# Stanford Health Study: Kosmos Ultrasound AI Enhances Image Acquisition and Interpretation for Novices

*Two-week study highlights the potential of AI-enabled handheld ultrasound*

Kosmos by EchoNous

REDMOND, WA, UNITED STATES, May 31, 2023 /EINPresswire.com/ -- EchoNous, the point-of-care ultrasound company that is redefining handheld ultrasound, today shared the results of a groundbreaking study that found artificial intelligence (AI) technology integrated into ultrasound devices can significantly enhance competency among novice ultrasound users and may improve patient care. The study's findings provide exciting insights into the potential use cases of AI in revolutionizing medical imaging and diagnosis.

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> *Dr. Andre Kumar*

The study, led by Dr. Andre Kumar, a Clinical Associate Professor in the Stanford Division of Hospital Medicine, focused on evaluating the impact of AI-enabled point-of-care ultrasound (POCUS) devices on trainees with limited POCUS experience. Participants were divided into two groups, one using the EchoNous AI-enabled device called Kosmos Torso One and the other using a device without AI functionality (Butterfly IQ).

Over a two-week period, the trainees utilized the assigned devices for patient-related care. Kosmos, the AI-enabled device, provided automatic labeling of cardiac structures, guidance for optimal probe placement, grading of diagnostic image quality and automated ejection fraction calculations. The primary outcome measured was the time required to capture a specific cardiac image, while secondary outcomes included image quality, correct identification of pathology, and participant attitudes.

The results of the study were remarkable. At the follow-up assessment, the Kosmos AI group demonstrated faster scan times, higher image quality scores, and improved identification of reduced systolic function compared to the non-AI group. This outcome suggests that Kosmos, as

an AI-enabled POCUS device, can enhance image acquisition and interpretation by novices, potentially improving diagnostic accuracy and patient outcomes.

“Our research demonstrates the transformative potential of AI in medical imaging,” said Dr. Kumar. “By leveraging AI technologies like those in Kosmos, healthcare professionals can acquire high-quality images more efficiently, leading to enhanced diagnostic capabilities and more informed treatment decisions," he said.

The study highlights where AI may be especially helpful in training healthcare professionals. For devices like ultrasound that require extensive training, AI can support learners by providing real-time guidance for optimal usage, automating complex and time-consuming measurements, and providing immediate feedback on quality standards. Beyond training assistance, EchoNous aims to employ AI to also help streamline workflows, reduce human variability, and improve accuracy across various medical specialties.

“We are excited to see our vision for AI assistance in handheld ultrasound validated by Dr. Kumar’s research,” said Graham Cox, CEO at EchoNous. “As a user-dependent imaging modality, the biggest barrier to point-of-care ultrasound adoption has always been related to training. We are encouraged to see evidence that our AI on Kosmos shows potential to close that gap.”

Dr. Kumar and his team are actively working on advancing the science and education surrounding diagnostic tools like POCUS, with a vision to enhance patient care and empower healthcare professionals with cutting-edge technologies.

About Dr. Andre Kumar
Dr. Andre Kumar is a Clinical Associate Professor in the Stanford Division of Hospital Medicine, known for his dedication to improving patient care through Point-of-Care Ultrasound (POCUS), research, and education. He holds a Master's in Education and has completed several randomized trials on POCUS and its impact on patient care. Dr. Kumar is actively involved in teaching and research at both local and national levels and is committed to advancing the field of medical diagnostics.

About EchoNous
Headquartered in Redmond, Washington, EchoNous, creates transformative handheld point-of-care ultrasound solutions by infusing premium ultrasound performance with industry-leading AI to make expert insights accessible for every user. For more information, visit www.echonous.com.

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