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CORONARY ARTERY DISEASE

Coronary calcium scanning improves risk factor control

Quantification of coronary artery calcification in asymptomatic individuals can improve control of risk factors for coronary artery disease (CAD) and is not associated with increased costs, report the investigators of the EISNER trial.

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The researchers sought to determine whether coronary artery calcium (CAC) scanning by CT influences subsequent medical management and costs compared with standard care in patients with risk factors for CAD. Two-thirds of a population of 2,137 middle-aged healthy volunteers were randomly assigned to receive a CAC scan at baseline and informed about their test results, whereas one-third did not receive a scan. Seven modifiable risk factors for CAD were assessed at baseline and at the 4-year follow-up. Progression of CAD risk was evaluated with the Framingham Risk Score (FRS). In addition, the investigators compared the downstream medical costs between the scan and no-scan groups.

Among the participants, 81.9% in the no-scan group and 88.2% in the scan group completed the study protocol. Significant improvements in systolic blood pressure, LDL-cholesterol levels, and waist circumference among those with increased abdominal girth were observed in the scan group compared with the no-scan group. The FRS in the no-scan group increased, whereas it remained unchanged in the scan group. In the scan group, high CAC scores were associated with subsequent increases in procedural and medication costs, but normal scores were associated with reduced costs. These effects led to similar overall costs in the two groups.

The researchers highlight the need for large-scale clinical trials to test whether their findings hold true in different patient populations and whether the effect of CAC scanning on risk profiles leads to fewer adverse clinical events.

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Original article Rozanski, A. *et al*. Impact of coronary artery calcium scanning on coronary risk factors and downstream testing: the EISNER (Early Identification of Subclinical Atherosclerosis by Noninvasive Imaging Research) prospective randomized trial. *J. Am. Coll. Cardiol*. **57**, 1622–1632 (2011)