

Retrospective Review of 60-day PNS Targeting Lumbar Medial Branches in Individuals with Spondylosis Without Radiculopathy

Sean Li, MD¹,
Denise Lester, MD²,
Yawar Qadri, MD, PhD³,
William Clark, PhD⁴,
Meredith McGee, PhD⁴,
Joseph Boggs, PhD⁴



1. Premier Pain Centers, Shrewsbury, NJ
2. Central Virginia VA Healthcare System, Richmond, VA
3. Emory University, Atlanta, GA
4. SPR Therapeutics, Cleveland, OH



22nd Annual Pain Medicine Meeting

November 10-11, 2023
New Orleans Marriott
New Orleans, Louisiana

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OBJECTIVE



Spondylosis is the degeneration of intervertebral disks, vertebral bodies and/or joints of the spine.¹

> 50% of people with chronic low back pain (CLBP) present with spondylosis on imaging (e.g., MRI).²

Minimally Invasive, 60-day Percutaneous PNS:

- non-opioid • non-destructive • non-surgical

60-day PNS targeting the lumbar medial branch nerves is a potential treatment for CLBP.³

The present analysis explores a specific diagnosis of spondylosis, including a subset of patients with confirmed ICD-10 codes (M47.816 and M47.817), to determine if real world measures of pain and function reported by patients receiving 60-day PNS in routine clinical practice are consistent with findings from a recent prospective, multicenter clinical trial.³

METHODS



60-day PNS



- Anonymized records were retrospectively reviewed from a national real-world database of patients who:

- i. Previously underwent commercial implantation of 60-day PNS leads targeting lumbar medial branch nerves
- ii. Were reported as having spondylosis without myelopathy or radiculopathy
- iii. Opted in to provide data to the device manufacturer
- iv. Had baseline and end of treatment outcomes available

- Outcomes were summarized at the end of the 60-day PNS treatment (EOT)

- Responders = substantial ($\geq 50\%$) pain relief and/or clinically significant improvement in physical function as measured by the Patient Global Impression of Change (PGIC ≥ 1)

- Subset analyzed among those with confirmed ICD-10 diagnosis codes of M47.816 and M47.817 (spondylosis without myelopathy / radiculopathy in the lumbar and lumbosacral region, respectively)

RESULTS

Responders had $\geq 50\%$ pain relief and/or clinically significant improvement in PGIC of physical function (PGIC ≥ 1).

Responders at EOT:

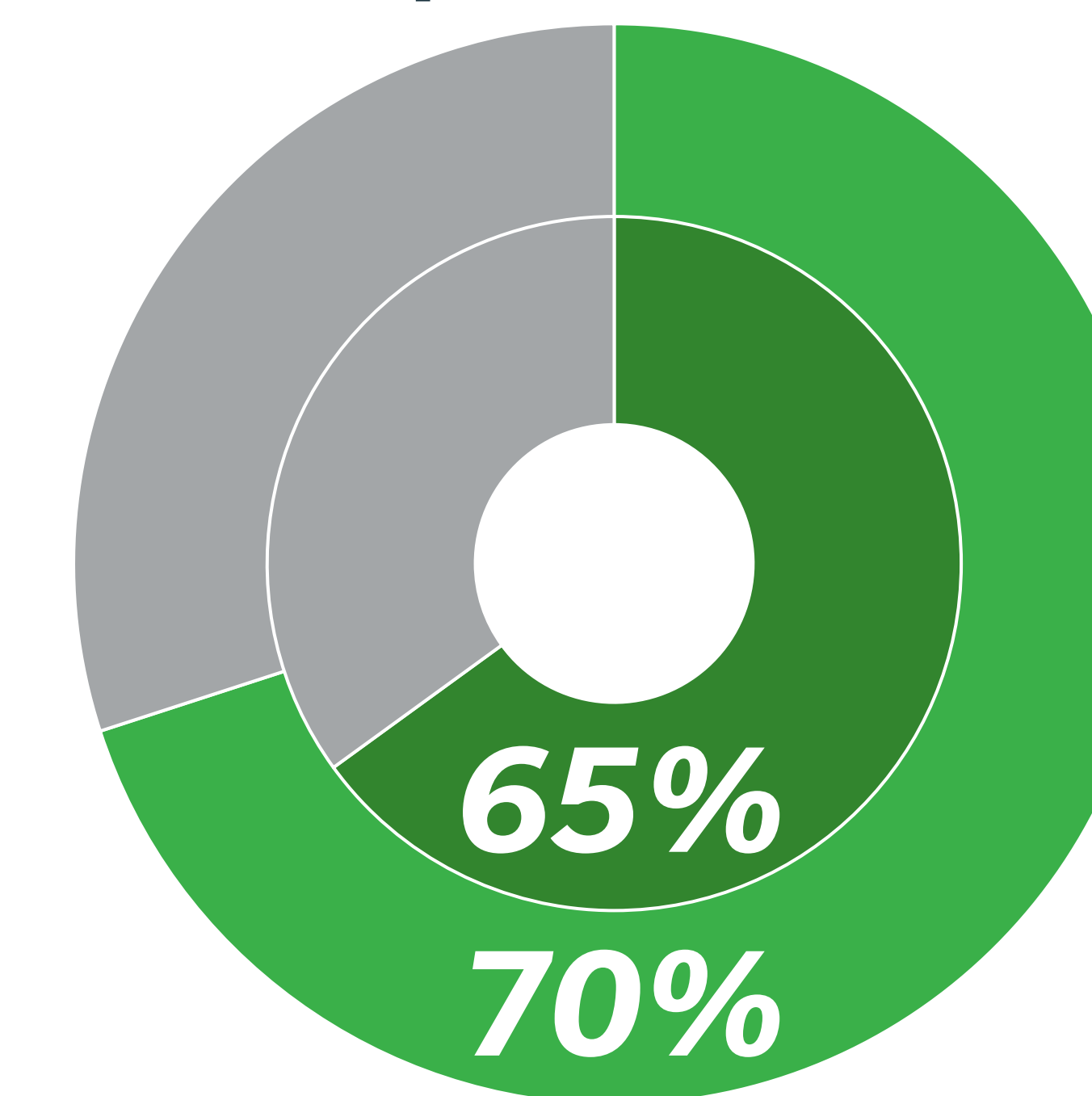
- 65% (n=173/265) of patients with spondylosis (suspected and/or confirmed)
- 70% (n=69/98) of patients with spondylosis confirmed by specific ICD-10 diagnosis codes of M47.816 (lumbar region) or M47.817 (lumbosacral region)

■ Patients with Spondylosis (Suspected and/or Confirmed)

■ Subset of Patients with Confirmed Spondylosis (ICD-10 Subset: M47.816, M47.817)

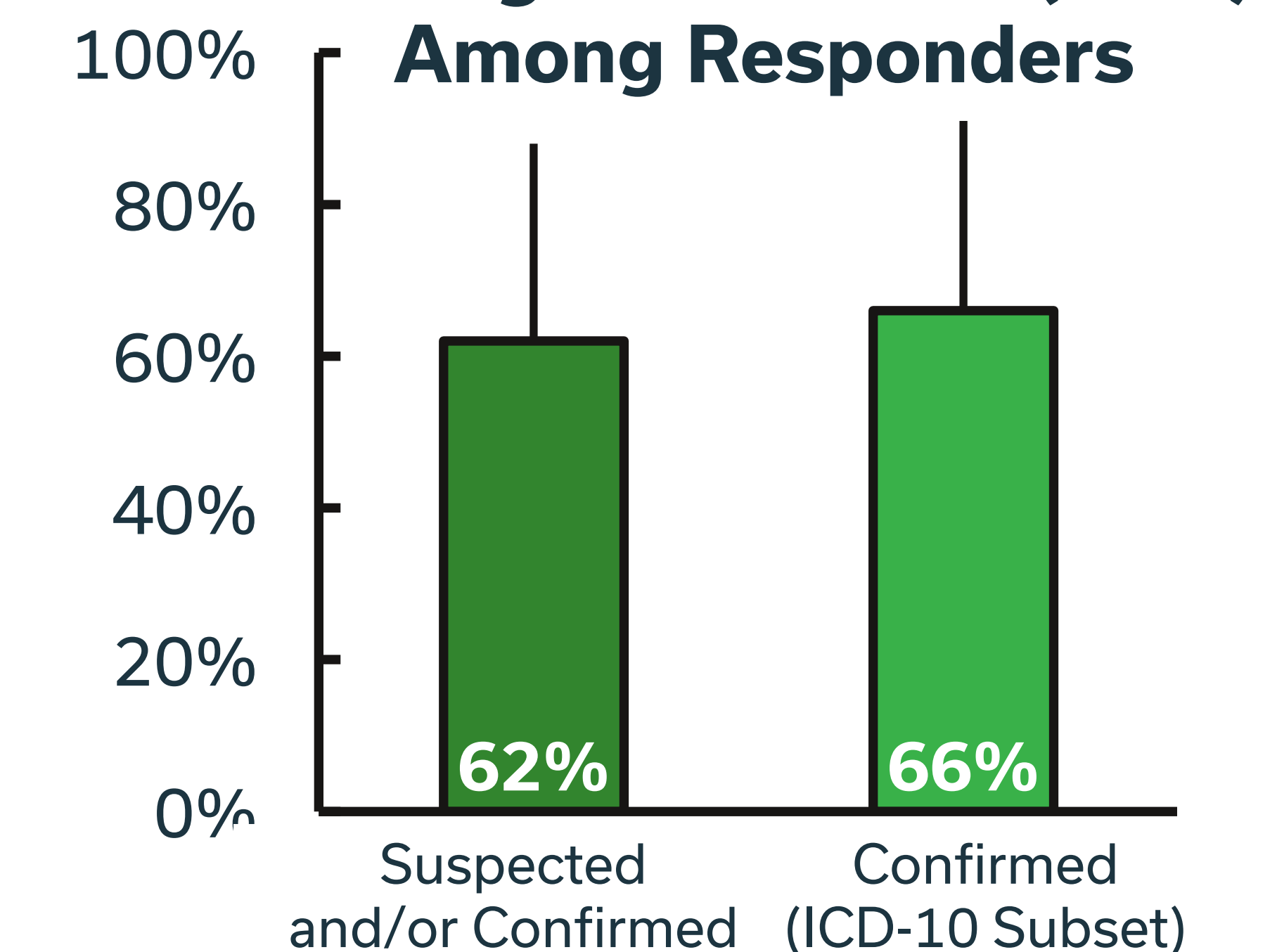
■ Non-responders

Responder Rate



Average Pain Relief ($\pm$ std)

Among Responders



Patients with Spondylosis

While safety was not directly analyzed here, published studies indicate the most common events are skin irritation due to adhesive bandages, pain or discomfort due to stimulation, and pain due to the lead placement procedure.

CONCLUSIONS

- Lumbar medial branch PNS produced significant improvements in real world outcomes of pain and physical function in the majority of patients with spondylosis, which makes up a significant proportion of patients with chronic low back pain.²
- Results from this retrospective review of 60-day PNS were consistent with a recent prospective, multicenter trial.³
- 60-day PNS is an opioid-free, non-destructive, non-surgical treatment option for individuals with lumbar spondylosis that may not require permanent system implantation.

REFERENCES

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ACKNOWLEDGMENT

- This study was supported by SPR Therapeutics.
- SL is a consultant for SPR. SL and DL have research sponsored by SPR. WC, MM, and JB are employees of SPR. YQ has nothing to disclose.