Reviewer’s report

Title: Isolation and characterization of two canine melanoma cell lines: New models for comparative oncology

Version: 1 Date: 20 Sep 2018

Reviewer: B. C. Ruetgen

Reviewer's report:

Comments to the manuscript "Isolation and characterization of two canine melanoma cell lines: New models for comparative oncology" for "BMC Cancer" BCAN-D-18-00269R1:

Comments to the Subject Editor

The topic of the submitted article still fits into the general scope of „BMC Cancer“.

Nevertheless the presented results are not yet described in sufficient detail in every section which makes it still sometimes difficult to follow (see comments below). These points should be addressed.

I recommend the manuscript "Isolation and characterization of two canine melanoma cell lines: New models for comparative oncology." to be published in "BMC Cancer" after MINOR REVISION.

Some comments on the manuscript:

Abstract

Results

Line 55: "sample" instead of "samples"

Introduction

Line 69: types

Material and Methods
Cells
Canine melanoma cell lines
Here are mentioned all 4 "cell lines" and also in Fig 2 all are called "Tumor cell lines", but in the abstract and other parts of the manuscript only Ocr_OCMM1x and Ocr_OCMM2x are named cell lines and are the presented end product.

Please decide if you want to mention all in the abstract, or if these are different "classes" of cell lines

Throughout the manuscript there is no consistent spelling of tumour and tumor - in the text tumour and in the Fig2 tumor. - please unify

Tumour samples

Page 8 line 163 - here the "Ocr_OCMM1X passage1" cell line should also be added to the engrafted tumour cell lines Ocr_OCMM1X and Ocr_OCMM2X, to be consistent.

Inoculation of melanoma cells

Line 183: 2 x 106 cells were injected in the mice from the xenograft. How many cells were injected from the primary tumour material? Also 2x106?

Line 188: here the "Ocr_OCMM1X passage1" cell line should also be added to the engrafted tumour cell lines Ocr_OCMM1X and Ocr_OCMM2X, to be consistent. They also were in a mouse and were cultured after.

Results

Establishment and characterization of canine melanoma cell lines

Libe 319: Here it is written that Ocr_OCMM2 Primary was cultured 5 month - so it's no cell line.

As referred before please define the 5 products from the 2 dogs precisely.

Line 321: please delete ocr

Figure 5A: is there any necropsy material of Nude mice from dog 2 xenografting where pictures could be added to the Figure? This would make it all more consistent.

Figure 5B:

Please describe the figure legend in more detail and
Is there confusion between the cell lines? It seems that Ocr_OCMM1 is growing faster??

Morphological and phenotypical characterization

Is there a possibility to add Figures of histopathology of the two primary material tumors from the canine patients, where the cell lines were made off? In general is there any photo material of the primary lesions?
This would make the whole manuscript more consistent - in the genetic section there is the structure which would be beneficial for the whole manuscript:
Tumour - Xenograft - Ocr_OCMM2Primary/ Ocr_OCMM1XPassage1 - Ocr OCMM2X/Ocr_OCMM1X.

This would be beautiful also for histopathology and would really help the reader not to lose track.

Conclusive remarks

I recommend the manuscript "Isolation and characterization of two canine melanoma cell lines: New models for comparative oncology" to be published in "BMC Cancer" after MINOR REVISION.

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

Yes

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.

Yes

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 am able to assess the statistics

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Please indicate the quality of language in the manuscript:

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