

“Patient-Reported Outcomes Following Lumbar Endoscopic Spine Surgery for Chronic Back and Leg Pain in Veterans”

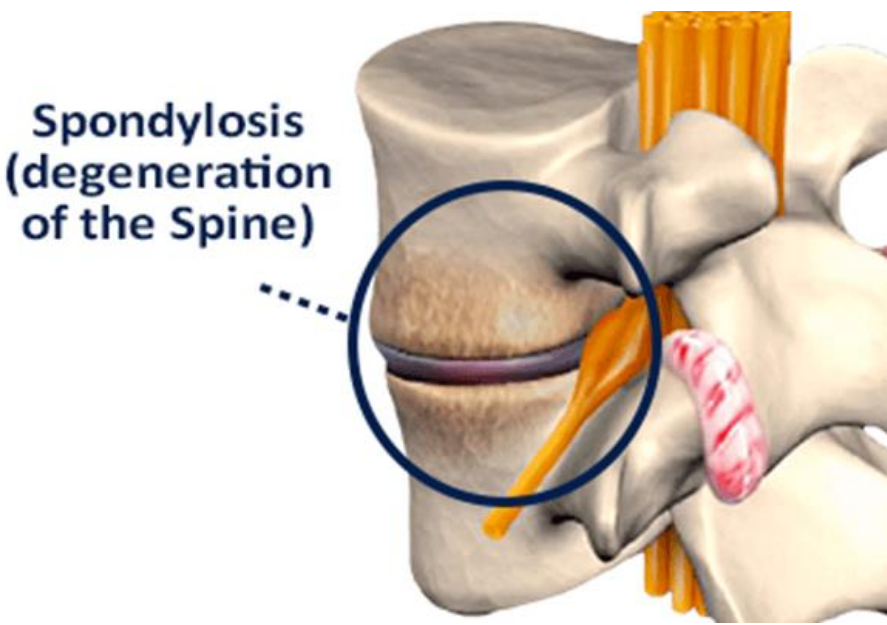
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Introduction

Chronic back pain can be associated with lumbar spondylosis (degeneration) with/without radiculopathy (pain, numbness, weakness from nerve compression). This pain can cause difficulty walking, sleeping, and radiating sensation to lower extremities. Factors that contribute to lumbar spondylosis include:

- Age
- Trauma
- Repetitive Stress
- Obesity
- Genetic predisposition



Endoscopic spine surgery provides patients with a minimally invasive alternative to open surgery. The use of an endoscope allows for light and a camera to visualize the tissue and ensure more specific and accurate nerve ablation versus needle-drive radiofrequency nerve ablation (RFA).

Procedures utilized with endoscopic guidance include:

- Rhizotomy (nerve ablation)
- Foraminotomy (widening of foramina)
- Discectomy (removal of intervertebral disc herniation)

Goal: Determine how endoscopic spine surgery improves pain and function in veterans experiencing chronic low back and leg pain.

We will assess patient satisfaction with endoscopic procedures and measure functional improvement post-operatively with survey questionnaires.

Endoscopic Spine Surgery Techniques

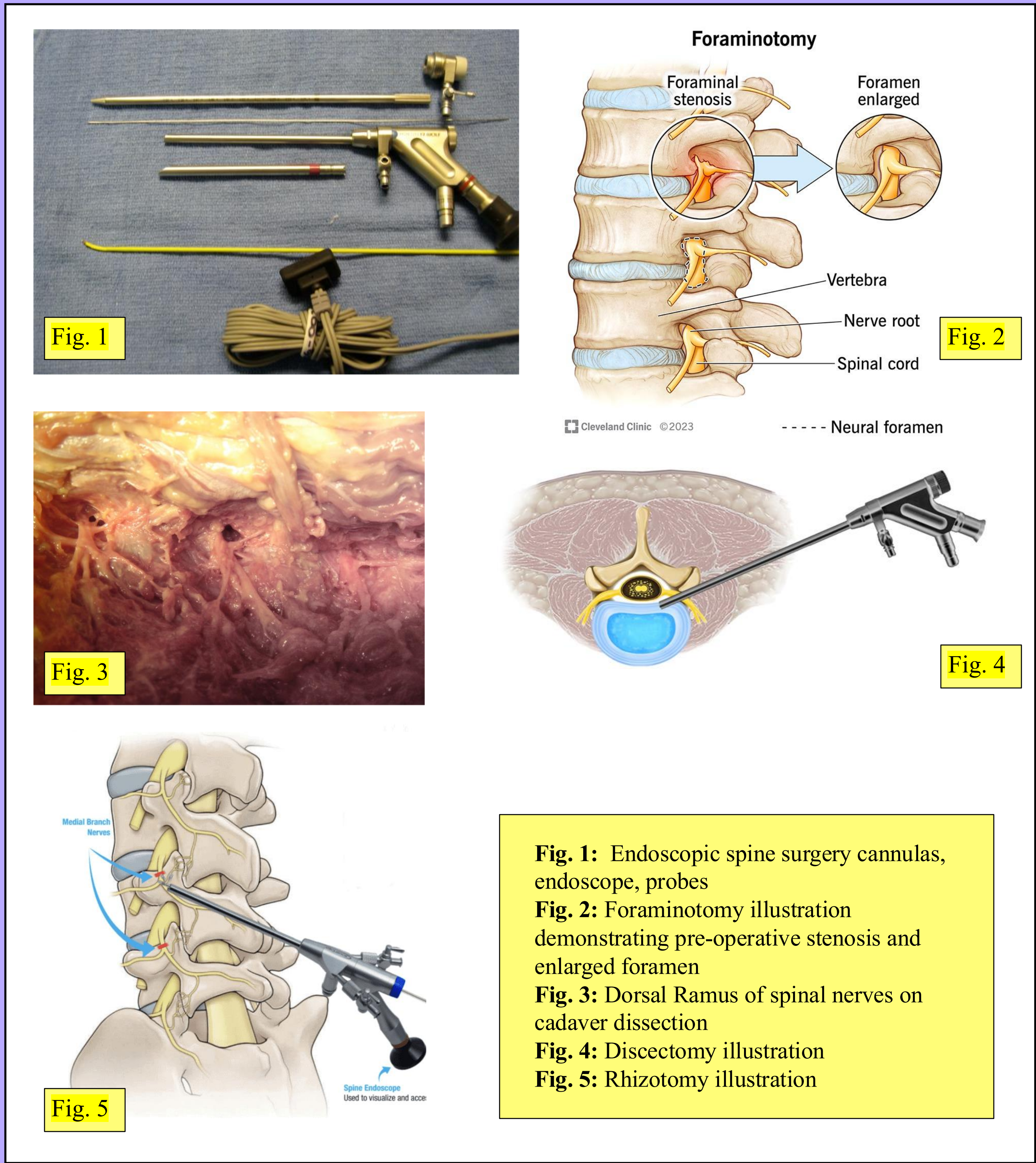


Fig. 1: Endoscopic spine surgery cannulas, endoscope, probes
Fig. 2: Foraminotomy illustration demonstrating pre-operative stenosis and enlarged foramen
Fig. 3: Dorsal Ramus of spinal nerves on cadaver dissection
Fig. 4: Discectomy illustration
Fig. 5: Rhizotomy illustration

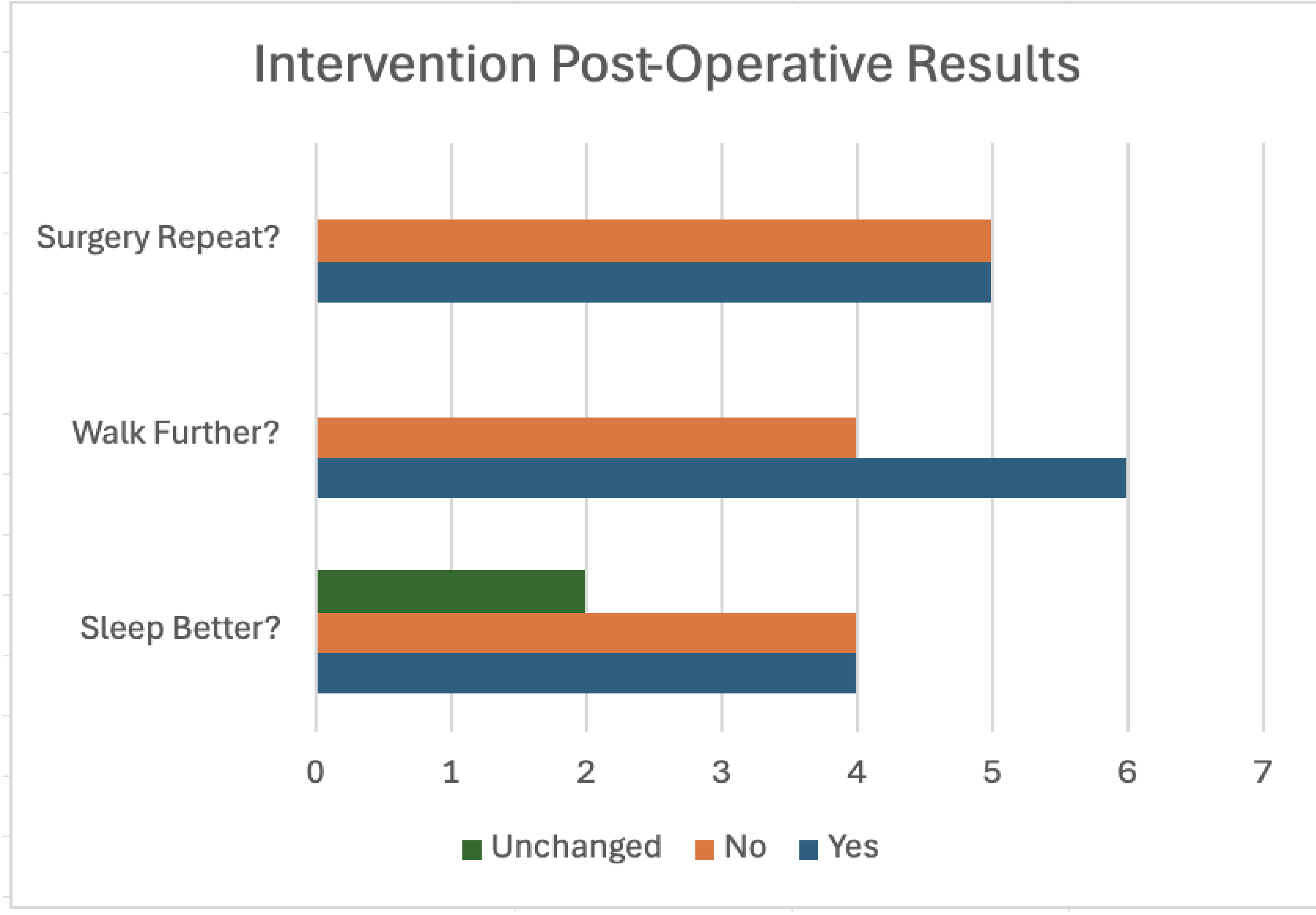
Survey Results

Patient	Surgery Repeat?	Walk Further?	Sleep Better?
1	Yes	Yes	Yes
2	No	Yes	Yes
3	No	No	No
4	Yes	Yes	No
5	Yes	No	No
6	No	No	Unchanged
7	No	No	No
8	Yes	Yes	Yes
9	Yes	Yes	Yes
10	No	Yes	Unchanged

Answer	Surgery Repeat?	Walk Further?	Sleep Better?
Yes	5	6	4
No	5	4	4
Unchanged	0	0	2

Results

- **10 out of 12 patients completed the survey (83% response rate)**
 - One patient cancelled
 - One was unreachable
- **Would repeat procedure:** 5 respondents
- **Improved walking distance:** 6 respondents
- **Sleep improvement:** 4 respondents
- **Unchanged sleep:** 2 respondents
- **Qualitative post-operative reflections:**
 - Importance of setting realistic expectations for outcomes
 - Understand recovery timeline
 - Desire for follow up appointments to manage pain in other areas



Methods

- Sample of **12 veterans** at the Veteran Affairs Medical Center (VA) in New Orleans, Louisiana
- Patients had undergone endoscopic spine surgery
- Contacted 2-8 months postoperatively
- **Four-question survey** (telephone): Yes/No/Unchanged:
 1. Would you choose to undergo the procedure again?
 2. Are you able to walk further after the procedure?
 3. Are you able to sleep better after the procedure?
 4. What else would you like patients considering the procedure/fellow veterans to know about the procedure (open ended/qualitative)

Conclusion

Endoscopic spine surgical procedures were shown to:

- **Improve** patient walking abilities:
 - **Increase** distance patients could walk pain-free
 - **Decrease** pain while walking

Sleep and desire to repeat the surgery outcomes were varied:

- Demonstrates importance of:
 - Pre-operative counseling
 - Careful patient selection

We hope these results in conjunction with future studies that stratify larger cohort data based on factors like age and pre-operative pain levels will help to better inform physician indications for choosing endoscopic spine procedures as well as predict patient outcomes and satisfaction.