Reviewer's report

Title: Radiofrequency Ablation of Liver Lesions: Quantitative Assessment of Treatment Completeness through CT Image Processing.

Version: 3 Date: 7 July 2012

Reviewer: Gerlig Widmann

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Major compulsory Revisions

In their answer, the authors do not believe that the paper my benefit from the information of modified RECIST criteria. However, as TFM was extremely low in their series, necrosis as a lack of contrast enhancement and thus reduction of HU seems to be an essential index. Size of the necrosis may become important during follow-ups, because successful ablation necrosis will undergo continuous shrinkage. As the paper deals with a (semi-automated) quantification of treatment success, and as the above mentioned indices “could be easily computed on our images”, I am displeased that the authors did not feel that it is worth to include my comment in the discussion.

The authors continue to focus on arterial supply occlusion plus RFA and answered that in their experience this approach gives better results than multi-electrode approaches. This is definitely wrong. The authors probably have limited experience with multi-electrode approaches. The generation of overlapping necrosis with large TFM is essential for successful RFA and the superiority of multi-electrode approaches such as SRFA is well published.

The References of the manuscript are weak and the majority consists of books, theses and conference proceedings, rather than international peer-reviewed journals. A careful revision of the references including the actual literature on RFA is recommended.

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'