Reviewer’s report

Title: Utility of Procalcitonin (PCT) and Mid regional pro-Adrenomedullin (MR-proADM) in risk stratification of critically ill febrile patients in Emergency Department (ED). A comparison with APACHE II score.

Version: 4 Date: 20 March 2012

Reviewer: Raffaele Altara

Reviewer’s report:

This manuscript is based on an interesting study providing new information on the potential role of MR-proADM and PCT as diagnostic biomarkers. There are however some aspects that should be considered by the authors.

• MAJOR COMPULSORY REVISIONS

1. The selection of the control group should be better defined giving the inclusion/exclusion criteria.
2. Hospitalization prediction: the number of patients hospitalized remains unclear. Table 2 does not show the outcome.
3. Two of the study conclusions should be revised:
   a. Firstly, the current study does not show a beneficial effect on the prognosis of the patients due to the identification of the two markers. Therefore the conclusion is not supported by the study.
   b. Secondly, there’s no cost-benefit analysis. Thus it is not possible to get to the conclusion that the identification of the two markers is cheaper than the APACHE II score.
4. Key messages 3, 4 and 5 should then be revised based on the previous comments.

MINOR ESSENTIAL REVISIONS

1. Some figures do not correspond to the applied number. Please check it again.
2. In Table 1 there is a range of 37-41°C for the patients category. This is in contrast with the patient selection, described in the materials and method. Indeed the patients defined as febrile should start from 38°C. Please adapt.
3. Table 2. I would change the diagnosis of “fever” in “unknown origin” for the fever group, as fever is just a symptom.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being
published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests