Reviewer's report

Title: Different protein expression associated with chemotherapy response in oropharyngeal cancer according to HPV status

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Reviewer: Yasuhiro Koh

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In this manuscript the authors addressed the differential status of potential biomarkers such as p53, b-tubulin, bcl-2 and ERCC1 regarding the response to chemotherapy in HPV/non-HPV OPC. Although the cohort size is relatively small and the study was performed retrospectively, the findings seem to be informative and worth to be confirmed in a larger cohort. The manuscript seems potentially acceptable for publication in BMC Cancer but some questions are raised to be accepted. Below are the questions and comments regarding the article.

Minor essential revisions:

1. It is no surprising that HPV OPC and non-HPV OPC have different biochemical property including the response to the treatment and status of predictive markers. Among HPV OPC, did the authors observe any differences in the response to the treatment or biomarker expressions according to HPV genotype?

2. In page 10/line 4, the authors claim “Patients who did not show a CR tended to express a higher level of p53 than CR patients”. Is this observed in both HPV OPC and non-HPV OPC? If that is the case, p53 may not be a predictive biomarker and it may be only a prognostic biomarker. That is not clearly addressed in the manuscript.

3. As stated in the Discussion, evaluation of thymidylate synthase and/or glutathion s-transferase in this study cohort is desired to further clarify the difference between HPV OPC and non-HPV OPC.

4. In the “Conclusion” section of the abstract, “in” may be left out between “…were differently expressed” and “OPC accoding to…” (line 22).

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.