Reviewer's report

Title: Three myths about risk thresholds for prediction models

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Reviewer: Feng Gao

Reviewer's report:

This is an excellent written manuscript. Prediction models have been widely applied in all fields of biomedicine. The authors provide a comprehensive review specifically on risk thresholds out of prediction models. This is a topic of broad clinical interest, in conjunction with the ever increasing demands of incorporating biomarkers for treatment selection and evaluation in the era of precision medicine. Since the purpose of many prediction models is for risk stratification, the availability of thresholds will greatly facilitate model interpretation and patient management. However, it is challenging to calculate optimal thresholds. In this study, the authors discussed three common myths on using risk thresholds and also provided some general guidelines on this issue via illustration with data from real-world study.

In short, this manuscript provides invaluable information for practitioners. No major statistical concerns. Only two minor comments:

1. Under the 3rd myth, it is helpful to also mention the concept and key references relevant to "partial ROC" ("partial AUC"). This approach is inline with the idea of multiple thresholds, but hopefully provides a better trade-off between overall ROC and single optimal threshold;

2. The references #29 and #33 are redundant

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