Reviewer's report

Title: Stratification of Coronary Artery Disease Patients for Revascularization Procedure Based on Estimating Adverse Effects

Version: 2
Date: 29 September 2014

Reviewer: Steven Babin

Reviewer's report:

Major Compulsory Revisions:

1) Abstract: lines 31-32: “Estimated savings per patient amounted to $693 and $794, respectively. Are these annual savings, total savings? Please state the period of time over which these savings occur.

2) Materials and Methods, page 7, line 4: are you saying the P with the caret is a probability estimate based on classifiers’ performance? And P with a tilde is a probability estimate based on data? But isn’t the classifier performance based on data? It is not clear how these two probabilities would be different. Please explain the difference more clearly. Furthermore, there are several places in the paper where P without adornment is used. In some cases, the P is simply used in a general equation so this is okay, but in other cases, there is a calculated number (e.g., the Supplement). I think that, when P is specifying a specific calculated number, then either the tilde or caret should be used. However, I may be misunderstanding these terms, in which case a clearer explanation is sorely needed.

3) The list of abbreviations is very incomplete. It should include those used in the Tables also.

4) Table 1 lists Eccentricity. However, there are different cardiac eccentricity indices, so it would be helpful to explain exactly which one is being used.

5) Caption for Table 1 uses the variables D1, D2, and D3, but the Table itself uses C1, C2, and C3. In contrast, the caption for Table 2 is consistent with the variable symbols used, so this implies a mistake in the caption for Table 1. Also, such confusion derives from not clearly identifying each abbreviation. As mentioned in comment 6) above, the list is far from complete.

6) Table 2: I assume Creatine Kinase MB is just that specific isozyme, while Creatine Kinase is all isozymes included. Is this correct? Or is one of them Creatine Kinase MM?

Minor Essential Revisions:

1) Background, page 5, line 1: Please change “there” to “their”

2) Materials and Methods, page 6: Please define the variable symbols. I believe R, H, and T are for restenosis, hazard, and therapy, respectively, but this is not
explicitly stated.
3) Are monetary amounts listed in USD? Other countries use the dollar symbol, so please specify.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.