

University Orthopedics' Dr. S. Chris Tian Becomes First in Rhode Island to Implant Closed-Loop Spinal Cord Stimulator

Next-Gen System Offers Longer Lasting Pain Relief for Those Suffering from Chronic Pain

EAST PROVIDENCE, RI, UNITED STATES, November 17, 2025 /

EINPresswire.com/ -- [University Orthopedics](#) announced that [Dr. S. Chris Tian](#), an expert in interventional pain management, recently became the first physician in Rhode Island to successfully implant a Closed-Loop Spinal Cord Stimulator (SCS) — marking a major milestone in the state's advancement of neuromodulation-based pain care.

The landmark procedure was performed on October 27, 2025, at University Orthopedics' East Bay Surgery Center in East Providence and is meant to help patients with chronic spinal or neuropathic pain, including low back pain, sciatica, and peripheral neuropathy, who have exhausted conservative treatments.

The Closed-Loop SCS system represents a new generation of spinal neuromodulation technology. Unlike traditional open-loop stimulators that deliver fixed electrical pulses, closed-loop devices continuously monitor evoked compound action potentials (ECAPs) — the spinal cord's real-time electrical responses to stimulation — and automatically adjust output to maintain consistent neural activation.



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*Dr. S. Chris Tian, University
Orthopedics Pain Specialist*

This feedback-controlled approach minimizes overstimulation, reduces loss of efficacy during movement or posture changes, and provides more stable, durable pain relief.

“Closed-loop spinal cord stimulation represents the next frontier in neuromodulation,” said Dr. Tian. “By tailoring stimulation dynamically to the patient’s neural feedback, we can provide safer, more consistent, and longer-lasting pain relief. This technology allows patients to regain

control over their lives without the unpredictability often associated with chronic pain.”

Clinical Evidence Supporting Closed-Loop SCS

Peer-reviewed studies have demonstrated significant clinical advantages of closed-loop technology over conventional open-loop systems:

Superior and sustained pain relief: Patients experience greater long-term reductions in pain intensity and functional impairment compared to open-loop stimulation¹.

Stable neural activation: Real-time ECAP feedback maintains consistent spinal cord activation across posture and activity changes².

Improved durability and lower reprogramming burden: Patients require fewer reprogramming sessions and show lower explant rates due to therapy stability³.

About the Procedure

The Closed-Loop SCS is a minimally invasive outpatient procedure performed under local anesthesia with sedation. The system delivers targeted electrical pulses to the dorsal columns of the spinal cord to interrupt chronic neuropathic pain signals. It is indicated for patients with chronic intractable pain of the trunk and/or limbs, including failed back surgery syndrome (FBSS), complex regional pain syndrome (CRPS), and post-laminectomy pain.

Regional Significance

With this achievement, University Orthopedics continues to lead Rhode Island and Southeastern Massachusetts in advanced pain management and neuromodulation innovation, offering patients access to cutting-edge therapies previously available only at large tertiary centers.

[Learn More](#)

Patients and referring providers interested in learning more about closed-loop spinal cord stimulation can visit UOI.com or call 401-457-1500 for more information.

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Sources:

(De Ridder et al., Pain Pract. 2022; 22(1): 13–25)

(Kramer et al., J Pain Res. 2021; 14: 2789–2803)

(Mekhail et al., Neuromodulation. 2020; 23(7): 1029–1038)

About University Orthopedics

University Orthopedics (UOI, universityorthopedics.com), with clinic locations in Rhode Island (Cranston, Cumberland, East Greenwich, East Providence, Johnston, Providence, Middletown, North Providence, Portsmouth, and Westerly) and Massachusetts (Mansfield, North Easton, Plymouth, and Raynham), is a regional center for orthopedics, sports medicine, and rehabilitation. UOI includes more than 70 board-certified orthopedic, fellowship-trained musculoskeletal, and sports medicine physicians. These specialists are faculty members of the Department of Orthopaedics at The Warren Alpert Medical School of Brown University, teaching medical students, orthopedic residents, and fellowship sub-specialty surgeons.

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