



American Academy
of Value Based Care

Spondylopathy

Quick Reference Guide

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AAVBC Spondylopathy Quick Reference Guide

Table of Contents

CLINICAL SNAPSHOT	3
RECOGNITION AND DIAGNOSIS	4
Medicare Screening/Diagnostic Workup.....	4
Subtle Early Signs.....	7
Risk Factors.....	8
Red Flags.....	8
Diagnostic Thresholds.....	9
Clues to Dig Deeper.....	11
Common Oversights.....	11
Key Differentials.....	12
Comorbidity Screening.....	13
Staging/Severity Matrix.....	13
MEAT DOCUMENTATION ESSENTIALS	15
TREATMENT AND REFERRAL QUICK GUIDE	16
Therapy Escalation Criteria.....	16
Treatment Options.....	17
Non-Rx Treatment Documentation.....	19
When to Refer.....	21
Follow-up Timing.....	21
Patient Education and Adherence.....	22
Comorbidity Management.....	23
Cost-Smart Options.....	24
Anti-Inflammatories (For Spondylosis).....	25
Quality Metrics Tie-In.....	25
CODING REMINDERS AND CASE EXAMPLES BOX	26
Specificity Requirements.....	26
Annual Clinical Review and Confirmation.....	27
Reframing Common Documentation Shortcuts.....	27
EHR Tips.....	28
Brief Case Examples.....	29
QUICK REFERENCE TABLES	29
REFERENCES	31

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.x x	93/18 2	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	M48.8 X	93	0.617	Structural. Document OPLL, Bastrup's, or ligamentous ossification
Spondylosis w/ Myelopathy	M47.1 x	182	0.478	Cord Signs. Must document ataxia, Hoffman's, or hyperreflexia
Spinal Stenosis w/ Claudication	M48.0 62	182	0.478	Functional. Must document neurogenic claudication/walking limits
Spondylosis w/ Radiculopathy	M47.2 x	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 AND DIAGNOSIS

Medicare Screening/Diagnostic Workup²⁻⁶

Key Diagnostic Features

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

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) 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
	X-ray Pelvis/SI Joints	72170	Identifies chronic structural changes: erosions, sclerosis, ankylosis ("bamboo spine")	Covered (often initial imaging or longitudinal assessment)

Category	Diagnostic Tool	CPT Code (Medicare/MA)	Clinical Utility & Significance	Coverage (Typical Medicare/MA Context)
	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 spondyloarthritis; supportive but not diagnostic alone	Covered when medically necessary (suspected inflammatory back pain or spondyloarthritis)
	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 spondyloarthritis	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 and 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 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)

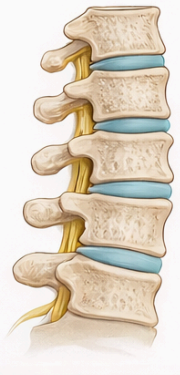
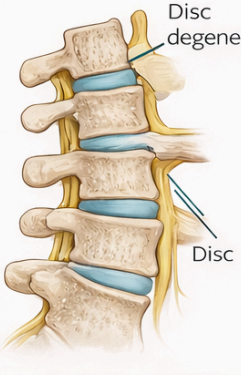
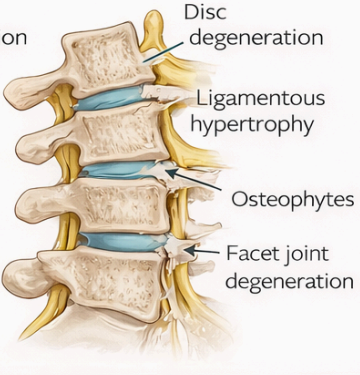
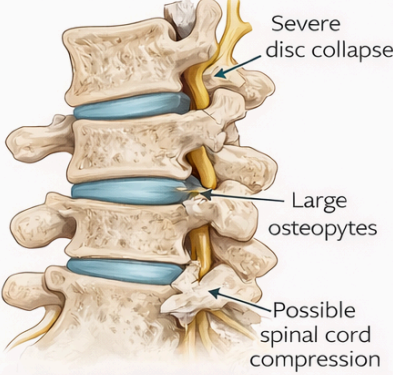
Meyerding Classification (Spondylolisthesis Severity)

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

Stages of Spondylopathy

NORMAL SPINE	STAGE I – MILD	STAGE II – MODERATE	STAGE III – SEVERE
	 <p>Disc degeneration</p> <p>Disc</p>	 <p>Disc degeneration</p> <p>Ligamentous hypertrophy</p> <p>Osteophytes</p> <p>Facet joint degeneration</p>	 <p>Severe disc collapse</p> <p>Large osteophytes</p> <p>Possible spinal cord compression</p>
NORMAL SPINE	<p>STAGE I – MILD</p> <ul style="list-style-type: none"> • Early degeneration of discs • Slight loss of disc height 	<p>STAGE II – MODERATE</p> <ul style="list-style-type: none"> • Significant disc degeneration and narrowing • Osteophyte formation • Facet joint degeneration 	<p>STAGE III – SEVERE</p> <ul style="list-style-type: none"> • Severe disc collapse • Large osteophytes • Spinal canal narrowing • Possible spinal cord compression

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 AND 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 and 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 <i>initially</i> 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 AND 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 <i>during that specific encounter</i>
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: Monitoring cord signs, Evaluating MRI findings, Assessing clinical ROM, Treating 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 Pathology Quick 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/Sacrococcygeal	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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