Reviewer's report

Title: Evaluation of decision-support software in Carcino-Embryonic Antigen (CEA)-based follow-up of colorectal cancer patients

Version: 2 Date: 24 October 2011

Reviewer: Alejandro Pazos

Reviewer's report:

*** Major Compulsory Revisions

The idea of a decision-support software to facilitate the follow-up of patients makes sense. And the evaluation of such software is necessary. However, in my opinion, it's necessary to describe the software in great detail and, in order to evaluate it rigorously, the process needs to be improved.

Some guidelines I consider should be followed are:

* The software should be described in great detail. At least, the manuscript should answer the following questions:
  - Is the software freely available for non-commercial use?; Can it be downloaded for testing purposes?
  - Could the software be used in other hospitals?; If the answer is "yes", how the installation process should be achieved?
  - What kind of data are stored into the CEAWatch database (what are the database fields)?
  - When a patient goes to an external laboratory, how can you be sure that the results of the analysis are introduced into the hospital information system?
  - What are the specific operations performed by the software?

* The evaluation process should be more rigorous and better described.
  - In this work, the group of patients that is followed-up by means of the system follows a different protocol than the control group. So, it’s difficult to know if the time variation is due to the system or caused by the protocol. It is said that “patients in the study group were seen at the outpatient clinic once annually instead of four times a year and they had the possibility of having blood drawn at local laboratories instead of in the hospital”. Why is the number of visits reduced? Why the other group can't have blood drawn at local laboratories? Why the group that is followed-up without the software can't follow the same protocol?

*** Discretionary Revisions

I suggest to avoid writing conclusions from other works in the “Conclusions” section. It causes confusion.

Different names are used to refer to the group that is followed-up with the software (intensive follow-up group, study group,...) In my opinion, it is also
confusing.

*** Minor Essential Revisions

“Abstract”, first line, probably there are two blanks before “CEAwatch”.

“Authors Contributions”, 4th paragraph says “the idea of the idea for” when it should say either “the idea for” or “the idea of”.

“Efficacy of the software” there are a reference to Table 3. It should refer to Table 2.

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

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