

Use of 60-day Percutaneous PNS for Sacroiliac (SI) Joint Pain: A Retrospective Review of Real-World Outcomes

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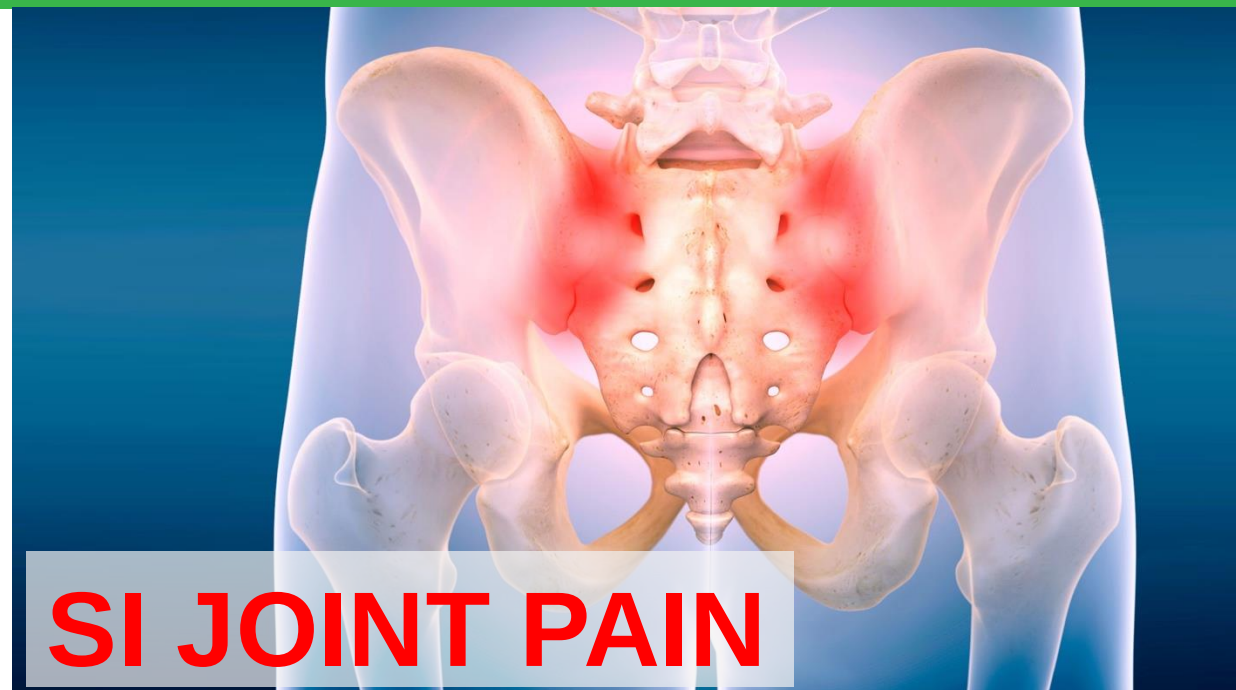
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BACKGROUND

- Approximately 15-30% of patients with low back pain have sacroiliac (SI) joint dysfunction as a factor¹.
- 60-Day peripheral nerve stimulation (PNS) of the lumbar medial branches has been effective in providing long-term relief of axial low back pain^{2,3}, but patients with SI joint pain were not included in those studies.
- Given the growing need for non-destructive, non-surgical treatments to better manage SI joint pain⁴, 60-day PNS may be well-suited to target the neural innervation of the SI joint.



SI JOINT PAIN

This report details a retrospective review of real-world data from the use of Percutaneous 60-Day Peripheral Nerve Stimulation for the treatment of SI joint pain.

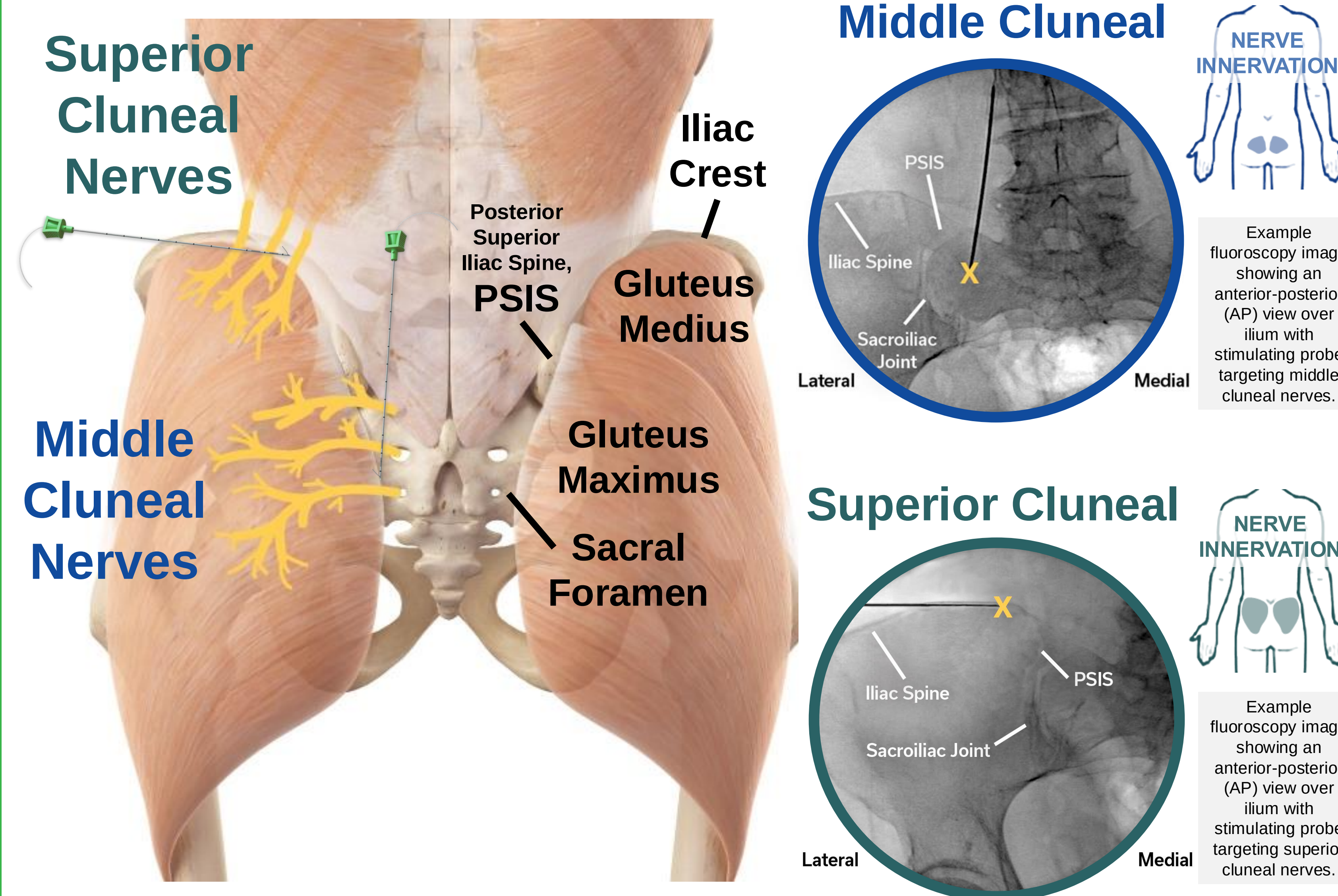
METHODS

- In this IRB-approved retrospective analysis, data were reviewed from a national real-world database of patients who:
 - were previously commercially implanted for 60-day PNS treatment,
 - were reported as having SI joint pain (*i.e.*, as the cause of pain or primary diagnosis),
 - opted in to provide data to the device manufacturer, and
 - had baseline and end of treatment outcomes available.
- Responders were defined as patients who reported $\geq 50\%$ pain relief and/or clinically meaningful improvement (≥ 1) in quality of life (QoL) as measured by the Patient Global Impression of Change at end of treatment (EOT).



Note: 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.

APPROACHES FOR 60-DAY PNS LEAD IMPLANTATION



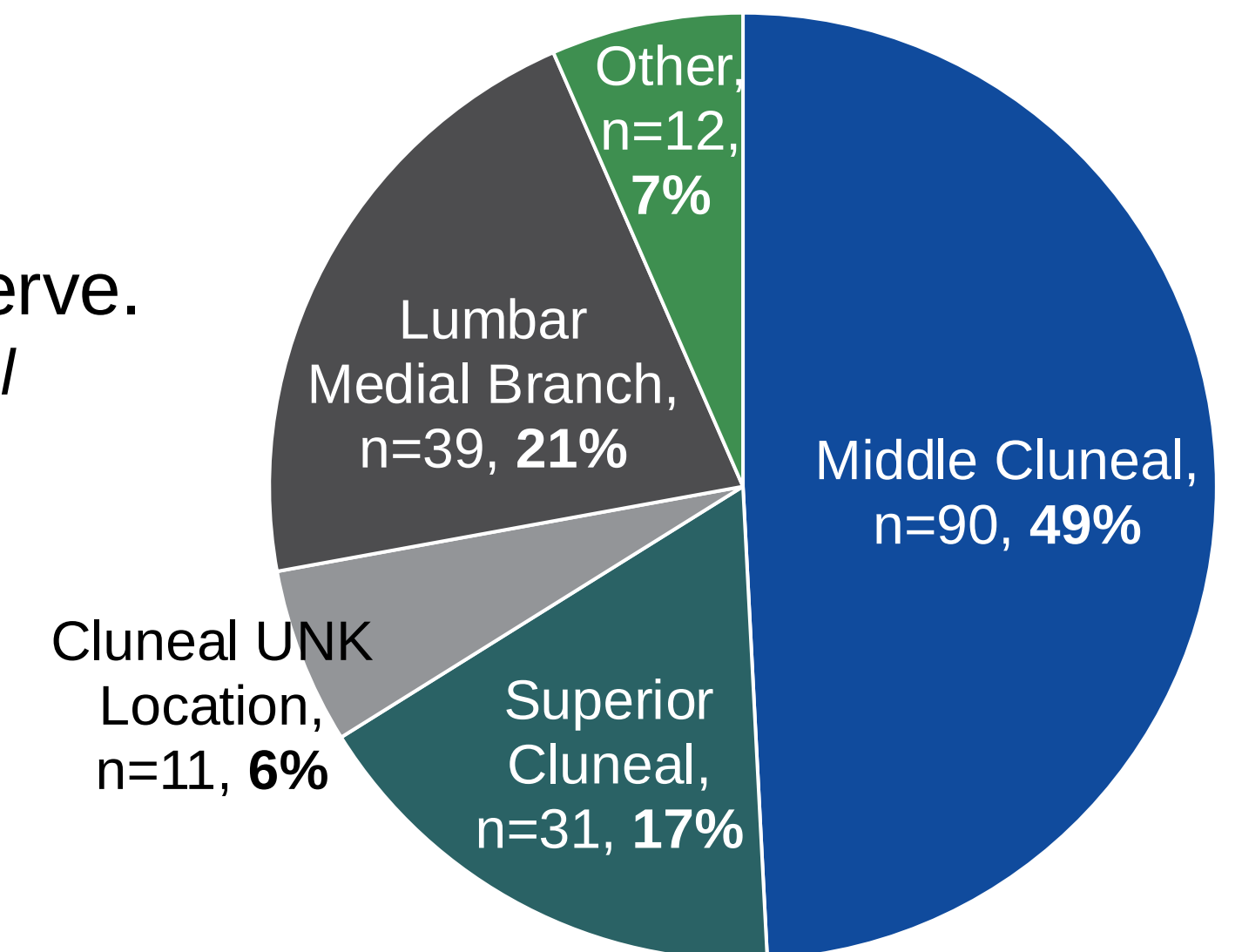
Example Approach - Middle (Medial) Cluneal: With patient in a prone position, insert needle just lateral to vertebrae at mid-to-lower lumbar region (L3-L5). Advance needle caudad to position lateral to sacral foramen. Needle probe should be posterior to bone to remotely target medial cluneal nerves.

Example Approach - Superior Cluneal: With patient in a prone position, insert needle at the lateral aspect of the iliac crest and target between the medial and middle thirds of iliac crest. Alternatively, insert needle at the medial aspect and project needle path laterally.

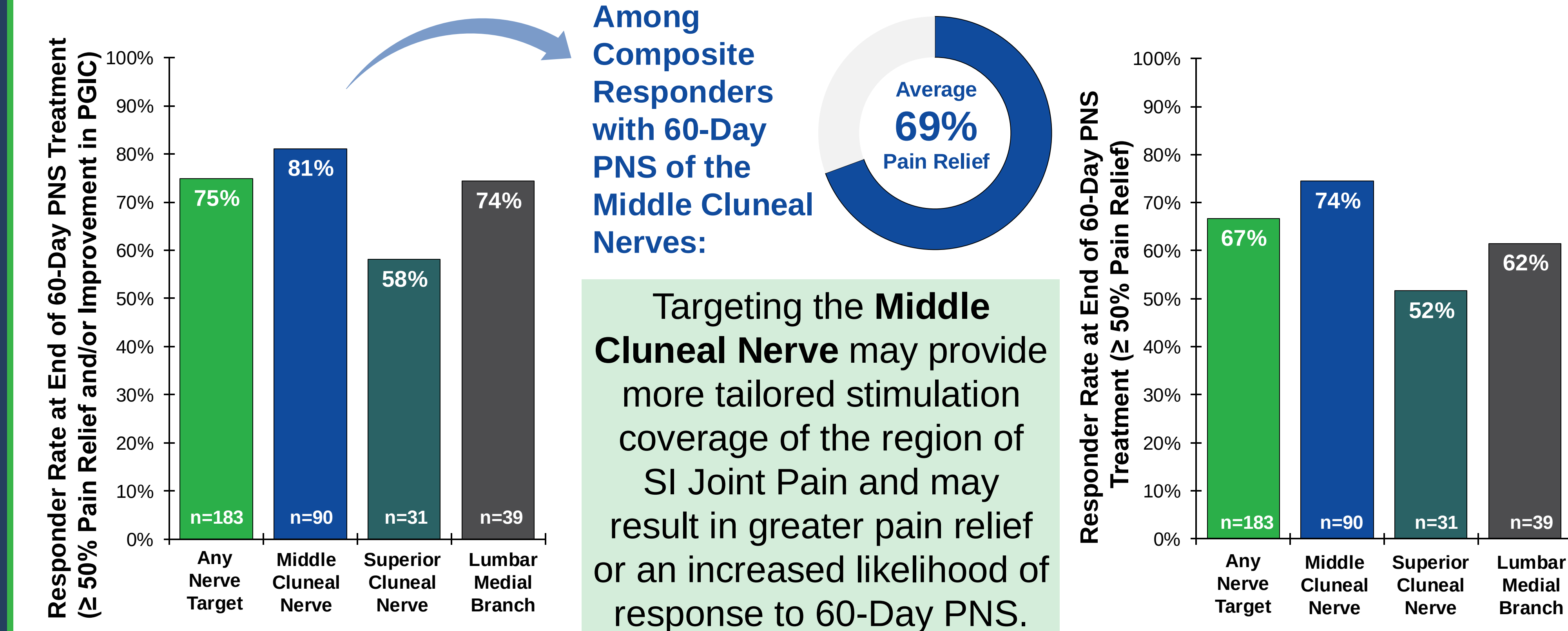
RESULTS

Common Nerve Targets for 60-Day PNS for SI Joint Pain

- A total of 183 patients who received 60-day PNS for the treatment of SI joint pain were identified for this analysis.
- The most commonly reported target was the middle cluneal nerve. (*approaches labeled as middle cluneal, medial cluneal, or sacral lateral branch were analyzed together as "middle cluneal" for this analysis*)
- Other nerve targets reported for SI joint pain included: superior cluneal nerve, lumbar medial branch, cluneal with unknown details on location, and other nerve targets used in only a few cases (superior gluteal nerve, L5 spinal nerve, sciatic nerve, ilioinguinal nerve, etc).



60-Day PNS Can Provide Clinically Meaningful Relief of SI Joint Pain



CONCLUSIONS

- This retrospective study found that most patients with SI joint pain achieved clinically significant pain reduction and/or improvement in quality of life, suggesting that 60-Day PNS may be an effective non-destructive, non-surgical treatment option for patients with SI joint pain.
- Targeting the middle cluneal nerves (which may also be described as the sacral lateral branches) produced the best outcomes (81% responder rate, avg. 69% relief among responders) with 60-Day PNS for patients with SI joint pain.

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