CT angiography aids risk stratification in patients with chest pain
By Reuters Health
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NEW YORK (Reuters Health), Nov 3 - CT angiography (CTA) predicts all-cause mortality in symptomatic patients suspected of having coronary artery disease (CAD), according to a report in the October 14 issue of the *Journal of the American College of Cardiology*.

"This test has important diagnostic and prognostic implications," Dr. Matthew Budoff from Harbor-UCLA Medical Center, Torrance, CA, told Reuters Health. "Unlike stress testing, this test allows visualization of atherosclerosis, which is our target of statins and antiplatelet agents."

Budoff and colleagues evaluated the incremental prognostic value of atherosclerotic burden and degree of stenotic disease seen on CTA, as well as of coronary artery calcium (CAC) score, over traditional risk factors in predicting all-cause mortality in some 2,500 consecutive patients referred for evaluation of suspected CAD.

Overall survival during a median follow-up of 78 months was significantly higher among patients found not to have CAD (98.3%) than among those who had CAD (95.3%) by CTA.

For patients with nonobstructive lesions detected by CTA, survival rates were 97.3% with one-vessel disease, 95.4% with two-vessel disease, and 93.1% for three-vessel disease. For those with obstructive CAD, survival rates were 92.9%, 89.7%, and 80% for one-, two-, and three-vessel disease, respectively.

The presence of coronary atherosclerosis on CTA independently predicted mortality and had significant incremental value over clinical risk factors and CAC score, the researchers note, but the predictive power was even greater when CAC score was combined with significant CAD detected on CTA.

"I think this test will allow faster and more accurate risk stratification, which will have important clinical implications and allow us to match intensity of therapies with intensity of risk," Budoff said.

For patients with low to intermediate risk for obstructive CAD, CTA "is the most cost-effective strategy for diagnosing CAD, given its high accuracy and low cost -- especially compared to catheterization or nuclear imaging," Budoff pointed out.

The study "is helpful and very welcome as it provides more data on the prognostic implications of coronary visualization using CT techniques," writes Dr. Stephan Achenbach from the University of Erlangen, Germany, in a related commentary. "It contains the very reassuring message that the absence of stenosis and nonobstructive plaque is associated with a good prognosis, even in a patient population that was most likely largely symptomatic."

"However," the editorial concludes, "the results do not justify the use of CTA as a screening tool for asymptomatic, primary prevention patients."