Reviewer's report

Title: Establishment and characterization of a new human pancreatic adenocarcinoma cell line with high metastatic potential to the lung.

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Reviewer: Eduard Ryschich

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Kalinina et al. described a new cell line of human pancreatic cancer, which was recently established in the author’s laboratory. Although the study did not show any pioneering insights of pancreatic cancer biology, it provided a detailed molecular and morphological analysis of a new cell line, which helps to expand a panel of well-characterized pancreatic cancer cell lines. The study was carefully performed and used appropriate methodology. The manuscript is well-readable and can be published, but some changes are required to achieve the level of BMC Cancer.

Major comment:
1. The authors compared morphological characteristics of primary tumor, established cell line in vivo and metastasis. They identified specific metastatic properties of new cell line (lung metastasis), which can be used for further therapeutical aims. However, the authors used subcutaneous site for tumor cells inoculation in vivo which does not represent an adequate model for therapeutical studies. The authors should regrade the relevance of subcutaneous tumor model and/or include data of orthotopic tumor growth.

Minor comments:
1. Figure 1 should show tumor cell morphology both in confluent and in non-confluent form. Indicate the scale as a bar in the image instead of magnification. The figure title is too general, make it more precise.
2. FACS analysis: Show an exact fraction of positively stained cells. If this fraction was lower than 80%, then the expression should be identified as “heterogeneous”.
3. The full name of mouse strain (Pfp-/-/rag2-/-) should be used in the text.
4. Change “,” to “.” for numbers (page 5 and tables).
5. Figure 5A, B: All images seem to have an identical size. Therefore, show the scale in one lower image, but increase its format to a visible size.
6. Figure 6: adjust titles to an identical font.
7. Specify clone names for all monoclonal antibodies (Methods).

Level of interest: An article whose findings are important to those with closely
related research interests

**Quality of written English:** Needs some language corrections before being published

**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'