CSF visible; dural sac shows a homogeneous gray signal |
| Abbreviations: CSF, Cerebrospinal Fluid; DS, Dural Sac | | | |

# 3. MEAT DOCUMENTATION ESSENTIALS

## Clinical Documentation Elements

| Element | Clinical Documentation Entry for M48.0 (Spinal Stenosis) | Clinical Documentation Entry for M47.8 (Other Spondylosis) |
|---|---|---|
| Link Causally | Neurogenic claudication and bilateral calf paresthesias due to severe central canal stenosis at L4-L5 | Focal L5 radiculopathy and foot drop secondary to severe lateral recess spondylosis and facet hypertrophy |
| Include Current Data | Lumbar MRI [Date] confirms a Schizas Grade 3 (Severe) stenosis with complete CSF obliteration at the L4-L5 level | Latest CT Spine [Date] shows multilevel osteophyte formation and significant disc space narrowing at C5-C7 |
| Specify Stage Precisely | Spinal Stenosis (M48.06) of the lumbar region with associated neurogenic claudication | Other spondylosis (M47.812) of the cervical region without myelopathy, manifesting as chronic neck pain |
| Document Chronicity | Chronic spinal stenosis; patient remains dependent on a rolling walker (Shopping Cart Sign) and continues Physical Therapy 2x/week | Stable chronic spondylosis; managing symptoms with daily Meloxicam 15mg and home therapeutic exercise program |
| Abbreviations: CP, Chronic Pain; CSF, Cerebrospinal Fluid; CT, Computed Tomography; DSN, Disc Space Narrowing; ESI, Epidural Steroid Injection; HEP, Home Exercise Program; LSS, Lumbar Spinal Stenosis; MRI, Magnetic Resonance Imaging; NC, Neurogenic Claudication; Ost, Osteophytes; Para, Paresthesia; PT, Physical Therapy; Radic, Radiculopathy; SCS, Shopping Cart Sign | | |

## Reframing Common Documentation Shortcuts

| Instead of... | Document... | Why this supports clarity |
|---|---|---|
| **"Back pain and stenosis"** | "Neurogenic claudication with 50ft exercise tolerance due to Central Spinal Stenosis (M48.06) at L4-L5" | Link causally: Directly connects the functional limitation to the specific ICD-10 code for HCC capture |
| **"Stable stenosis"** | "Lumbar Stenosis (M48.06) Schizas Grade 3; MRI [Date] shows complete CSF effacement at L3-L4" | Include current data: Uses a validated grading system and objective imaging evidence to prove ongoing monitoring |
| **"Degenerative changes"** | "Spondylosis with radiculopathy (M47.26); L5 dermatomal paresthesia and 4/5 EHL weakness noted on exam" | Specify stage precisely: Moves from "wear and tear" to a specific neurologic deficit that justifies higher complexity |
| **"Refilled meds"** | "Continuing Duloxetine 60mg daily for chronic spondylotic neuropathic pain; reported 30% reduction in VAS score" | Document chronicity: Provides evidence of "Evaluation" and "Treatment" (MEAT), proving the condition is active |
| **"Stiff gait"** | "Shopping Cart Sign present; patient exhibits compensatory forward flexion to alleviate canal pressure from M48.06" | Specify stage precisely: Documents a pathognomonic physical exam finding that validates the specific diagnosis of stenosis |

Abbreviations: B/L, Bilateral; CSF, Cerebrospinal Fluid; EHL, Extensor Hallucis Longus; HCC, Hierarchical Condition Category; LSS, Lumbar Spinal Stenosis; MEAT, Monitor, Evaluate, Assess, Treat; MRI, Magnetic Resonance Imaging; NC, Neurogenic Claudication; Radic, Radiculopathy; SCS, Shopping Cart Sign; VAS, Visual Analog Scale

# 4. TREATMENT & REFERRAL QUICK GUIDE

## Therapy Escalation Criteria[15–18,18]

### 1. Conservative Management (First-Line)

Most patients (even those with moderate Schizas Grade 2) start here. The goal is to reduce inflammation and widen the "functional" space in the spinal canal.

- Physical Therapy (Flexion-Biased): Focuses on the "Shopping Cart" posture. Exercises emphasize lumbar flexion (e.g., knee-to-chest, pelvic tilts) which stretches the ligamentum flavum and opens the cana
- Stationary Cycling: Often tolerated better than walking because the seated, forward-leaning position maintains the canal in an open state
- Pharmacotherapy:
  - NSAIDs: To manage the inflammatory component of spondylosis
  - Neuropathic Agents: Gabapentin or Pregabalin for radicular "nerve pain"

- Antidepressants: Low-dose Amitriptyline or Duloxetine for chronic pain modulation

### 2. Interventional Procedures

If "MEAT" documentation shows that conservative therapy is failing to improve functional scores (like the Oswestry Disability Index), interventional steps are taken.

- Epidural Steroid Injections (ESI): Target the epidural space to bathe compressed nerve roots in anti-inflammatories. These are often used as a "bridge" to buy time before surgery
- Facet Joint Injections / Radiofrequency Ablation (RFA): Specifically for M47.8 (Spondylosis) where the pain is coming from the arthritic joints themselves rather than the central canal
- MILD Procedure: (Minimally Invasive Lumbar Decompression) A needle-based procedure to debulk thickened ligaments without full surgery

### 3. Surgical Options

Surgery is generally indicated for Schizas Grade 3 stenosis, progressive weakness, or Cauda Equina Syndrome.

| Procedure | Indication | Description |
|---|---|---|
| **Laminectomy** | Central Stenosis (M48.06) | Removal of the "roof" (lamina) of the vertebrae to create immediate space for the dural sac |
| **Laminotomy** | Foraminal Stenosis | Removal of a smaller "window" of bone to decompress a specific exiting nerve root |
| **Spinal Fusion** | Instability/ Spondylolisthesis | Used when spondylosis has led to "slippage" of vertebrae, providing stability via rods and screws |

## Treatment Options[19,20]

### 1. Anti-Inflammatories (For Bone & Joint Pain)

Used to treat the arthritic component (Spondylosis) and reduce swelling in the ligaments that narrow the canal.

| Medication | Typical Starting Dose | Max / Maintenance Dose | Key RADV Note |
|---|---|---|---|
| **Naproxen** | 250–500mg BID | 1000–1500mg/day | Document GI tolerance |
| **Ibuprofen** | 400mg q6-8h | 3200mg/day | Best for acute flares |
| **Meloxicam** | 7.5mg daily | 15mg daily | Preferred for chronic use |
| **Celecoxib** | 100mg daily | 200mg BID | COX-2 selective (lower GI risk) |

Abbreviations: BID, twice a day; COX-2, Cyclo-oxygenase-2; GI, Gastrointestinal; mg, Milligram; NSAIDs, Non-Steroidal Anti-Inflammatory Drugs; q6-8h, every 6 to 8 hours

## 2. Neuropathic Agents (For Nerve Root Pain)

Crucial for patients with **Radiculopathy** or **Neurogenic Claudication** (leg heaviness/burning). These must be titrated slowly to avoid sedation.

| Medication | Starting Titration | Target Therapeutic Dose |
|---|---|---|
| **Gabapentin** | 100–300mg at bedtime | 600–900mg TID (Max 3600mg/day) |
| **Pregabalin** | 25–50mg at bedtime | 150–300mg BID |
| **Duloxetine** | 30mg daily | 60mg daily (Max 120mg/day) |
| **Amitriptyline** | 10mg at bedtime | 25–50mg at bedtime |

## 3. Muscle Relaxants (For Secondary Spasms)

These do not treat the stenosis itself but address the "splinting" or compensatory muscle spasms caused by a stiff spine.

- Cyclobenzaprine: 5mg to 10mg TID (limit use to 2–3 weeks; very sedating)
- Baclofen: 5mg TID (can be titrated up to 20 mg TID for chronic spasticity)
- Tizanidine: 2mg to 4mg at bedtime (useful for nocturnal cramping)

## 4. Pain Management

### Opioid Dosing and Options

Opioid therapy is measured in MME (Morphine Milligram Equivalents).

| Option Type | Examples | Typical Dose Range (Spondylopathy) | Clinical Note |
|---|---|---|---|
| **Short-Acting** | Hydrocodone/APAP, Oxycodone IR | 5mg to 10mg every 4–6hrs PRN | Best for "breakthrough" pain during flare-ups |
| **Long-Acting** | Morphine ER, Oxycodone ER | 15mg to 30mg twice daily | Provides a stable baseline; avoids the "rollercoaster" effect |
| **Atypical** | Tramadol | 50mg every 6hrs | Dual-action (opioid + serotonin); lower respiratory risk but lowers seizure threshold |
| **Atypical** | Buprenorphine | 5mcg/hr to 20mcg/hr patch | Partial agonist; much safer for elderly patients with lumbar stenosis |

### Medical Cannabis Dosing and Options

Cannabis dosing follows the "Start Low, Go Slow" rule. For spinal issues, the goal is often to use CBD for inflammation and THC for the "pain gate" at night.

- Initial Dose: 2.5mg to 5mg of THC/CBD (1:1 ratio)

- The "Sweet Spot": Most spondylopathy patients find relief at 10mg–20mg of total cannabinoids per dose
- Daytime: High-CBD sublingual oil (e.g., 20:1 CBD:THC) to reduce inflammation while the patient is active
- Nighttime: Balanced 1:1 THC:CBD capsule to manage the deep, aching pain of spinal stenosis and improve sleep
- The Result: By adding these, a physician can often drop a patient's oxycodone dose from 30MME to 10MME, drastically reducing side effects

| Option Type | Delivery Method | Duration | Best Used For |
|---|---|---|---|
| **Sublingual Oil** | Drops under tongue | 4–6 hours | Consistent daytime relief for radiculopathy |
| **Edibles/Capsules** | Ingested | 6–10 hours | Chronic nighttime pain and sleep disturbances |
| **Topical Salve** | Applied to skin | 2–3 hours | Localized facet joint pain (M47.816) without "high" |
| **Inhalation** | Vaporization | 1–3 hours | Acute, sharp "electric" shocks from nerve compression |

### Important Safety Considerations

1. **Renal Adjustment**: Gabapentin and Pregabalin require significant dose reductions if the patient has a low GFR (common in elderly stenosis patients)
2. **The "NSAID Ceiling"**: Long-term high-dose NSAID use in M47.8 patients increases the risk of renal failure and peptic ulcers. Consider topical formulations (Diclofenac gel) to minimize systemic absorption
3. **Beers Criteria**: Use extreme caution with Muscle Relaxants and Amitriptyline in patients over 65 due to increased fall risk

## Non-Rx Treatment Documentation[15,20,21,7]

### 1. Postural Interventions

The goal here is to maintain Lumbar Flexion, which stretches the ligamentum flavum and increases the cross-sectional area of the spinal canal.

- **The "Shopping Cart" Modification:** Encouraging the use of a rolling walker for community ambulation. The slight forward lean opens the spinal canal and significantly increases walking distance (the "Shopping Cart Sign")
- **Zero-Gravity Positioning:** Using an adjustable bed or recliner to keep the hips and knees flexed at 90 degrees while sleeping, which offloads the facet joints (M47.8)

### 2. Specialized Equipment

Document that these items were prescribed to improve specific functional deficits.

- **Unloading Bracing:** A lumbar corset or brace can provide proprioceptive feedback to prevent painful extension of the spine
- **Lumbar Traction:** Mechanical or manual traction can provide temporary relief by creating negative pressure in the disc space and widening the neural foramina
- **Aquatic Therapy:** Exercising in chest-deep water uses buoyancy to "unload" the spine. This allows patients with severe stenosis to perform aerobic conditioning that they cannot tolerate on land

## 3. Interventional "Bridge" Procedures

These are non-pharmacological *long-term* options that sit between conservative care and major surgery.

- **Interspinous Process Spacers (e.g., Vertiflex):** A small titanium device is implanted between the spinous processes to "prop" the canal open, preventing the spine from extending and pinching the nerves
- **TENS Units:** While not a "cure," Transcutaneous Electrical Nerve Stimulation can gate the pain signals sent from compressed nerve roots to the brain

## 4. Nutritional and Skeletal Support

- **Standing Frames:** Using a mechanical device to hold the body in an upright, weight-bearing position for 30–60 minutes a day. This is the most effective non-medication way to prevent osteoporosis and "fragility fractures" in the legs
- **High-Protein, High-Fiber Diet:** Vital for preventing the two most common reasons for re-hospitalization: skin ulcers (which need protein to heal) and fecal impaction (which requires fiber and water to move)
- **Inversion Table:** Uses gravity to decompress the spine, potentially relieving chronic back pain, sciatica, or disc issues by creating space between vertebrae

## 5. Movement-based Therapy (Physiotherapy, Occupational Therapy, etc.)

These are the cornerstones of chronic care, moving beyond simple exercise to specialized neurological retraining.

- **Locomotor Training:** Utilizing body-weight-supported treadmill systems (BWSTT), therapists help move the patient's legs in a walking pattern. This provides sensory input to the spinal cord, which can stimulate "central pattern generators" to improve gait and circulation
- **Flexion-Based Physical Therapy (Williams Exercises):** Focuses on pelvic tilts, knee-to-chest stretches, and abdominal strengthening. This reduces the "lumbar lordosis" (arch) that worsens stenosis symptoms
- **Constraint-Induced Movement Therapy (CIMT):** For incomplete injuries, the "stronger" limb is restricted to force the brain and cord to strengthen the neural pathways of the "weaker" limb
- **Adaptive ADL Training:** Occupational therapists teach "compensatory strategies" for Activities of Daily Living, such as using a tenodesis grasp (using wrist extension to close the fingers) or specialized utensils for those with limited hand function
- **Pilates: Core & Stability:** Strengthens deep core muscles, improving spinal and pelvic stability, crucial for managing spinal pain

- **Chiropractic Care:** Chiropractic manipulation focuses on spinal alignment, joint mobility, and nerve relief through adjustments, often combined with massage, exercises, and therapies like decompression to ease pain, improve function

## When to Refer

### 1. Emergent Referrals (Go to ER Immediately)

These symptoms indicate Cauda Equina Syndrome (CES) or severe spinal cord compromise. Delay can lead to permanent paralysis or permanent loss of bladder control.

- **Saddle Anesthesia:** Numbness in the groin, perineum, or "saddle region" (where you would touch a horse's saddle)
- **New Bowel/Bladder Dysfunction:** Urinary retention (inability to pee) or overflow incontinence (leaking without realizing the bladder is full)
- **Rapidly Progressive Weakness:** A sudden drop in motor strength (e.g., unable to lift the front of the foot — "foot drop" — within 24–48 hours)
- **Intractable Pain:** Severe pain that prevents the patient from lying still, sitting, or sleeping, and is unresponsive to oral opioids or high-dose NSAIDs

### 2. Elective Surgical Referrals (Neurosurgery/Ortho Spine)

An elective referral is appropriate when the patient has failed a trial of conservative care and their Quality of Life is significantly impacted.

- **Failure of Conservative Management:** Typically 6–12 weeks of dedicated Physical Therapy (flexion protocol), NSAIDs, and/or activity modification without meaningful improvement
- **Neurological Deficit:** Presence of objective muscle weakness (Grade 4/5 or less) or persistent numbness that follows a specific dermatome (Radiculopathy)
- **Functional Limitation:** The patient's "walking distance" is severely restricted (e.g., cannot walk more than 1 block or 5 minutes) due to neurogenic claudication
- **High Disability Scores:** An Oswestry Disability Index (ODI) score greater than 40-45% is often a tipping point where surgical outcomes outweigh the risks of conservative management

## Follow-up Timing[16,22–24]

### 1. Conservative Management Follow-Up (Every 4–6 Weeks)

When starting a new conservative "trial" (e.g., Physical Therapy or a new medication like Gabapentin), a short-term follow-up is necessary to evaluate efficacy.

- Goal: Determine if the patient is responding to flexion-biased PT or if the medication dose needs titration
- EHR Entry: Document the change in walking distance (e.g., "Increased from 5 minutes to 15 minutes") or VAS Pain Scale
- Decision Point: if there is 0% improvement after 6 weeks of PT, consider transitioning to interventional or surgical referrals

### 2. Post-Interventional Follow-Up (2–4 Weeks Post-Injection)

If a patient receives an Epidural Steroid Injection (ESI) or Facet Injection, follow up is timed to the peak efficacy of the corticosteroid.

- Goal: Assess the "percentage of relief." Surgeons often use the response to an injection as a "diagnostic test" to confirm the exact level causing the pain
- EHR Entry: "Patient reports 70% reduction in radicular symptoms following L4-L5 ESI; validates M48.06 as the primary pain generator"

### 3. Chronic Stability Follow-Up (Every 6–12 Months)

For patients with Stable Chronic Spondylosis, annual or semi-annual visits are required to maintain the diagnosis in the HCC (Hierarchical Condition Category) coding for the year.

- Goal: Ensure there is no "silent" neurological decline (e.g., gradual loss of strength the patient hasn't noticed)
- Up to Date Data: Perform a focused neuro exam (Strength 5/5, Sensation intact, Reflexes 2+)
- Documentation Tip: Even if the patient is "doing well," you must document that the condition is "Chronic and persistent, requiring ongoing activity modification and PRN medication."

| Clinical Status | Timing | Key Assessment Element |
|---|---|---|
| New Diagnosis/Acute Flare | Every 2–4 Weeks | Medication titration and safety monitoring |
| Active Physical Therapy | Every 6 Weeks | Review of PT progress reports and functional gains |
| Post-Surgical (Laminectomy) | 2 Weeks, 6 Weeks, 3 Months | Wound healing, then return to ADLs/work |
| Stable/Maintenance | Every 6–12 Months | Annual "MEAT" capture for RADV/HCC compliance |

## Patient Education & Adherence[7,19,25]

### 1. Explaining the "Mechanical" Nature

Patients often expect a pill to "cure" the stenosis. Education must focus on the fact that this is a structural (space) issue.

- **The "Hose" Analogy**: Explain that the spinal canal is like a garden hose. Spondylosis is like a kink in the hose. Medication reduces the "leaking" (inflammation), but posture and PT are what "unkink" the hose
- **The Flexion Principle**: Teach patients that bending forward (flexion) opens the spinal canal, while leaning back (extension) closes it
- **Actionable Advice**: Suggest "pacing" activities. If they need to go grocery shopping, they should always use a cart for support

## 2. Barriers to Adherence & Solutions

| Common Barrier | Clinical Solution/Patient Education |
|---|---|
| **Fear of Movement** | Explain that "hurt does not always mean harm." Gentle flexion exercises actually decompress the nerves |
| **Medication Side Effects** | Educate that neuropathic meds (Gabapentin) cause drowsiness *initially* but usually improve after 1-2 weeks of consistent use |
| **PT "Burnout"** | Transition patients to a Home Exercise Program (HEP) or Aquatic therapy to keep the routine manageable and low-impact |
| **Unrealistic Expectations** | Clarify that the goal is functional improvement (walking further with less pain), not necessarily 0/10 pain |

## 4. Reframing Common Documentation Shortcuts

There needs to be evidence that the patient is an active participant in their care. This proves the condition is being evaluated and managed.

| Instead of... | Prefer documenting... | Why this supports care |
|---|---|---|
| **"Discussed PT"** | "Counseled patient on flexion-biased posture to alleviate M48.06 symptoms; patient demonstrated 'Teach-Back' successfully" | Proves the patient understands the mechanical nature of their diagnosis |
| **"Gave handouts"** | "Provided education on red-flag symptoms (saddle anesthesia/bowel-bladder changes); patient verbalized understanding of when to seek ER care" | Documents safety monitoring and risk assessment |
| **"Patient is non-compliant"** | "Patient struggles with HEP due to transportation issues; adjusted plan to include aquatic therapy at a local community center" | Shows active "Evaluation" and "Adjustment" of the treatment plan |
| Abbreviations: B/B, Bowel/Bladder; ER, Emergency Room; HEP, Home Exercise Program; M48.06, Spinal Stenosis (Lumbar) | | |

## 5. Leveraging Technology

- **Digital Apps**: Encourage the use of step-counters to track "Pain-Free Walking Distance." This data can be reviewed at follow-ups to provide objective evidence of progress
- **Patient Portals**: Encourage patients to message if they have "zingers" (electric shock pains) so medication can be titrated before the next 6-month visit

# Comorbidity Management[7,26,27]

When a patient has Spondylosis or Stenosis, it may not exist in a vacuum. You must document how it impacts — or is impacted by — the potential comorbidities:

| Comorbidity | The Clinical Interplay | RADV Documentation Tip |
|---|---|---|
| **Diabetes (E11.9)** | Spinal stenosis can mimic or mask diabetic peripheral neuropathy | "Distinguished neurogenic claudication from diabetic neuropathy via physical exam (preserved pulses, positional pain)" |
| **Obesity (E66.x)** | Increased axial loading exacerbates M47.8 spondylosis and limits surgical options | "Counseling on weight loss as a primary mechanical treatment to reduce load on the L4-L5 segment" |
| **Vascular Disease (I73.9)** | Vascular claudication must be differentiated from neurogenic claudication | "Walking tolerance limited by spinal stenosis (M48.06), not PAD, as symptoms improve with spinal flexion/sitting" |
| **Chronic Kidney Disease** | Limits the use of NSAIDs for spondylosis management | "Avoiding NSAIDs for M47.8 pain due to Stage 3b CKD; utilizing topical Diclofenac and Gabapentin instead" |
| **Depression (F32.x)** | Chronic pain from stenosis often leads to or worsens depressive disorders | "Monitoring PHQ-9; chronic spinal pain (M48.06) is a significant driver of patient's current depressive state" |

Abbreviations: CKD, Chronic Kidney Disease; E11.9, Type 2 Diabetes Mellitus; M47.8, Other Spondylosis; M48.06, Lumbar Spinal Stenosis; NSAIDs, Non-Steroidal Anti-Inflammatory Drugs; PAD, Peripheral Artery Disease; PHQ-9, Patient Health Questionnaire-9

## Cost-Smart Options

| Condition | Preferred Generic Medication | Est. Monthly Cost (No Insurance) | Benefit / Target Symptom |
|---|---|---|---|
| **Neuropathic Pain** | **Gabapentin** | $11 – $24 | Reduces "burning" or electric nerve pain |
| **Neuropathic Pain** | **Pregabalin** | $15 – $30 | More potent alternative to Gabapentin |
| **Spasticity** | **Baclofen** | $20 – $50 | First-line for muscle spasms and rigidity |
| **Spasticity** | **Tizanidine** | $4 – $48 | Short-acting antispasmodic; good for nighttime use |
| **Bladder Control** | **Oxybutynin** | $5 – $10 | Reduces bladder spasms to prevent leakage |
| **Sleep/Nerve Pain** | **Amitriptyline** | $2 – $20 | Helps with sleep and chronic "cape" distribution pain |
| **Bone Health** | **Alendronate** | $10 – $20 | Prevents osteoporosis and fragility fractures |

| Medication | Standard Retail (Cash) | Discount Price (GoodRx/CostPlus) | Cost-Smart Tip |
|---|---|---|---|
| **Gabapentin (300mg TID)** | ~$45.00 | $8.00 – $15.00 | Generally the cheapest option for nerve pain |
| **Pregabalin (75mg BID)** | ~$150.00 | $12.00 – $25.00 | Now generic |
| **Duloxetine (60mg Daily)** | ~$120.00 | $8.00 – $20.00 | Best value for patients with concurrent depression/anxiety |

Abbreviations: BID, twice a day; mg, Milligram; TID, three times a day

## Anti-Inflammatories (For Spondylosis)

These manage the "bone-on-bone" pain associated with M47.8.

| Medication | Standard Retail (Cash) | Discount Price (GoodRx/CostPlus) | Cost-Smart Tip |
|---|---|---|---|
| **Meloxicam (15mg Daily)** | ~$35.00 | $4.00 – $10.00 | Often on the "$4 Generic" list at major retailers |
| **Celecoxib (200mg Daily)** | ~$180.00 | $10.00 – $20.00 | Mention "Generic Celebrex" to get the lower price |
| **Diclofenac 1% Gel** | ~$40.00 | $8.00 – $15.00 | Often cheaper with a prescription discount than buying OTC Voltaren |

Abbreviations: BID, Twice a day; GI, Gastrointestinal; mg, Milligram; NSAIDs, Non-Steroidal Anti-Inflammatory Drugs; OTC, Over-the-counter

## Quality Metrics Tie-In[10,28]

In the current value-based care landscape, documenting Spondylosis (M47.8) and Spinal Stenosis (M48.0) is not just about RADV/HCC capture; it is directly tied to MIPS (Merit-based Incentive Payment System) and HEDIS quality metrics.

### 1. Functional Status Assessment (MIPS #131)

Medicare rewards providers who track functional improvement in patients with chronic bone and joint pain.

- The Metric: Percentage of patients with a functional status assessment (e.g., Oswestry Disability Index or ODI) performed within the last 12 months
- RADV Alignment: Using an ODI score provides the "Current Data" element for your RADV template
- EHR Entry: "ODI score is 42% (Moderate-to-Severe); results used to justify referral for surgical consult for L4-L5 Stenosis (M48.06)"

### 2. Avoiding Imaging for Low Back Pain (HEDIS/MIPS #406)

Quality metrics discourage "reflexive" imaging (MRI/CT) within the first 6 weeks of back pain *unless* red flags are present.

- The Metric: Percentage of patients who did not have an imaging study within 28 days of a new diagnosis of low back pain
- The RADV Conflict: You need imaging to prove M48.0 (Stenosis)
- The Solution: To stay "Quality Compliant" document the Red Flags or the failure of conservative treatment that justifies the image
- Documentation Entry: "Ordering MRI [Date] despite HEDIS 28-day window due to focal neurologic deficit (Grade 4/5 weakness) and failure of 4 weeks of aggressive conservative management"

### 3. Documentation of "Current Medications" (MIPS #130)

You are measured on the accuracy of your medication list, including dosing and indications.

- The Metric: Documentation of all current medications (prescribed and OTC)
- RADV Alignment: This satisfies the "Treatment" and "Chronicity" elements of the RADV template
- Documentation Entry: "Patient continues Meloxicam 15mg daily for chronic spondylosis; patient advised to discontinue OTC Ibuprofen to avoid NSAID duplication and renal risk"

### 4. Falls: Screening and Plan of Care (MIPS #154 & #155)

Spinal Stenosis (M48.0) is a primary driver of gait instability and falls in the elderly.

| Quality Goal | Documentation Entry |
|---|---|
| Screening | "Screened for falls; patient reported 1 fall in last 6 months due to leg buckling from neurogenic claudication (M48.06)" |
| Plan of Care | "Fall prevention plan initiated: Referral to PT for gait training and recommendation for a rolling walker to assist with spinal flexion" |
| Abbreviations: B/L, Bilateral; LSS, Lumbar Spinal Stenosis; M48.06, Spinal Stenosis (Lumbar); NC, Neurogenic Claudication; PT, Physical Therapy | |

### 5. Opioid Management Metrics

With the high scrutiny on chronic opioid use, documenting M47/M48 as the structural cause for pain is vital.

- The Metric: Use of Opioids at High Dosage (HEDIS)
- EHR Entry: "Maintaining current analgesic regimen; M48.06 (Stenosis) is the documented structural pathology. Opioid Risk Tool (ORT) score is low; PDMP reviewed [Date]"

## 5. CODING REMINDERS & CASE EXAMPLES BOX

### Specificity Requirements

| Critical Element | Clinical Requirement | Example Documentation |
|---|---|---|
| Stage & Level | Use the Schizas Classification and specify the vertebral level (Cervical, Thoracic, Lumbar) | Schizas Grade 3 (Severe) stenosis at L4-L5. Documenting the grade and specific level is vital for capturing the complexity of the spinal narrowing |
| Etiology | Link the structural change to the neurologic symptom (Radiculopathy vs. Claudication) | Lumbar Spondylosis with Radiculopathy (M47.26) involving the L5 nerve root secondary to facet hypertrophy and foraminal narrowing |
| Validation Data | Include specific imaging findings (e.g., AP diameter of the canal) or physical exam signs | MRI [Date]: Canal AP diameter <10mm at L3-L4; Positive "Shopping Cart Sign" on exam. This satisfies the Monitor and Evaluate portions of MEAT |
| Complications | Explicitly link secondary mobility or neurologic deficits to the spinal pathology | Neurogenic Claudication (M48.061) secondary to central canal stenosis; patient's gait is limited to <100 feet due to bilateral leg heaviness |

| Critical Element | Clinical Requirement | Example Documentation |
|---|---|---|
| Abbreviations: AP, Anteroposterior; CSF, Cerebrospinal Fluid; LSS, Lumbar Spinal Stenosis; M47.26, Lumbar Spondylosis with Radiculopathy; M48.061, Lumbar Spinal Stenosis with Neurogenic Claudication; MEAT, Monitor, Evaluate, Assess, Treat; MRI, Magnetic Resonance Imaging | | |

## Annual Clinical Review and Confirmation

*Confirm spinal disease remains active, specific, and clinically managed*

- **YES — Annual Recapture Required:** Even if the MRI was done 5 years ago, you must document that the stenosis (M48.062) is an **active** chronic condition by 12/31 of the current year
- **The "Constraint" Rule:** V28 uses "constraining," meaning if you code multiple levels of stenosis, you only receive the RAF for the highest-weighted HCC in that family (Spinal HCCs 180–182)
- **Telehealth Eligibility:** Video visits count for annual capture, but **audio-only** phone calls typically do not satisfy the requirements for HCC recapture in most Medicare Advantage plans
- **Clinical context**: Under HCC V28, spinal diagnoses are subject to *constraining* within the spinal HCC family (HCCs 180–182); documentation should reflect the **most clinically severe, current presentation**, not multiple levels alone

### Documentation Focus for Annual Review

| Goal | Required Documentation Action |
|---|---|
| **Prove Activity** | Use "Chronic," "Persistent," or "Stable" to describe the condition. Never use "History of" for a diagnosis that still requires management |
| **Demonstrate MEAT** | For the visit to count, you must show you did one of the following: Monitor, Evaluate, Assess, or Treat the condition *during that specific encounter* |
| **Update Specificity** | Recapture the highest-level code (e.g., M48.062 for stenosis with claudication). Plans will flag "unspecified" codes that are simply carried over from the previous year's problem list |
| **Verify Linkage** | Ensure the medication being refilled (e.g., Gabapentin) is explicitly linked to the diagnosis in the Assessment/Plan |
| Abbreviations: HCC, Hierarchical Condition Category; M48.062, Lumbar spinal stenosis with neurogenic claudication; MEAT, Monitor, Evaluate, Assess, Treat; RADV, Risk Adjustment Data Validation | |

## Reframing Common Documentation Shortcuts

| Instead of... | Document... | Why this supports care |
|---|---|---|
| **"Stable stenosis"** | "Lumbar Stenosis (M48.06) stable but chronic; MRI [Date] confirms Schizas Grade 2 at L4-L5" | Include current data: Provides objective grading to prove active monitoring |
| **"Worsening pain"** | "Treatment Failure; Neurogenic claudication worsened from 15min to 5min walking tolerance. Scheduled for ESI" | Specify stage precisely: Quantifies the decline in functional status to justify interventional care |

| Instead of... | Document... | Why this supports care |
|---|---|---|
| **"Back pain and leg numbness"** | "L5 Radiculopathy (M47.26) secondary to Chronic Spondylosis; EHL weakness 4/5 noted on exam [Date]" | Link clinical relationships: Connects the neurologic deficit to the primary structural diagnosis, ensures for proper HCC 181 coding and management |
| **"Refilled Gabapentin"** | "Adjusted Gabapentin to 600mg TID for neurogenic claudication (M48.06); safety review confirms no falls or sedation" | Document chronicity: Shows active titration and safety monitoring (The "Treat" in MEAT) |

Abbreviations: EHL, Extensor Hallucis Longus; ESI, Epidural Steroid Injection; HCC, Hierarchical Condition Category; L4-L5, Lumbar levels 4 and 5; M47.26, Lumbar Spondylosis with Radiculopathy; M48.06, Lumbar Spinal Stenosis; MEAT, Monitor, Evaluate, Assess, Treat; MRI, Magnetic Resonance Imaging; TID, Three times a day

# EHR Tips

## 1. The "SmartPhrase" Strategy

Build a dedicated template for spinal pathology that prompts you for the specific data needed. A well-designed "SmartPhrase" ensures you never miss the **6th character** specificity.

**Template Example (`.STENOSIS`):**

**Assessment: Lumbar Spinal Stenosis with Neurogenic Claudication (M48.062) Data:** Schizas Grade **[Select: 1/2/3]** at **[Select: L3-L4/L4-L5]** per MRI dated **[Date]**. **Exam:** Positional relief with forward flexion (Shopping Cart Sign) present. Ambulation limited to **[X]** feet. **Plan:** Continue **[Medication Name/Dose]**. Patient educated on red flags (saddle anesthesia). Follow up in **[X]** months.

## 2. "Problem List" Hygiene

The Problem List is often the source of "Unspecified" code denials. At the start of the year, perform a "Problem List Scrub":

- **Delete:** Generic codes like "M54.50 Low Back Pain"
- **Replace With:** Specific HCC-weighted codes like **M47.26** (Spondylosis with Radiculopathy, Lumbar)
- **EHR Tip:** Set your EHR to "Star" or "Favorite" the specific 6th-character codes so they appear at the top of your search results every time

## 3. Medication-Diagnosis Linkage

In most EHRs (Epic, Cerner, Athena), you can "Associate" a diagnosis with a medication order.

- **Why it matters:** When you link **Gabapentin** directly to **M48.062** in the orders section, the EHR automatically creates a "Treat" link
- **Note:** Never leave a spinal medication "unlinked" to a specific structural diagnosis

## 4. Patient Portal "Data Mining"

Use your portal to collect "Monitor" data before the patient even enters the room.

- **Functional Scores:** Send the **Oswestry Disability Index (ODI)** via the portal
- **Auto-Population:** Have the patient's score pull directly into your note. This provides **Evaluation** data (The "E" in MEAT) without you having to type a word

### 5. Managing Telehealth Specificity

For video visits (which count for annual capture), you must adapt your EHR physical exam.

- **Documentation Tip:** "Gait observed via video; patient exhibits compensatory forward flexion while walking. Strength assessed via functional move (unable to perform single-leg toe-rise)." This validates the **Evaluation** portion of the code when a hands-on exam isn't possible

## Brief Case Examples

| Case Type | Documentation Example | Potential Financial Implication |
|---|---|---|
| SUCCESS | "74yo with **Other Specified Spondylopathy (M48.8X2)** specifically **OPLL** (Ossification of the Posterior Longitudinal Ligament) in the cervical region. Imaging (MRI 09/2025) shows significant ligamentous thickening at C3-C5 with associated cord flattening. Clinical stiffness and limited ROM noted. Patient managed with chronic gabapentin and neurosurgical surveillance. | **HCC 93** (RAF 0.617). RAF 0.617 x $10,402.34 MA rate = **Estimated $6,418.24/year.** Satisfies **MEAT: M**onitoring cord signs, **E**valuating MRI findings, **A**ssessing clinical ROM, **T**reating with Gabapentin |
| PITFALL | "M48.8X9 - Other spondylopathy, site unspecified. General back pain and age-related wear." | **Flagged.** The use of the "X9" unspecified site code is an automatic red flag for RADV. Without a specific site or condition name, the "Other Specified" status is invalid |
| FIX | 74yo with Lumbar Spondylopathy (M48.8X6). Clinical and radiographic findings (X-ray 11/2025) confirm Baastrup's Disease at L3-L5 with significant 'kissing spine' and interspinous inflammatory bursitis. Exam: Exquisite midline tenderness on palpation; pain worsens with lumbar extension. Plan: Proceeding with fluoroscopic-guided bursa injection and PT for flexion-based core stabilization." | **HCC 93 (RAF 0.617). Success w/** naming the specific inflammatory pathology (Baastrup's) and satisfying MEAT through injection planning and physical exam correlation |

Abbreviations: B/L, Bilateral; CSF, Cerebrospinal Fluid; EHL, Extensor Hallucis Longus; ESI, Epidural Steroid Injection; HCC, Hierarchical Condition Category; L4-L5, Lumbar levels 4 and 5; M47.26, Lumbar Spondylosis with Radiculopathy; M48.062, Lumbar spinal stenosis with neurogenic claudication; MA, Medicare Advantage; MEAT, Monitor, Evaluate, Assess, Treat; MRI, Magnetic Resonance Imaging; ODI, Oswestry Disability Index; RAF, Risk Adjustment Factor; TID, Three times a day

# QUICK REFERENCE TABLES

## Spinal PathologyQuick Sheet: Top 10 Codes

**Spinal Coding Cheat Sheet** for your billing and clinical teams. It highlights the most frequent **M47** and **M48** codes, emphasizing the **6th character** required to satisfy the **V28 HCC model**.

| Diagnosis Category | ICD-10 Code | Site Specificity | Clinical Necessity for RADV |
|---|---|---|---|
| **Lumbar Stenosis** | **M48.062** | Lumbar w/ claudication | Highest Weight. Must document "Shopping Cart Sign" or specific walking limits |
| **Lumbar Stenosis** | **M48.061** | Lumbar w/o claudication | Document narrowing on MRI with localized pain only (no leg symptoms) |
| **Spondylosis w/ Radic** | **M47.26** | Lumbar region | Must specify nerve root findings (e.g., L5/S1 weakness or reflex change) |
| **Spondylosis w/ Myelo** | **M47.12** | Cervical region | High Severity. Must document cord signs: Hoffman's, gait ataxia, or hyperreflexia |
| **Other Spondylopathy** | **M48.8X1** | Occipito-atlanto -axial | Findings at C0-C2. Document specific ligamentous ossification or "kissing spine" |
| **Other Spondylopathy** | **M48.8X2** | Cervical region | Findings at C3-C7. Specify the unique pathology (e.g., OPLL) |
| **Other Spondylopathy** | **M48.8X3** | Cervicothoracic | Specifically at the C7-T1 junction |
| **Other Spondylopathy** | **M48.8X4** | Thoracic region | Findings between T1-T12. Document specific level and structural change |
| **Other Spondylopathy** | **M48.8X5** | Thoracolumbar | Specifically at the T12-L1 junction |
| **Other Spondylopathy** | **M48.8X6** | Lumbar region | Findings between L1-L5. Common for Baastrup's disease documentation |
| **Other Spondylopathy** | **M48.8X7** | Lumbosacral | Specifically at the L5-S1 junction |
| **Other Spondylopathy** | **M48.8X8** | Sacral/Sacrococ cygeal | Findings in the Sacrum or Coccyx (tailbone). |
| **Other Spondylopathy** | **M48.8X9** | Site Unspecified | Use only if imaging/exam does not specify a level |

## Billing Tip: The "6th Character" Key

When searching in the EMR, **never stop at the decimal**.

- **M48.0** is non-billable
- **M48.06** is non-billable
- **M48.062** is a **Valid HCC Capture**

## "Pro-Tips" for the M48.8X Series

The "Placeholder X": Always remember the "X" is a mandatory character. Submitting "M48.86" without the X will result in an immediate claim rejection.

Define the "Other": Should explicitly name the condition.

- *Example:* "Patient's lumbar pain is secondary to Baastrup's disease (M48.8X6) as evidenced by interspinous contact on lateral X-ray."

Transitional Zones: Use the "junction" codes (M48.8X3, X5, X7) specifically when the pathology crosses the boundary between two major spinal regions. This shows higher clinical precision.

## Clinician Sheet for the Exam Room

If you see these findings, use these specific codes to ensure accurate **documentation**:

- **Patient leans on a walker?** → **M48.062** (Stenosis with Claudication)
- **Absent Achilles reflex or "Foot Drop"?** → **M47.26** (Spondylosis with Radiculopathy)
- **Balance issues or dropping things?** → **M47.1x** (Spondylosis with Myelopathy)
- **Back pain ONLY, no nerve signs?** → **M47.81x** (Spondylosis without Radiculopathy)

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