Reviewer’s report

Title: Predictive Value of Coronary Calcifications for Future Cardiac Events in Asymptomatic Patients with Diabetes mellitus: A prospective Study in 716 Patients over 8 Years

Version: 2 Date: 2 June 2008

Reviewer: Diane Bild

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Major Compulsory Revisions

1. It is unclear what these patients with diabetes represent. Why were they referred to a cardiology clinic, if they were asymptomatic and had no other clinical evidence of coronary artery disease? It seems likely that they were, in fact, at higher than usual risk for CHD.

2. It is implied that the patients all had ECG stress, ECG and echocardiography. Why did they undergo these procedures if they had no symptoms? Was the protocol for performing these measures standardized?

3. Which Framingham risk algorithm was used?

4. It is stated that the patients were contacted after an observation time of 8 years. Were they contacted during this period or only at the end of the period? If the latter, are the authors concerned that patients might have forgotten hospitalizations that occurred over this time period? How often were health records available during this eight year period and did this change over the period? It is stated that coronary interventions had to be confirmed by reports of the performing physician. How was this ascertained?

5. It’s stated in the Abstract and elsewhere that the risk of MI and Agatston score were “correlated”. This is not the proper statistic to use to relate a continuous measure and a bivariate outcome, and I am not sure the authors intended to state this.

6. Page 8: The author’s state that an area under the curve above 0.7 indicates “relatively good clinical test”. This is not necessarily the case. Depending on the importance of being certain about the ability to predict in a clinical setting, an area under the curve of 0.7 could be considered poor.

Minor Essential Revisions

1. Page 4: The authors note that it is questionable whether the determination of CAC adds additional prognostic value. Of importance is whether this addition is clinically significant rather than just statistically significant.

2. Page 7: Why were 96% confidence intervals reported or is this a typographical error? (It is unusual.)
3. Page 9: The author’s state “there was no significant difference in age or number of risk factors between patients with or without cardiac events”. Table 2 clearly shows a significant difference in age. On the other hand, the number of risk factors in not even shown.

4. Page 10: This reviewer does not understand what “resp.” means as in 57% resp. 60%” please clarify.

5. The methods for risk factor measurement should be better clarified, including measurement of blood pressure and lipids. How was family history measured and defined?

6. Page 8: The author’s report the mean Agatston score and the range. Because of the extreme skewness of the score, the median and interquartile range would be more appropriate.

Discretionary Revisions

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.