Author's response to reviews

Title: Interactive Decision Support in Hepatic Surgery

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PDF covering letter
Concern: re-submission to BMC Medical Informatics and Decision Making

Dear Sir,

hereby I re-submit our work Interactive Decision Support in Hepatic Surgery
(Martin Dugas, Rolf Schauer, Andreas Volk, Horst Rau) for publication in BMC Medical Informatics and Decision Making.

The constructive comments of the reviewers were handled as follows:

Reviewer Dr. Vivek Goel
1) The second question on page 3 "Does a decision support system for this medical domain provide clinically relevant information?" is now covered more detailed in Discussion / Risk assessment
2) In the methods section / subsection "Automatic generation of web programs" information was added, how security and confidentiality of information is protected.
3) In the results section / subsection "The interactive decision support component" the issues concerning sensitivity and specificity was explained more precisely.
4) In the discussion section / subsection "High-granular database design" now the advantages of a smaller set of variables are discussed.
5) In the discussion section / subsection "Data monitoring" the issue concerning selection bias was added
6) In the results section / subsection "The interactive decision support component" the last sentence was removed
7) In the discussion section / subsection "Success factors for clinical decision support" the role of the given characteristics with respect to our system was clarified.
8) Figure 3 was corrected.

Reviewer Dr. Rainer Schmidt
1) The subsection "Automatic generation of web programs" now provides more details about the web tool
2) The approach of this manuscript is not case based reasoning as applied in artificial intelligence research. The system does not intend to draw conclusions from the cases - it simply searches cases with similar clinical characteristics.
I do not agree with the final statement of the reviewer, because our approach is not simple database programming. We use a sophisticated modelling technology, which has been applied successfully to other domains in medical research. Because we are not doing case based reasoning in the field of artificial intelligence, specific AI computer languages do not provide advantages in our project.

Reviewer Prof. Christian Ohmann
1) Concerning similarity measures: This point also refers to comment 3) from reviewer Dr. Goel. The subsection "The interactive decision support component" was clarified. Simply speaking, all cases that are not contradictory to the query are considered similar.
2) In the Discussion section, a statement concerning the sample sizes and interpretation of Kaplan-Meier plots was inserted. Not only the sample size, but also the follow-up-interval is important for interpretation of Kaplan-Meier plots.
3) The limitations of this study are now described more explicitly in the sections "Risk assessment" and "Visualization and aggregation of medical information"

Sincerely,

Dr. Martin Dugas