Imaging speeds early diagnosis of heart disease, the top killer in the Western world

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The most up-to-date imaging techniques for the early diagnosis of heart disease will be presented and discussed at EUROECHO and other Imaging Modalities 2012. The annual meeting of the European Association of Cardiovascular Imaging (EACVI), a registered branch of the European Society of Cardiology (ESC), takes place during 5-8 December in Athens, Greece, at the Megaron Athens International Conference Centre.

"Atherosclerosis is the leading cause of cardiovascular disease and the leading killer in Europe," said Professor Patrizio Lancellotti, President-Elect of the EACVI and Chairman of the EUROECHO Scientific Programme Committee. "Many of these deaths could be averted by diagnosis at a preclinical stage or early after the onset of symptoms."

He added: "Echocardiography and other imaging modalities play an important role in the diagnosis of atherosclerosis. For example, many of the features associated with a high risk plaque can now be probed by novel imaging techniques such as ultrasound imaging of carotid intima-media thickness, contrast enhanced ultrasound, magnetic resonance imaging (MRI) and positron emission tomography (PET)."

Professor Luigi Badano, EACVI President, continued: "We now have the tools to image the early signs of atherosclerosis without waiting for symptoms or clinical manifestations."

This breakthrough is the focus of the first theme of the congress,

imaging atherosclerosis.

EUROECHO 2012 is one of the largest echo and imaging meetings in the world and is expected to attract more than 3,000 cardiologists, internists, cardiac surgeons and sonographers from over 90 countries. This year promises four days of the latest science and treatment monitoring options in cardiovascular imaging, with an abundance of news stories for journalists. The full scientific programme is available here.

Nearly 700 original scientific abstracts will be presented by international scientists on hot topics such as increasing the viability of hearts for transplantation, cardiovascular risks in patients with HIV, the links between obstructive sleep apnea and heart disease, and assessing the cardiac damage induced by cancer drugs.

"The aim is to create an exciting forum for both clinicians and scientists to present and discuss the most up-to-date research and clinical findings in echocardiography and cardiovascular imaging," said Professor Lancellotti. "The most exciting part of the meeting will be dedicated to how new technology on echocardiography (contrast echo, tissue Doppler imaging, 3D echo, stress echocardiography) and other modalities can enter the clinical arena in the interest of the patient."

The second theme of the congress is non-invasive cardiovascular imaging techniques and outcome. Professor Lancellotti said: "A rapid echo-guided puncture of a pericardial effusion can save the life of a patient with cardiac tamponade."

He added: "Most often, imaging outcome is derived from risk stratification and detection of any cardiac involvement at an earlier stage. Early detection is of importance because early intervention may slow down the progression of the disease or appropriate follow-up

monitoring can be started."

New echocardiographic techniques such as tissue Doppler imaging and 2D speckle tracking of myocardial dysfunction enable detection of subtle abnormalities in left ventricular function before any changes in ejection fraction (used to define a normal function). Imaging can also be used to detect cardiotoxicity of cancer drugs. Professor Lancellotti said: "We cannot necessarily prevent the cardiotoxicity but we can detect the cardiac effect earlier and then adapt the treatment."

Special sessions have been organised for delegates under the age of 35 by the EACVI Club 353 committee. EACVI membership in this age group has increased from 5% to 25% over the past year. For the first time this year there will be two young investigator awards, one for clinical research and one for basic research.

Professor Badano concluded: "Today it is not just echocardiography that can improve patient outcome, but also magnetic resonance imaging, computed tomography and nuclear cardiology. Cardiovascular imaging can be used to improve diagnosis, guide interventional procedures and assess the results of cardiac surgery."

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