# Accuracy of 64-row multidetector computed tomography in detecting coronary artery disease in 134 symptomatic patients: Influence of calcification

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## Background

The new 64-row multidetector computed tomography (CT)–assisted angiography can now detect coronary artery disease with shorter breath-hold time and at faster heart rates for symptomatic patients. We aim to determine if the 64-row scanner can also overcome limitations due to mild to moderate calcification.

## Methods

Scheduled for conventional coronary angiography, 134 symptomatic patients underwent multidetector CT–assisted angiography within 3 months. Patients were divided into those with low or high calcium score (median score 142) by modified Agatston formula: group A calcium score <142 Agatston score (68 patients, mean age 53 years, heart rate 62 beat/min) and group B calcium score ≥142 Agatston score (66 patients, mean age 57 years, heart rate 62 beat/min). Eleven major coronary segments were evaluated.

## Results

In group A, 93.6% of segments were evaluable with 97.3% correlation. Segment-by-segment analyses for sensitivity, specificity, and positive and negative predictive values were 85.4%, 98.1%, 76.7%, and 99.2%, respectively. For group B, 86.9% of segments were evaluable with 90.5% correlation. Sensitivity, specificity, and positive and negative predictive values were 79.9%, 92.8%, 78.8%, and 93.5%, respectively.

## Conclusions

The 64-slice multidetector CT coronary angiography can reliably detect the presence of significant coronary stenosis in symptomatic patients with mild calcification, but remains limited by moderate to heavy calcification.

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