NeuraSignal Reports Successful Completion of DoD-Funded TBI Research Across Top Trauma Centers

Studies enrolled 618 participants to evaluate TCD ultrasound and computer-based analysis for estimating intracranial pressure and identifying brain injury



NeuraSignal Inc.

LOS ANGELES, CA, UNITED STATES, September 17, 2026 / EINPresswire.com/ -- NeuraSignal, a medical technology company focused on advancing transcranial Doppler (TCD) ultrasound, today announced the completion of two clinical studies funded through Department of Defense grants to investigate non-invasive approaches to assessing traumatic brain injury (TBI).

> Advancing TCD requires a commitment to investing in the research, technology and clinical evidence needed to expand its capabilities. At NeuraSignal, we're making that investment..."
>
> *Robert Hamilton, CEO of NeuraSignal*

The studies enrolled a combined 618 participants and explored whether measurements of blood flow velocity in the brain, analyzed using NeuraSignal's technology, could help estimate pressure inside the skull or identify abnormalities associated with traumatic brain injury. The studies were completed in March 2025 and March 2026, respectively.

"Advancing TCD requires a commitment to investing in the research, technology and clinical evidence needed to expand its capabilities. At NeuraSignal, we're making that investment. These studies demonstrate our commitment to exploring new applications for TCD and continuing to move the field forward," said Robert Hamilton, CEO of NeuraSignal.

Investigating a Non-Invasive Approach to Intracranial Pressure Assessment

The first study, Prospective non-invasive study of Cerebral Blood Flow Velocity (CBFV) Morphology for Quantification of Intracranial Pressure (ICP), was completed in March 2025.

Intracranial pressure is the pressure inside the skull and an important measure in the

assessment of severe head injuries. Standard monitoring requires placing a device through the skull. The study investigated whether TCD ultrasound, combined with NeuraSignal's computer-based analysis technology, could provide a non-invasive way to estimate that pressure.



Revolutionizing Transcranial Doppler with Robotics and A.I.

The study enrolled 248 participants across three sites at Brooke Army Medical Center and Westchester Medical Center. Researchers compared TCD-derived measurements with readings from standard invasive monitors. NeuraSignal shared study data with Emory University under a data-sharing agreement to support algorithm development which was translated into a publication.



NeuraSignal Mobile App

Exploring Blood Flow Measurements for Brain Injury Triage and Monitoring

The second study, Precision Intracranial Bleed Triage and Monitoring, was completed in March 2026. It enrolled 370 patients presenting to emergency departments at two trauma centers in San Antonio, Texas: Brooke Army Medical Center and UT Health Science Center San Antonio. The study evaluated whether non-invasive TCD ultrasound, together with NeuraSignal's machine-learning technology, could help identify and monitor intracranial abnormalities in patients with traumatic brain injury.

Researchers compared TCD measurements with CT scans to investigate whether changes in blood flow velocity could distinguish patients with bleeding or other injuries visible on CT from those without such findings. Data analysis is ongoing.

Together, these studies support NeuraSignal's efforts to understand how non-invasive blood flow measurements could give clinicians additional insight into traumatic brain injury. By comparing TCD measurements with established or standard of care methods of assessment, the research is

helping define where the technology may contribute to care and what further validation is needed.

About NeuraSignal

NeuraSignal is a medical technology company in the Autonomous Neurovascular Ultrasound category, focused on advancing transcranial Doppler ultrasound and making critical information about cerebral blood flow more accessible to clinicians. Its TCD technologies are designed to support neurovascular assessment across a range of clinical applications while helping healthcare institutions expand access to TCD.

For more information, visit www.neurasignal.com.

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