Reviewer's report

Title: Lactate transporters and vascular factors in HPV-induced squamous cell carcinoma of the uterine cervix

Version: 2
Date: 9 June 2014
Reviewer: Jerome Doyen

Reviewer's report:

Major Compulsory Revisions

1- detailed characteristics of population are missing (median age, number stage I, II, III, TNM classification, etc ...); it has to be added either in the text or within a dedicated table,

2- it is not clear whether authors have already reported the same results in a previous publication (reference 28) for MCT1,2 and 4; did the authors use exactly the same patients? in this case authors should put the results for MCTs in the introduction or discussion paragraph;

3- HPV status is missing in all patients samples (either cervicitis, dysplasia and cancer samples); it is indirectly done routinely with the p16 immunostaining and has to be reported as well in this study;


it would be very interesting to try to correlate p16 protein staining with tumor progression and metabolic phenotype; this could mimic the data seen in vitro,

4- could authors also see stromal MCT4 staining in patient samples? it was described as an important characteristic in several tumors, with maybe a prognostic impact due to stromal and not only tumoral staining;


5- why did authors not analyse VEGF proteins in non malignant tissues, and in keratinocytes?

6- results of staining in keratinocytes are difficult to interpret with the photos chosen by authors; in order to better quantify it, authors should perform western blot to rigorously demonstrate small quantitative changes.
Minor Essential Revisions:
7- what authors wanted to write line 19 page 7 instead of "e"

Discretionary Revisions:
8- why authors choose 48 years as cut-off for age ?
9- authors should mention how they did 3D culture,
10- photos for MCT4 staining in keratinocytes in vitro does not seem to show MCT4 staining; could author choose other photos?
11- authors should remove HIF-1 alpha throughout all the conclusion since no experiments did analyse this protein (they should only mention hypoxia instead);
12- authors did not discuss why MCT1 expression was not correlated with basigin expression although it is its main chaperon protein,
13- authors should add in discussion that larger sample are needed to rigorously confirm these results and in order to perform multivariate analysis and correlation with survival.
14- the following articles are missing in the introduction or discussion:
   - articles dealing with previous reports on glycolytic proteins in cervical cancer,
   - article demonstrating clinical benefit of anti-VEGF therapy in cervical cancer:
   Improved survival with bevacizumab in advanced cervical cancer.
**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