Reviewer’s report

Title: Genetic and epigenetic characteristics in ovarian tissues from polycystic ovary syndrome patients with irregular menstruation resemble those of ovarian cancer

Version: 0 Date: 18 Jan 2019

Reviewer: Patricia Canto

Reviewer's report:

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Jiao et al., performed a study which objective was to investigate differences in DNA methylation, mRNA expression and miRNA expression profiles between two groups of women; as well as, the authors searched mutations in a critical oncogenic genes.

This study is interesting; however, I have some comments:

Subject and Method section:

The authors must described more the women who participated in the study., i.e, family history of ovarian cancer or PCOS, what were the criteria of inclusion and exclusion? Etc.

The authors knows What was the histopathologic characteristics of the ovarian biopsias of their women?

In spite that the authors show the information of 46 normal ovary tissue samples downloaded from GEO database, the authors knows the general characteristic and the menstrual cycles of the normal and ovarian serous cystadenocarcinoma tissue women?

Discussion section:

The identification of women carriers of BRCA1 mutations is essential for the prevention of ovarian cancer and breast cancer, so it is important that the authors discuss these findings further. In addition, although it is not an objective of their study, but they found it in their results, the discussion should also include comparing the mutations they found with those described in ovarian cancer, in order to determine whether women with PCOS with irregular menstruation should be monitored more often.
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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Acceptable

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