Reviewer’s report

Title: Should C-reactive protein concentration at ICU discharge be used as a prognostic marker?

Version: 1 Date: 9 August 2010

Reviewer: Mark G. Coulthard

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1. Is the question posed by the authors well defined?
   Yes the research question/hypothesis is well-defined.

2. Are the methods appropriate and well described?
   Yes this is an observational study of a cohort of ICU patients which appropriate for a prognosis type study like this one.

3. Are the data sound?
   The mortality following ICU discharge was actually double (33.3%) in patients with CRP > 10 mg/dL compared with patients who had a CRP <5 mg/dL (15.1%) or CRP 5-10 mg/dL (16.1%). Is this actually a Type II error (there is a difference but the sample size is too small?) I am not certain how to inspect the area under a ROC for Type II error. However, in Table 1 the CRP clearly does not discriminate between survival/non-survival like the scoring systems (APACHE II, SAPS II, TISS-8). However, there were only 29 non survivors. It would have been good to see the ROC for CRP at the three different levels? The majority of the medical patients were ventilated for pneumonia?

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
   Hospital ethics committee review was sought and waived as this study did not change medical practice.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
   The discussion and conclusions are well balanced.

6. Are limitations of the work clearly stated?
   Yes the authors acknowledge the limitations of their work.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
   Yes the authors are clear that this research (CRP levels to predict post-ICU mortality) is not novel and they were seeking to confirm previous observations although in this study they are unable to confirm that CRP does predict post-ICU mortality. The previous research on CRP predicting post-ICU mortality does
appear to published from a single ICU in Perth, Australia.

8. Do the title and abstract accurately convey what has been found?
Yes the title and abstract are accurate. The abstract may be a little too long at 330 words. The main result is the CRP which is difficult at a quick glance to find in the list of results in the "Results" paragraph. If CRP was the last prognostic marker in that list (rather than the third last) then it could be a little easier for the reader?

9. Is the writing acceptable?
Yes the writing style is quite acceptable and there are only a few grammatical errors which should be easily resolved by the copy editor.