Reviewer’s report

Title: Prediction of cardiovascular risk using default risk factor values compared to clinically estimated cardiovascular risk

Version: 1 Date: 30 October 2007

Reviewer: Gregory Peterson

Reviewer’s report:

General

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

It is stated several times that there are significant differences between the curves in Figure 1. What statistical tests were used to confirm that there were statistically significant differences between the areas under the curves for the ROC curves? Is it simply assumed that they are statistically different because their 95% confidence intervals don’t overlap, which is not necessarily the case?

The dominant influence of age in determining cardiovascular risk is clearly evident from Figure 1. Therefore having the patient’s age accounts for a large proportion of the area under the curve in Figure 1. This should receive some discussion. Why not just use age alone? Adding the other variables doesn't seem to have a great influence.

How useful is a test with poor specificity when the outcome variable is ‘only' cardiovascular risk > 20% over 10 years. A poor specificity might be acceptable if the outcome variable was something like a diagnosis of cancer. There should be some discussion of the clinical utility of selectivity vs. specificity, especially in relation to predicting something so relatively vague as cardiovascular risk > 20% over 10 years.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Page 4. 1st line of Background: The first sentence doesn’t make sense. It should state “Because they are at high risk of cardiovascular events, patients with…”

Page 4. Bottom of page. More details (e.g. address) should be provided for the two companies mentioned.

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Discretionary Revisions (which the author can choose to ignore)
**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests