Reviewer's report

Title: MicroRNA-27a promotes proliferation and suppresses apoptosis by targeting PLK2 in laryngeal carcinoma

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Reviewer: Sun Jung Kim

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Major Compulsory Revisions

MicroRNA-27a promotes proliferation and suppresses apoptosis by targeting PLK2 in laryngeal carcinoma

BMC Cancer

Dear Editor,

The biological issue investigated in the manuscript "MicroRNA-27a promotes proliferation and suppresses apoptosis by targeting PLK2 in laryngeal carcinoma" is of physiological and biological interests.

This manuscript reports the first investigation that miR-27a is upregulated in laryngeal cancer and targets PLK2.

The experimental data are consistent with the aim of the manuscript. The experimental design is reliable, has proper controls in general and is in accordance with the current standards.

Major points

As a normal cell line the authors used HCK293. The cell is inappropriate for representing larynx, therefore, cell lines originated from the tissue or related tissues are recommended, such as bronchial epithelial cell lines for multiple cell lines.

It is well described that miR-27a is upregulated in cancer. However, to complete the relation between miR-27a and PLK2, the expression of PLK2 in normal and cancer tissue should be given. Also, association study in statistics between the two genes’ expression should be given.

The authors described that PLK2 was downregulated by miR-27a in the protein level but not the RNA level. The way of regulation by miRNA is important concept and therefore the result for RNA should be given not in a form of “data not shown”. The result can be placed in the supplementary section.
Minor points
Fig. 1A and B are not essential. So it is better to be moved to supplementary section.

Fig. 1C: In addition to the bar graph, adding a box plot graph would be helpful to understand the result.

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

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:
I declare that I have no competing interests.