Reviewer's report

Title: Autophagy and apoptosis-related genes in chronic liver disease and hepatocellular carcinoma

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Reviewer: Ying-Hong Shi

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The manuscript presented by Kotsafti et al. describes the expression level of autophagy and apoptosis related genes and proteins in liver tissues and HCC, furthermore, the high Beclin 1, Bcl-xl and Bad levels in CH and CIRR tissue and low expressions of those proteins in HCC indicted that an interaction between autophagy and apoptosis.

Major Compulsory Revisions:

1. The results of expression level of autophagy and apoptosis related genes were based on the relative small group of 85 patients including CH, CIRR and HCC. The sample size should be expanded or another independent cohort of similar patients were needed to validate the correlation.

2. The expression level of Beclin 1, Bcl-xl and Bad (mRNA and protein) in tissue is not a true indictor of activity of autophagy and apoptosis. Alternative studies (autophagy and apoptosis activity in cell lines or in vivo study) are mandatory to demonstrate that conclusions that Beclin 1, Bcl-xl and Bad are down-regulated in HCC, and higher expression in CH and CIRR.

3. In Figure 3, only two pairs of HCC and PHCC were not convincing to get the definite results of the protein levels in HCC.

4. In previous published studies, The Bcl-XL is overexpressed in a great percentage of HCCs (Takehara T, Hepatology 2001; Ding ZB, Cancer Res, 2008). The authors should interpret the reasons of this discrepancy or provide other data to demonstrate their different result.

Level of interest: An article of limited interest

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