Reviewer's report

Title: A novel biomarker TERTmRNA is applicable for an early detection of hepatoma

Version: 1 Date: 19 September 2009

Reviewer: Michael Grusch

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The manuscript "A novel biomarker TERTmRNA is applicable for an early detection of hepatoma" by Miura et al describes that in a study including 638 subjects (303 with HCC) analysis of telomerase mRNA in serum by real-time RT-PCR was a superior biomarker for compared to AFP, AFP-L3 and DCP in diagnosis and detection of recurrence of HCC.

There is indeed an urgent need - and ongoing search - for improved HCC biomarkers and the data reported here for hTERT mRNA, if confirmed, seem promising. Important clarifications/improvements, however, have to be made by the authors before this study can be published.

Compulsory revisions:

1) Regarding their method of TERT mRNA detection, the authors refer to an earlier publication, but say that they used more efficient primers than in the earlier report. Primer sequences should be given and it should be explained how RNA controls for quantification were performed and copy numbers per ml were derived. Are logarithmic values log2 or log10? How was exclusion of false negatives performed? No reference at all is made to the detection of the other markers.

2) Language editing is essential, as multiple statements are hard to interpret in their present form.

3) Although a different approach was used, the conflict with recent data of Kong et al (J Cancer Res Clin Oncol) should be discussed.

4) Given the assumed specificity of hTERT for immortalized cancer cells, how do the authors interpret the apparently increased level in LC and CH compare to healthy controls and what were the statistics of this effect?

Level of interest: An article of importance in its field

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:
I declare that I have no competing interests