Reviewer's report

Title: Impact of coronary artery calcification on risk assessment in asymptomatic subjects with family history of premature coronary artery disease

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Reviewer: Carlo CG Gaudio

Reviewer's report:

The objective of the paper is well defined in the text but not in the title. The title is misleading, as it states that coronary artery calcification contributes to risk assessment in asymptomatic subjects with family history of premature coronary artery disease. The present study, however, shows only that asymptomatic first degree relatives (FDRs) of patients with angiographically confirmed early onset of coronary artery disease have higher risk of abnormal CAC scores compared to controls.

The authors discuss on the predictive role of CAC scores that has already been reported in previous studies. However, they should compare this technique with those information provided by other diagnostic tests (i.e. stress tests). More importantly, the authors do not underline that CAC assessed by computed tomography exposes asymptomatic subjects to a radiation dose that may be of concern in the young and in fertile women.

The authors focus on several limitations of their work. However, they miss to admit that the present study can not derive any conclusion on the prognostic role of more frequent abnormal CAC scores in first degree relatives of patients with CAD. As a matter of fact, no follow-up data are available and therefore no definite conclusion on the predictive role of abnormal CAC scores can be derived.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

I have no conflict of interest to disclose