Author’s response to reviews

Title: Heart Rate n-Variability (HRnV) and Its Application to Risk Stratification of Chest Pain Patients in the Emergency Department

Authors:

Nan Liu (liu.nan@duke-nus.edu.sg)
Dagang Guo (guodagang@outlook.com)
Zhi Xiong Koh (koh.zhixiong@singhealth.com.sg)
Andrew Ho (sophronesis@gmail.com)
Feng Xie (xief@u.duke.nus.edu)
Takashi Tagami (t-tagami@nms.ac.jp)
Jeffrey Sakamoto (jtsakamo@stanford.edu)
Pin Pin Pek (pek.pin.pin@singhealth.com.sg)
Bibhas Chakraborty (bibhas.chakraborty@duke-nus.edu.sg)
Swee Han Lim (lim.swee.han@singhealth.com.sg)
Jack Tan (jack.tan.w.c@singhealth.com.sg)
Marcus Ong (marcus.ong.e.h@singhealth.com.sg)

Version: 2 Date: 21 Mar 2020

Author’s response to reviews:

21 March 2020

Dear Editor,

BCAR-D-19-00934
Heart Rate n-Variability (HRnV) and Its Application to Risk Stratification of Chest Pain Patients in the Emergency Department
Nan Liu; Dagang Guo; Zhi Xiong Koh; Andrew Ho; Feng Xie; Takashi Tagami; Jeffrey Sakamoto; Pin Pin Pek; Bibhas Chakraborty; Swee Han Lim; Jack Tan; Marcus Ong

We would like to thank the editor and reviewers for providing us with their valuable comments and suggestions. In this revised manuscript, we have addressed all concerns and integrated suggested changes. We hope the current manuscript is now acceptable.
Thank you.

Dr Nan Liu
Centre for Quantitative Medicine and Programme in Health Services and Systems Research, Duke-NUS Medical School, Academia, 20 College Road, Singapore 169856
Email: liu.nan@duke-nus.edu.sg
Response to Dr Han-Kuei Wu (Reviewer 2)

The manuscript was well revised. However there was still one suggestion:
1. In Table 5, there were two variable (HR2V skewness & HR2V SampEn) including 1 in confidence interval, which may not be suitable as the predictors. And the logistic regression analysis should be renewed.

Reply: Thank you Dr Wu for your kind words and valuable suggestions.

We noted that HR2V skewness and HR2V SampEn included 1 in their confidence intervals. We have tried to remove these two variables from modeling but found out that other variables’ contributions (in terms of odds ratios) to the model have also changed accordingly. Another two variables’ confidence intervals included 1 after this change. This was primarily due to that in multivariable analysis the Akaike Information Criterion (AIC) was used for model selection where p-values were not necessarily to be smaller than 0.05; in other words, the confidence intervals of some variables may include 1. That said, these two variables (HR2V skewness and HR2V SampEn) have helped other variables (all together) to achieve the best performance in model selection. Given this fact, we would like to keep these two variables in Table 5. To make it clear, we changed the caption of Table 5 by stating “stepwise logistic regression (backward selection)”.

Thanks again for raising this concern and we hope our answer is acceptable.