Reviewer's report

Title: Procalcitonin (PCT) and C-reactive Protein (CRP) as indicators of infection in febrile neutropenic adults.

Version: 1 Date: 22 June 2007

Reviewer: Evangelos Giamarellos-Bourboulis

Reviewer's report:

General

• The main problem of the study is the inconsistency between Materials and Methods and the rest of the manuscript. More precisely, the authors tend to perform a double-blind study and then to classify patients into FUO, localized bacterial infection, bacteremia and severe sepsis according to the PCT value. What is the aim and the design of that double-blind study? There is no indication for any randomization. If this is indeed a double-blind study of decision making according to PCT, then this will be only the second study in the literature doing this and of course the merit will be considerable. Furthermore, there are no provided results for classification into the mentioned four categories according to PCT values.

• PCT follows non-normal distribution. As a consequence values should be expressed as medians-IQR. Though this is done in the Tables, mean values are applied in the text. In addition, the applied statistical test for comparisons should be non-parametric and not the Student’s t-test.

• The number of enrolled patients is low. How was the power of the study assessed?

• No follow-up values of PCT were provided. For a study with a limited number of patients this is mandatory.

• Were any differences observed in PCT between infections caused by Gram-positive and infections caused by Gram-negative bacteria?

• As described by Giamarello et al (Clin Microbiol Infect 2004), the ROC for PCT to discriminate between severe sepsis and bacteremia was far higher than 71%. This should be discussed.

Minor essential revisions

• I believe that Figures 1 and 2 should be combined into one single figure. Probably medians and 95%CI are provided for both PCT and CRP but this is not mentioned.

• Figures 3 and 4 should be omitted since they provide merely negative data.

• There are various grammatical and spelling errors that should be corrected.
Discretionary revisions
None

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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:
No competing interests