Reviewer’s report

Title: Expression and role of oncogenic miRNA-224 in esophageal squamous cell carcinoma

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Reviewer: Maha Guindi

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This study investigated the role of miR-224 in esophageal squamous cell carcinoma by comparing miRNA-224 expression using qRT-PCR in esophageal squamous intraepithelial neoplasia, squamous cell carcinoma tissue specimens, with matched distant normal tissues. Western blot was used to quantify the level of PH domain leucine-rich repeat protein phosphatase 1 and PHLPP2 to which miRNA-224 binds. miR-244 expression pattern was correlated with clinicopathological features from of squamous carcinoma and the effects of miRNA-224 expression or inhibition on regulation of squamous cell carcinoma cell viability and mobility were investigated.

The study question is well defined and the authors acknowledge previous published and unpublished work upon which they are building.

In general a well designed study with results supporting an oncogenic role for MiRNA-224. As the authors state it is limited t proof of principle. It does not address the contribution of MiRNA-224 when evaluated in the context of previously reported aberrant expression of other MiRNA in squamous carcinoma.

I have a few questions and observations regarding the study samples.

Major points

1. The authors indicate that the sampled if low and high grade intraepithelial neoplasia were matched with normal tissue 5 cms away for the study tissue. They should clarify whether some of these different grades of squamous dysplasia or cancer specimens were obtained from the same patients’ i.e did some patients. I some of the dysplasia samples were obtained form patients who had already developed squamous carcinoma this would constitute a weakness of the study and should be mentioned.

2. The justification for a distance of 5 cm between the study dysplasia or carcinoma tissue and normal tissue should be mentioned. Is this an arbitrary number?

Minor

1. Minor

Page 5 line 4 “studied” should be “studies”
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.