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TISSUE DOPPLER IMAGING SURPASSES CONVENTIONAL ECHOCARDIOGRAPHY IN PREDICTING MORTALITY

CHICAGO, IL – Adults over the age of 40 have a 20 percent lifetime risk of developing heart failure, a condition with high morbidity and mortality. Echocardiography, together with a history and physical examination, has been an essential part of the evaluation of patients with suspected heart failure; however, echo reveals evidence of heart failure in only half of affected individuals.

Now, a newer echocardiographic method called Tissue Doppler Imaging (TDI) appears to be better at diagnosing heart failure and predicting adverse outcomes, including death, according to a study presented today at the American College of Cardiology's 57th Annual Scientific Session. ACC.08 is the premier cardiovascular medical meeting, bringing together cardiologists and cardiovascular specialists to further breakthroughs in cardiovascular medicine.

The study, known as the 4th Copenhagen City Heart Study (2002), evaluated cardiac function in 1,036 non-hospitalized subjects using conventional echocardiography and color-coded TDI. The researchers sought to examine the prognostic power of TDI compared with conventional echocardiographic measures in this large cohort of subjects living in the community. The subjects were followed for more than five years, from 2002 to 2007, examining total mortality, and peak myocardial systolic, early diastolic and late diastolic velocities from six mitral annular sites were recorded.

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After adjusting for clinical information (age, sex, body mass index, heart rate, diabetes, hypertension and ischemic heart disease) and abnormal conventional echocardiography, which was observed in 17 percent of participants, TDI was found to be more predictive of mortality due to cardiovascular disease than conventional echocardiography.

“Abnormal conventional echocardiography had no predictive value in a multiple Cox proportional hazards regression model,” said Rasmus Møgelvang, M.D., of Gentofte Hospital, Copenhagen University, Denmark, and lead author of the study. “TDI identified persons with high risk of dying during the follow-up period and it was definitely superior to conventional echocardiography. Our results may pave the way for the introduction of TDI into standard clinical echocardiographic examination. The information it gives could allow patients to take measures proactively to prevent or delay their death from heart disease.”

Dr. Møgelvang will present this study, “Echocardiographic Tissue Doppler Imaging is a Powerful Independent Prognosticator of Overall Mortality in the General Population. Results From the Fourth Copenhagen City Heart Study (2002-2007),” on Monday, March 31, at 1:15p.m., in Vista Room S406.

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The American College of Cardiology (www.acc.org) represents the majority of board certified cardiovascular physicians in the United States. Its mission is to advocate for quality cardiovascular care through education, research, promotion, development and application of standards and guidelines- and to influence health care policy. ACC.08 is the largest cardiovascular meeting, bringing together cardiologists and cardiovascular specialists to share the newest discoveries in treatment and prevention, while helping the ACC achieve its mission to address and improve issues in cardiovascular medicine.