Reviewer's report

Title: Predictive and prognostic relevance of circulating nucleosomes and oncological biomarkers in liver cancer patients undergoing transarterial chemoembolization therapy

Version: 1 Date: 11 November 2010

Reviewer: Katrin Hoffmann

Reviewer's report:

Kohles N. et al. Predictive and prognostic relevance of circulating nucleosomes and oncological biomarkers in liver cancer patients undergoing transarterial chemoembolization therapy

Major Compulsory Revisions

The authors investigate in their prospective study the potential role of various serum markers for therapy response and survival prediction in patients undergoing TACE for HCC. The TACE procedure and the radiologic outcome evaluation are well described.

However, a more detailed description of the patients` characteristics, eg. number of nodules, maximal size of nodules, intention for treatment (bridging vs. palliative), potential treatments before TACE (liver resection, sorafenib therapy...) would be helpful to assess the patients cohort better. (Table 1, Material and Methods)

To monitor TACE treatment efficiency different serum markers have been evaluated. The authors state that 24h after application of TACE concentrations of circulating nucleosomes, CYFRA 21-1, LDH, CRP, bilirubin, and activity of liver enzymes were increased in most patients and the concentration of AFP was decreased. (Results section, 2nd paragraph) However, neither in the referred table 1 nor in figure 1 any p-values are stated. To evaluate if the median values were just lower or statistically significantly decreased the presentation of p-values is absolutely necessary.

A correlation with therapy response was detectable 24h after TACE for AP, GGT, AFP and Nucleosomes. However, no correlation of CYFRA 21-1 levels after 24h or the percentage of change was detectable. Figure 2b should be excluded. (Results section 3rd paragraph)

The authors included patients who additionally received RFA after TACE in the survival analysis which might bias the outcome. It would be consequent to exclude these patients from the analysis since combined treatment modalities might have other impact on tumor control as TACE alone. (Results section 4th paragraph)

Minor issues not for publication
The authors should check spelling and grammatical errors.

1. Is the question posed by the authors well defined? yes
2. Are the methods appropriate and well described? yes
3. Are the data sound? yes
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? yes
5. Are the discussion and conclusions well balanced and adequately supported by the data? yes
6. Are limitations of the work clearly stated? Minor changes needed
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
8. Do the title and abstract accurately convey what has been found? yes
9. Is the writing acceptable? Minor changes needed

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

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

Quality of written English
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- Acceptable

Statistical review
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- No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests
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I declare that I have no competing interests' below.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being
published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.