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Answering reviewers

Reviewer 02797788: the paper reviewed prognostic models based risk scores for patients with acute heart failure, which provides references for clinical practice and further studies. Although the characteristics of each risk score were compared with statistical pertinence and applicability in practice, the guidance on how to choose these risk scores under different circumstances could be further discussed. Furthermore, as the grade of evidence and the recommendation level is crucial for clinical practice, the quality of each risk score study with the grade of evidence is suggested. In table 1, more information can be give, such as the sample size for validation and other processes, publication year, outcome measures, methodological issue etc.

We appreciate the comments of the reviewer; for a better evaluation of each score study, we added a third table, and supplied the following information: publication year, sample size of both derivation and validation cohort, statistical method to select variables entering the model outcome measures, C-statistic of derivation and validation cohorts, calibration. By means of these data is possible to evaluate the grade of evidence of each model.

To suggest some guidelines for evaluation and choice of a risk model, we added to the paper the following paragraph:

“How the choose a risk score?

To choose a risk score, statistical and methodological pertinence should be evaluated. Models have a high grade of evidence when they are derived from large community or registry populations, when they have been validated in an external population, and when they show good discrimination (>0.70) in both derivation and validation cohorts; eventually, adequate calibration is crucial.

Clinicians should be suspicious of risk models derived from clinical trials and that were not validated in an external population and that were not calibrated. Risk models in which in-hospital mortality is the outcome must be used at the

time of hospital admission. Obviously, an emergency department model with few easily measurable variables is preferred. Risk models that evaluate long-term mortality are useful during hospitalization and at discharge to plan the follow-up or to select patients for advanced therapies”.

Reviewer 02445850: In this review the authors analyzed several studies that evaluated some prognostic models, combining different variables, to predict mortality in heart failure. C-statistic measured the ability of each model to discriminate patient's outcome. We also recommend to report a checklist for each of the included studies according to TRIPOD statement. This effort aids the reader to better evaluate the prediction model studies

We recognize the relevance of reviewer 's comments ; in the revisited tables we reported most items included in the check list of tripod statement: the following data were supplied: publication year, sample size of both derivation and validation cohorts, statistical method used to select variables entering the model, outcome measures, C-statistic of derivation and validation cohorts , calibration.

Sincerely Yours

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