Reviewer's report

Title: A combined blood based gene expression and plasma protein abundance signature for diagnosis of epithelial ovarian cancer - A study of the OVCAD consortium

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Reviewer: Sergei Moshkovskii

Reviewer's report:

The paper uses a big cohort of ovarian cancer patients to classify them from control non-cancer subjects using variables derived from transcriptomics of leukocytes and from 6 plasma protein panel. Experimental procedures and statistics are done in appropriate, state-of-the-art manner.

Major Compulsory Revisions

1. One general problem of the paper which cannot be fixed in the submission is the ratio between FIGO I-II and III-IV stage patients recruited for tests. It is 33 vs. 430, less than 8% early stage. I understand that collection of early ovarian cancer is very difficult. However, reporting data of such pooled set means a substantial bias toward III-IV stage. Despite data are of novelty and importance, the ratio between FIGO I-II and III-IV should be clearly announced to readers elsewhere, inter alia, in the abstract.

2. The separate statistical analysis of FIGO I-II stage group is done, but it is described too briefly. It is interesting to know what specific RNA and protein entities significantly changed in early cancer.

3. Protein analysis is described purely. In order to know the list of proteins analyzed readers should go to the external references. If we have only 6 protein variables, the descriptive statistics on each of them should be shown, at least in the supporting data. If authors exclude some protein variables from the study, as I could hardly understand, they should note what exact protein(s) is(are) excluded.

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

Quality of written English: Not suitable for publication unless extensively edited

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

Declaration of competing interests:

I declare that I have no competing interests