Novel Plantar-Palmar Index protocol using SnapshotNIR replaces ABI for assessment of Peripheral Arterial Disease

Peer-reviewed study introduces the Plantar-Palmar Index as a non-invasive, clinically feasible alternative to ABI in vascular diagnostics and wound care.

CALGARY, ALBERTA, CANADA, June 11, 2025 /EINPresswire.com/ -- Kent Imaging, a leading innovator in near-infrared spectroscopy (NIRS) medical imaging, is excited to announce the groundbreaking publication in the International Journal of Tissue Repair, highlighting the clinical utility of a new diagnostic protocol using its flagship device, SnapshotNIR. The study introduces the Plantar-Palmar Index (PPI) as a non-contact, real-time alternative to the traditional Ankle-Brachial Index (ABI) for evaluating Peripheral Arterial Disease (PAD).

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>
> *Dr. Craig Walker, MD*

The study, titled "The Plantar-Palmar Index with Near Infrared Spectroscopy as an Alternative to the Ankle-Brachial Index for Noninvasive Evaluation of Vascular Perfusion and Peripheral Arterial Disease" found that PPI values strongly correlated with PAD severity. This was compared to the current standard of care methods for diagnosing PAD defined by Pulse Volume Recordings (PVR). The study results were also able to significantly distinguish between severity classes. The findings suggest that PPI is clinically feasible and highly accurate, positioning it as a potential practical frontline tool for PAD detection and management.

The protocol used SnapshotNIR to measure PPI by imaging the plantar (foot) and palmar (hand) surfaces. This method avoids the limitations of arterial compression or calcified vessels, and can be performed quickly, without physical contact, specialized training, or patient discomfort. This elevates the patient experience while allowing clinicians to perform the protocol across more patient populations. The PPI can potentially expedite referrals for vascular interventions to improve patient outcomes.

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across a broad range of patients," said Dr. Craig Walker, MD, Professor Tulane/Louisiana State University, and Medical Director Cardiovascular Institute of the South. He continued, "We know there is more work to do in this space and are looking forward to leading the charge."

Dr. Richard Neville, MD, Associate Director INOVA Schar Heart and Vascular, Chief Vascular Surgery, Wound Care, Hyperbaric Medicine added, "The use of SnapshotNIR imaging allows for a non-invasive assessment of perfusion for wound care and limb preservation. This is a significant advancement in our limb practice. I'm excited about future applications, especially for monitoring patients pre- and post-intervention."

Kent Imaging would like to acknowledge their physician Key Opinion Leaders: Charles Andersen, MD; Lee Rogers, DPM; Eric Dippel, MD; Jaafer Golzar, MD; John Lantis, MD; Craig Walker, MD; Richard Neville, MD; and Brant Ullery, MD, for their leadership in advancing the use of SnapshotNIR in the care of vascular patients. We especially thank Dr. Neville and Dr. Walker for their support with this manuscript.

SnapshotNIR is a non-contact imaging device that uses near-infrared light to assess tissue oxygenation by measuring the relative concentrations of oxygenated and deoxygenated hemoglobin in the microvasculature. The device produces real-time visualizations, including a unique Hemoglobin View that provides information on wound healing trends, helping clinicians objectively assess tissue viability at the point of care.

"This publication reinforces the paradigm shift we are seeing in the potential adoption of innovative MedTech," said Dr. Glyn Jones, Chief Medical Officer of Surgery at Kent Imaging, "SnapshotNIR is providing clinicians with a more accessible, objective, and accurate method of assessing oxygenation, one that seamlessly integrates into existing workflows."

Ongoing research into protocols like the Plantar-Palmar Index and technologies like SnapshotNIR has the potential to transform older assessment methods. Validating these tools in broader, more diverse populations will help clinicians apply them confidently and consistently.

"I was impressed with the performance of the device in patients with dark skin. Melanin is a challenge for NIRS technology, and the Kent Team has essentially resolved this problem," reported Dr. Jeffrey A. Niezgoda, Chief Medical Officer of Wound and Vascular at Kent Imaging.

As the evidence continues to grow, healthcare practices will be better equipped to diagnose PAD earlier, personalize treatment strategies, and improve long-term outcomes for at-risk patients.

Kent Imaging would like to recognize the efforts of Jonathan A. Niezgoda, MS2; Debarpan Das, MSc; Najratun Nayem Pinky, PhD; Sandeep Gopalakrishnan, PhD; Glyn Jones, MD, FRCS (Ed), FCS (SA), FACS; Richard Neville, MD; Craig Walker, MD; and Jeffrey A. Niezgoda, MD, FACHM, MAPWCA. Their collective expertise and dedication continue to drive the advancement of vascular diagnostics and wound care through the application of SnapshotNIR technology.

About Kent Imaging

Kent Imaging, located in Calgary, Alberta, Canada, is a leading innovator in near-infrared tissue oxygenation imaging, which develops, manufactures, and markets medical technology that supports real-time decision-making in wound care, vascular and surgical subspecialties. Kent holds multiple patents in oxygen imaging technology and continues to provide innovative and advanced diagnostic imaging solutions to aid healthcare systems nationally and internationally. SnapshotNIR is supported by clinical evidence demonstrating its ability to help improve clinical decision-making in wound care and reduce healing time. Since receiving FDA and Health Canada clearance in 2017, the technology has been featured in several published articles and peer-reviewed posters. Applying the knowledge gained from clinical trials to patient care promotes consistency of treatment and optimal outcomes.

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