Peer review file

Article information: http://dx.doi.org/10.21037/jtd-20-3586

Reviewer A

Comment 1: The authors state in the abstract (conclusion section) that their scoring system could be useful for "preventive interventions and perioperative management". In view of the fact that some of the variables in the score are only known after the surgery (notably CPB time and blood transfusion), it cannot be calculated prior to surgery and therefore cannot be used as purported by the authors. This should be corrected.

Reply 1: Thank you for this valuable feedback. We have modified our text as advised in the abstract (conclusion section) (see Page 4, line 47).

Changes in the text: ~~The scoring system may be useful for individualized risk estimations, preventive interventions and perioperative management.~~ The scoring system may be helpful for individualized risk estimations and clinical decision-making.

Comment 2: I understand that the authors include ventilator-associated pneumonia in the outcomes, but it is not clear enough from the results whether the patients were on ventilation because they had pneumonia, or whether they developed pneumonia while on ventilation. In this regard, more details are required in the methods section regarding the ventilation strategy during surgery (e.g. what about tidal volume, plateau and driving pressure, recruitment manoeuvers, positive end-expiratory pressure (PEEP) etc).

Reply 2: Thank you for your kind suggestion. We didn't describe this aspect much before because it is not the main focus of our study. We have added some details in the methods section (Study population section) regarding the ventilation strategy

during surgery as advised (see Page 6, line 87).

Changes in the text: All patients were ventilated using a lung protective ventilation strategy (tidal volume was 6-8 ml/kg, driving pressure was 15 cm H_2O, and positive end-expiratory pressure was 5 cm H_2O).

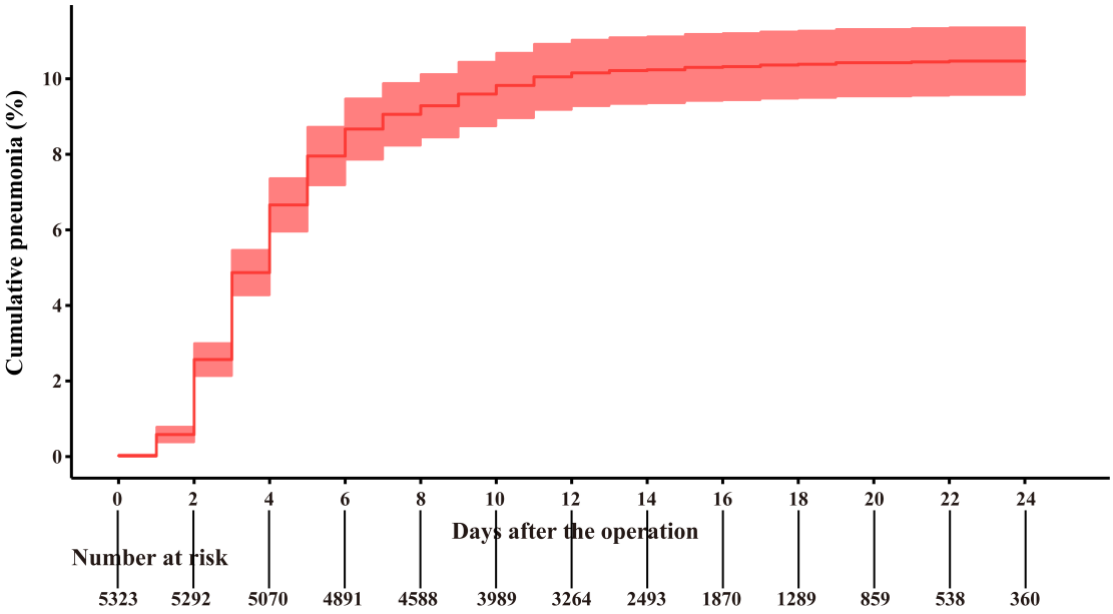
Comment 3: The authors should avoid using the term “drinking” and should use “alcohol consumption” instead. Please indicate the thresholds for alcohol consumption in units of alcohol per day or week.

Reply 3: Thanks for picking this up. We have used the term “alcohol consumption” to replace “drinking” in the text as suggested. We have indicated the thresholds for alcohol consumption in units of alcohol per day or week (see Page 7, line 105).

Changes in the text: ~~Drinking history was defined as drinking at least once a week over a year, and current drinking or quit drinking for less than three years.~~ A history of alcohol consumption (consumption >20 g/day or >140 g/week) was defined as alcohol consumption at least once a week over a year, current alcohol consumption, or quitting for less than three years.

Comment 4: For the survival analysis, please specify at which timepoint.

Reply 4: We are very sorry for our failure to make it clear. The number of patients at risk corresponds to the time point on the x-axis (shown below). Thank you for your comments.



Comment 5: There seems to be an inversion of the legends for figures 2 and 3.

Reply 5: We are very sorry for the mistake. We have modified that in this version. Thank you for your correction.

Comment 6: The details of the score should be provided in the results, notably the risk intervals (what score corresponds to low, intermediate, high risk?)

Reply 6: Thank you for your advice. We have provided more details of the score in the results section (see Page 11, line 179 and 191).

Changes in the text: There were 32 possible points in the composite risk index, with scores ranging from 0 to 27 in this study with a median of 9 (6,13). The predicted rate of postoperative pneumonia ranged from 0.61% for those with a score of 0, to 93.4% for those with a score of 32. (see Page 11, line 179).

Finally, three optimal risk intervals were identified as low (<11 points), medium (11-15 points) and high risk (≥16 points) for postoperative pneumonia according to the simplified risk score and clinical practice (Table 3). (see Page 11, line 191).

Comment 7: I don't see any funding information mentioned – please include.

Reply 7: Thank you for your suggestion. We have included the funding information in

this version (see Page 19, line 359).

Changes in the text: **Funding:** This work was supported by the National Natural Science Foundation of China (Grant No. 81800413).

Comment 8: Overall, the English could do with revision - there are a number of small grammar mistakes throughout the paper.

Reply 8: We are very sorry for the mistakes in this manuscript and inconvenience they caused in your reading. The manuscript has been thoroughly revised and edited by a professional language editing service (AJE: American Journal Experts No. 5J6C17BZ) in this version.

Reviewer B

Comment 1: The aim of the study is clear. The title is informative and relevant. The references are relevant, recent, and referenced correctly. Please complete your references with the following articles:

1. doi: 10.21037/jtd.2019.04.48.

2. doi: 10.33963/KP.14940

Reply 1: Thank you for your suggestion. We have added the mentioned literatures in the reference part (Ref. 18 and 46) as advised.