Reviewer’s report

Title: A molecular computational model improves the preoperative diagnosis of thyroid nodules

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Reviewer: mykola onyshchenko

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The manuscript “A molecular computational model improves the preoperative diagnosis of thyroid nodules” by Sara Tomei et al. describes the study on markers for diagnosis/predicting thyroid cancer. Study is important as it can be directly applied in clinical practice. Implementation of proposed markers can increase both the specificity and the sensitivity of histological examination of thyroid samples taken from FNAB. The study is conducted in appropriate manner, methods used and statistical analysis are adequate.

There are few questions/comments I would like to address to authors:

1. In abstract and along the text there is some confusion in using the term “quantitative reverse transcription PCR’ which is qRT-PCR in abbreviation.

2. Although this study belongs to an applied research and provides a reliable method to improve diagnosis in clinical practice, still it would be reasonable to speculate more in Discussion why observed changes in gene expression take place.

3. In Figure 2 it is unnecessary to show correlation between each pair of markers twice. It confuses and makes the figure less representative.

Writing is acceptable, paper can be accepted with minor revisions.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

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