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New Study Sheds Light on Risk Factors for Atrial Fibrillation and Cardioembolic Stroke

Portland, OR: Researchers have announced the results of a four-year study which used 3D echocardiography to examine the role of mid left atrial cross sectional area (LACSA) as a risk factor for cardioembolic (CE) stroke, atrial fibrillation (AF), and stroke recurrence. Atrial fibrillation is a common heart problem, affecting 2.6 million Americans per year. Strokes resulting from atrial fibrillation and heart disease are typically more severe, as they are associated with significant debilities and higher death rates.

“One of the challenges in treating patients with heart disease and atrial fibrillation is predicting which patients are at higher risk for stroke. Our study identifies a novel imaging sign that can be obtained with echocardiography, a common medical diagnostic tool that uses ultrasound to image the heart, in order to improve our ability to predict which patients are at greater risk for stroke,” said Primary Investigator Timothy C. Tan, MBBS, PhD. “Ultimately, this may help physicians develop more targeted and effective treatment plans for patients with heart disease and atrial fibrillation.”

Dr. Tan is a Clinical and Research Fellow at Massachusetts General Hospital; he and his colleagues first used 3D echo and customized software to analyze a small cohort of 40 ischemic stroke patients, to compare left atrial (LA) remodeling between patients with AF and those with no AF. Those results, combined with flow dynamics analysis, allowed the researchers to derive a simplified echocardiographic parameter using 2D echo measurements to calculate LACSA. Finally, the researchers validated their new formula in a separate group of 1,275 ischemic stroke patients.

Researchers on the study, *Left Atrial Cross Sectional Area, a Marker of Left Atrial Shape, is a Novel Risk Factor for Cardioembolic Stroke and Recurrence of Ischemic Stroke*, included Timothy Tan, Octavio Pontes-Neto, Mark Handschumacher, Maria C. Nunes, Yong-Hyun Park, Victoria Piro, Yuan Jiao, Gyeong-Moon Kim, Johanna Helenius, Cashel O'Brien, Xin Zeng, Karen Furie, Hakan Ay, and Judy Hung from Massachusetts General Hospital in Boston, MA.



A poster based on the results of the study will be displayed in the Poster and Exhibit Hall from Saturday, June 21 through Monday, June 23 at the American Society of Echocardiography (ASE) 25th Annual Scientific Sessions at the Oregon Convention Center, Portland, OR. Dr. Tan will present this research during the prestigious 2014 Arthur E. Weyman Young Investigator's Award Competition on Monday, June 23, from 8:00 am – 9:30 am in the Portland Ballroom, where the four best abstracts submitted compete in front of a panel of luminaries for cash prizes and international recognition.

To schedule an interview with Dr. Tan, please contact [Andie Piddington](#) by Friday, June 20. For on-site media inquiries please go to the Registration Desk or contact [Robin Wiegerink](#).

As the largest global organization for cardiovascular ultrasound imaging, the American Society of Echocardiography (ASE) is the leader and advocate, setting practice standards and guidelines. Comprised of over 16,000 physicians, sonographers, nurses, and scientists, ASE is a strong voice providing guidance, expertise, and education to its members with a commitment to improving the practice of ultrasound and imaging of the heart and cardiovascular system for better patient outcomes. For more information about ASE and the 2014 Scientific Sessions, visit www.asecho.org.

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