Reviewer's report

Title: Full B-type natriuretic peptide trumps other prognostic markers in patients assessed for coronary disease

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Reviewer: Marcus Kleber

Reviewer's report:

The authors investigated the potential value of a number of risk markers for the prediction of mortality and severe cardiovascular events in a cohort of 526 patients that had been recruited prior to elective coronary angiography. The study addresses a clinical need and the article is well written.

Comments:

- The authors compare the risk markers with the Framingham score and the ESC score. A large proportion of their patients had prior coronary heart disease and therefore a comparison with risk scores in secondary prevention might be more appropriate, at least for those patients. A number of risk scores has been proposed for stable coronary artery disease patients (admittedly, they are not widely used), e.g. J Am Coll Cardiol, 2001, vol. 38 (pg. 56-63), Eur Heart J. 2012 Sep;33(18):2282-9 or J Intern Med. 2014 Aug;276(2):184-94. In the last study, BNP (or NT-proBNP in this case) was identified to be the strongest marker of mortality in stable coronary artery disease patients. The authors might at least compare and discuss their findings with these publications.

- The authors pre-specified cut-points for biomarkers. It might be interesting to look at the association of the biomarkers with mortality more closely to see if these pre-specified cut-points really are optimal for risk classification. One could e.g. model the risk markers as restricted splines and plot the concentration versus the respective risk. Or are the numbers too low?

- The authors state that they used with randomly-generated derivation and validation sets, stratified by age and left-ventricular systolic dysfunction. I would request that the authors would add further details to these procedure (e.g. size of the derivation and the validation set). Further, validation in an independent cohort would be a big improvement. The C-statistic of 0.91 in the random validation cohort appears very high for me.

- In figure 4 the predicted risk for a 62 year old with BNP of 1000 pg/ml seems to be extremely low with only 0-5%.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
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Yes

Are the conclusions drawn adequately supported by the data shown?
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