Reviewer's report

Title: A latent class approach for sepsis diagnosis supports use of procalcitonin in the emergency room

Version: 3 Date: 25 June 2013

Reviewer: Pierre Hausfater

Reviewer's report:

Major compulsory Revisions: None

Minor essential revisions:
- it is not clear when the first blood sample was drawn: as the patients were included "in the first 24-hours admission following ED admission", some patients could have been drawn at ED entry and some others 24-hours later. Is that true or were all first biomarker samples drawn at ED entry? This is important because biomarker’s kinetic (notably PCT) is only 24h so that PCT levels may vary considerably during 24 hours delay. In case, this should be mentioned as a potential limitation. The same question concerning H-24 sample: drawn 24h after the first one or "just" the day after?
- table 3: in contrary to author’s answers to reviewer 4, cluster 1 and 2 are still not clearly explicated as a legend/title
- if possible, I still not think that LCA explanation is clearly depicted in statistical method section. May be improved, maybe via a concrete example.

Level of interest: An article of importance in its field

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:

See previous competing interest declaration