GREAT LAKES INTERVENTIONAL SPINE CENTER

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PATIENT DEMOGRAPHICS

Patient Name:	Sullivan, Catherine Marie
Date of Birth:	January 30, 1951
Age:	74 years
Sex:	Female
Medical Record Number:	GLISC-332198
Insurance:	Medicare Part B (MBI: 4H89K56723H)
Date of Service:	October 6, 2025

CHIEF COMPLAINT

Progressive lower back pain with bilateral leg pain and difficulty walking.

HISTORY OF PRESENT ILLNESS

Mrs. Sullivan is a 74-year-old retired librarian presenting with symptomatic lumbar spinal stenosis. She reports a gradual onset of symptoms beginning approximately 18 months ago. She describes chronic lower back pain (intensity 6-7/10) that radiates into both lower extremities with associated numbness, tingling, and weakness. Pain and leg symptoms worsen significantly with standing and walking, limiting her to approximately 75-100 feet of ambulation before requiring rest. She experiences classic neurogenic claudication with relief

obtained through sitting or forward flexion positions. She denies any bowel or bladder dysfunction.

Comprehensive Conservative Treatment Course (15 months):

- **Physical Therapy:** Completed 15-week program at University Physical Therapy Center (April-July 2024), attending 3 sessions per week with home exercise program compliance
- **Pharmacotherapy:**
  - NSAIDs: Meloxicam 15mg daily for 5 months (discontinued due to GI intolerance)
  - Acetaminophen: 1000mg three times daily (ongoing, minimal benefit)
  - Neuropathic agents: Gabapentin titrated to 900mg three times daily (moderate pain relief, continued)
  - Duloxetine 60mg daily added for neuropathic pain (ongoing)
- **Interventional Procedures:** Lumbar epidural steroid injection series at L3-L4 level in May 2024 (6 weeks relief), repeated series at L3-L4 and L4-L5 in August 2024 (4-5 weeks relief)
- **Lifestyle Modifications:** Structured home exercise program, postural training, use of assistive device (trekking poles) for ambulation, weight management counseling

Symptoms persist with progressive functional decline and significant impact on activities of daily living and quality of life.

PAST MEDICAL HISTORY

- Hypertension - well-controlled (Lisinopril 10mg daily)
- Hypothyroidism (Levothyroxine 125mcg daily)
- Osteoporosis (Alendronate 70mg weekly, Calcium/Vitamin D supplementation)
- Gastroesophageal reflux disease (Omeprazole 20mg daily)
- Remote cholecystectomy (1998)

PHYSICAL EXAMINATION

Vital Signs: BP 128/76 mmHg, HR 68 bpm, Temperature 98.4°F, Weight 148 lbs, Height 5'4"

General: Alert and oriented, well-appearing female, comfortable at rest

Musculoskeletal Examination: Decreased lumbar lordosis with flattened lumbar curve. Tenderness to palpation over bilateral lumbar paraspinal muscles L2-S1. Range of motion: forward flexion 60 degrees, extension 10 degrees (limited by pain and reproduces bilateral leg symptoms), lateral bending moderately limited bilaterally.

Neurological Examination:

- Motor strength: 4+/5 bilateral ankle dorsiflexion, 5/5 all other lower extremity muscle groups
- Sensory: Diminished light touch sensation bilateral L4-L5 dermatomes, otherwise intact
- Deep tendon reflexes: Patellar 2+ bilaterally, Achilles 1+ bilaterally, plantar responses flexor
- Straight leg raise: Negative bilaterally
- Gait: Mildly antalgic with shortened stride, uses trekking poles, unable to perform tandem gait

DIAGNOSTIC IMAGING

MRI Lumbar Spine without Contrast (September 19, 2025):

Technique: Multiplanar multisequence MR imaging of the lumbar spine performed without intravenous contrast.

Findings:

- L2-L3: Mild degenerative disc disease, no significant stenosis
- L3-L4: **Severe central canal stenosis** with anteroposterior diameter measuring 7mm (normal >10mm). Marked bilateral ligamentum flavum hypertrophy measuring 6-7mm thickness. Facet joint hypertrophy and degenerative changes. Moderate bilateral foraminal narrowing. Grade 3 morphologic central stenosis.
- L4-L5: Moderate central canal stenosis, disc bulge, mild bilateral foraminal narrowing
- L5-S1: Minimal degenerative changes
- No spondylolisthesis or acute fracture identified
- Vertebral body heights and alignment maintained

Impression: Severe central canal stenosis at L3-L4 level with significant ligamentum flavum hypertrophy as primary contributing factor.

VALIDATED OUTCOME MEASURES

Assessment Tool	Baseline Score	Interpretation
Oswestry Disability Index (ODI)	62%	Severe disability
Visual Analog Scale - Back Pain	7/10	Severe pain
Visual Analog Scale - Leg Pain	8/10	Severe pain
Walking Distance Tolerance	75-100 feet	Severely impaired
SF-36 Physical Component Score	29	Significantly below normal
Zurich Claudication Questionnaire	3.9/5	Severe symptoms

CLINICAL RESEARCH STUDY INFORMATION

Study Title: Long-term Outcomes Following PILD for Lumbar Spinal Stenosis: Extended Follow-up Study

ClinicalTrials.gov ID: NCT04891267

Study Design: Prospective Longitudinal Cohort Study

Parent Study: RCT NCT04112556 (Primary completion January 2024)

Study Site: Great Lakes Interventional Spine Center (Site #18)

Principal Investigator: Elizabeth Morgan, MD, PhD

Sponsor: Midwest Academic Spine Research Network

Patient Enrollment Date: September 29, 2025

IRB Approval: University of Michigan IRB #HUM00198234 (approved 08/15/2024)

Informed Consent: Obtained and signed 09/29/2025

Device: Vertos mild® Device System (FDA 510(k) K182474)

Study Protocol Summary:
This is a prospective longitudinal outcomes study designed as an extension of the parent randomized controlled trial (NCT04112556). The parent RCT compared PILD to conservative management and completed primary data collection in January 2024. This extended study protocol calls for continued outcome assessments through 36-month follow-up with particular focus on durability of benefit and long-term safety. Study maintains same inclusion/exclusion criteria as parent RCT. Protocol includes validated outcome measures at baseline, 6 weeks, 3 months, 6 months, 12 months, 24 months, and 36 months.

CLINICAL ASSESSMENT

Mrs. Sullivan is a 74-year-old female with severe symptomatic lumbar spinal stenosis at L3-L4 level confirmed by clinical examination and MRI findings. She has undergone comprehensive conservative treatment for over 15 months including physical therapy, multimodal pharmacotherapy, and epidural steroid injection series without achieving sustained functional improvement. Her quality of life remains significantly impaired with severe activity limitations due to neurogenic claudication.

Patient has been enrolled in a prospective longitudinal outcomes study examining long-term results following PILD. This study represents an extended follow-up phase of a completed parent randomized controlled trial. Study protocol maintains rigorous methodology with validated outcome measures and scheduled follow-up assessments. IRB approval is current and informed consent has been properly obtained.

TREATMENT PLAN

Percutaneous image-guided lumbar decompression at L3-L4 level under fluoroscopic guidance with epidurography per study protocol. Procedure to target ligamentum flavum hypertrophy contributing to central canal stenosis. Procedure scheduled for October 23, 2025. Follow-up per protocol at 6 weeks, 3 months, 6 months, 12 months, 24 months, and 36 months with standardized validated outcome measures.

PROVIDER INFORMATION

Attending Physician: Elizabeth Morgan, MD, PhD

Specialty:	Anesthesiology and Pain Medicine
NPI Number:	0123456789
State License:	MI-4301-089234
Date:	October 6, 2025

Electronically signed by Elizabeth Morgan, MD, PhD on October 6, 2025 at 15:32 EDT