Reviewer's report

Title: Differences in microRNA expression between melanoma and healthy adjacent skin

Version: 0 Date: 26 Aug 2018

Reviewer: Georgios Gaitanis

Reviewer's report:

I have read the manuscript by Aksenenko et al in which the authors describe the differential expression of microRNA-146a in melanoma cells versus non-cancerous adjacent tissues evaluating a number of histologically different melanoma subtypes. Major and Minor points that have to be addressed follow:

Major Points

1. A clear cut definition of the control tissues (healthy adjacent skin) should be made. Ideally, proximity to the melanoma cells should be defined as well as the relevant anatomic position, i.e. in Lentigo maligna melanoma did it correspond to the lateral safety margins or the deeper healthy portions, or did it correspond to the remnants of the histological section after removing the melanoma cells. Please define it and use the same terminology throughout the text as changes confuse the reader: It is different "adjacent noncancerous tissues" (Page 5, Lines 25-26) than "surrounding healthy tissue" (Page 8, Lines 23-24). Also, some comparisons should be made between different histological subtypes os melanoma

2. microRNA-146a family has been previously linked to melanoma (Qi M, Huang X, Zhou L, Zhang J. Identification of differentially expressed microRNAs in metastatic melanoma using next-generation sequencing technology. Int J Mol Med. 2014 May;33(5):1117-21). The authors should comment on this article and include relevant ones also.

Minor points

1. Abstract. Define FFPE, Line 43 "have been showed" needs correction.

2. Page 5, Lines 23-29 that constitute the "Aim of the study" should be transferred above "Methods" subtitle

3. Page 6, Lines 1-3: Include also the numbers to the percentages.

4. Lines 6, "the 3-4um sections" add "thick"

5. Page 7, Lines 23-27, are redundant as they are mentioned in Page 5, Tissue samples

6. Page 9, Line 18. Define "KEGG"
7. Page 11, Lines 52-53. The microRNA is not "down-regulated in adjacent tissue" as the baseline expression is not evaluated. It is actually "lower compared to melanoma cells".

Discussion.

8. Page 12, Lines 52: Rephrase "metastasis target organs"


Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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