Author's response to reviews

Title: Infection Probability Score, APACHE II and KARNOFSKY scoring systems as predictors of bloodstream infection onset in hematology-oncology patients

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Version: 3 Date: 18 March 2010

Author's response to reviews: see over
Author's response to reviews

Title: Infection Probability Score, APACHE II and KARNOFSKY scoring systems as predictors of bloodstream infection onset in hematology-oncology patients

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Version: 2 Date: 21 February 2010

Author's response to reviews: see over
Reviewer's report

Title: Infection Probability Score, APACHE II and KARNOFSKY scoring systems as predictors of bloodstream infection onset in hematology-oncology patients

Version: 1 Date: 7 December 2009

Reviewer: Alexandre Marra

This manuscript about infection probability score, APACHE II and Karnofsky scoring systems as predictors of bloodstream infection onset in hematology-oncology patient analyzed only 17 patients with BSI. It is a too small number for the authors perform a significant conclusion about the infection probability score to be the best scoring system in predicting BSIs.

Thank you for your recommendation. Although 17 patients with BSI seem to be a small number and although a larger sample would allow us to make better conclusions the most important parameters of the current research is that the sample is specific and that the study period was long enough. The literature for IPS and BSI is sparse. To our knowledge this is the first research that examines the predictive power of the IPS for the onset of Bloodstream Infections compared with the other two tools.
Reviewer's report

Title: Infection Probability Score, APACHE II and KARNOFSKY scoring systems as predictors of bloodstream infection onset in hematology-oncology patients

Version: 1 Date: 9 January 2010

Reviewer: Haridimos Markogiannakis

1 “Abstract”: please give the full term of the abbreviation “BSI”.

Thank you for the recommendation. We have already corrected the abbreviation. All the changes are underlined.

2 The “Introduction” section needs shortening. Some parts of this section may be transferred in the “Discussion”.

We appreciate your comment. We have shortened the background.

3 In both the “Abstract” and the “Results” sections, it is stated that patients with BSIs were mainly males. In contrast, though, in Table 2 it is shown that 82.3% of these patients were females. Please clarify.

Thank you for the remark. We have already corrected it.

4 The authors have performed a very good statistical analysis. In order to improve it, and also to indicate if IPS is an independent predictor of BSIs, it would be very useful to conduct a multivariate analysis.

We have added the following: Logistic regression analysis revealed that IPS was the only significant predictor of BSI onset (OR=5.60; 95% CI=1.66-18.88; p=0.003) compared with APACHE II (OR=0.71; 95% CI=0.22-2.28; p=0.546) and KARNOFSKY (OR=0.39; 95% CI=1.13-1.18; p=0.121).

5 The “Discussion” section is too short. More importantly, it needs a great revision. In its current form, the authors only address the issue of microorganisms causing BSIs. Apart from the first two sentences, nothing is mentioned about the actual topic of this paper: prediction of BSIs in hematology/oncology patients and the potential role of IPS, APACHE II and KARNOFSKY scores. The authors should focus on this topic, evaluating their results and presenting/analyzing the existing literature.

We agree with your remark. We have revised the discussion and have focused on the characteristics of IPS. The existing literature regarding the use of IPS is sparse (only two studies).

6 Regarding their results, APACHE II and KARNOFSKY scores are not useful for BSI prediction; furthermore, although IPS showed better results, its sensitivity, specificity, AUC and PPV values are not very satisfactory.

We appreciate your comment. Indeed the sensitivity, specificity, AUC and PPV values are not very satisfactory but they are better compared to the other two tools. We conclude that the tool may be more sensitive in predicting the onset of a HAI compared with the onset of a BSI.
7 “References” section:
   a) Reduce the total number of references to less than 30.
   b) References numbers “6” and “7” are not cited in the text.

We appreciate your comment. We have reduced the number of references to 29.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**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.