Author’s response to reviews

Title: Biomarker Enhanced Risk Prediction for Development of AKI after Cardiac Surgery

Authors:
Michael Merchant (mlmerc02@louisville.edu)
Michael Brier (mebrie01@louisville.edu)
Mark Slaughter (msslau01@louisville.edu)
Jon Klein (jbklei01@louisville.edu)
Kenneth McLeish (krmcle01@louisville.edu)

Version: 2 Date: 16 Mar 2018

Author’s response to reviews:

We appreciate the helpful comments of the reviewers and editors. We have addressed as possible these comments and believe they have greatly improved the clarity and readability. (Reviewer Comments: Manuscript is much improved. However following points need further clarification.)

Minor comments:

1) Please remove last sentence from conclusion: “An independent validation set was not performed”.

  a. Sentence was removed

2) Please define and abbreviate when used first time. For example: Acute Kidney Injury (AKI) is repeated in line 7 and line 9. ICU is not defined in line 13. Similarly, RIFLE and KDIEGO not defined in line 20. Define IL-18 in line 58. Serum creatinine is repeated multiple
times in introduction. Whole manuscript is filled with such errors. Please double check whole manuscript.

a. Corrected use of abbreviations and definitions deficiencies. Repeated spell and grammar check.

3) Some Sentence structures are too big. For example: “AKI after cardiac surgery is associated with increased short-term and long-term mortality, increased length of ICU and hospital stay, increased ventilator days, increased cost of hospitalization, and increased risk of developing chronic kidney disease (CKD) and end-stage renal disease (ESRD)”. Please revise manuscript as needed. I believe additional efforts are required to make manuscript more reader friendly.

a. Reduced sentence lengths as determined feasible by authors.

4) Please describe how baseline serum creatinine was defined? Add text in the manuscript.

a. Definition of baseline serum creatinine has been provided within the next to last sentence in outcome definitions on page 5 of 19.

5) Why authors decided to use Thakkar Cardiac Surgery risk score? There are multiple scores available for example: predictive model by Bernie et al demonstrated better discrimination compared with the Cleveland Clinic Score. Also, this is the first predictive model for all stages of AKI.

a. The study design and patient enrollment (2010-2012) predated the above cited study.

b. The current version of the manuscript utilizes the KDIGO risk score in addition to the Thakar risk score.

6) Please draft separate paragraph on strength of study, also how these study findings can be used in the future for risk stratification.

a. A paragraph addressing strengths and use with risk stratification has been added in the discussion ahead of the paragraph on limitations.

7) How much I love Dr. Thakkar, I would refrain from using study author name again and again in the manuscript. This is a personal suggestion. Please spell check again.

a. Specific reference to Thakar et al has been limited to the first introduction of that risk score.

8) Please follow standard guidelines for p-values. For example, P-values showing two significant decimal places (e.g. 0.25) or one non-zero if smaller than 0.01 (e.g. 0.005 or < 0.001). Apply this for all tables.
a. Standard guidelines have been followed per editors suggestions

9) Table 1: Please remove superscripts on CHF, DM…so on. Please report data as n (%). Age years, mean ± SD; similarly for creatinine, blood pressure etc.

a. Corrections made per editors suggestions

10) Table 4: Report data as two significant decimal places.

a. Corrections made per editors suggestions

11) Number of Tables for the manuscript are high. Keep Table numbers to 4. May consider moving some tables as supplemental data.

a. Two tables have been combine. Two tables have been moved to supplemental. A total of three tables remain.