**Comments to the Authors,**

**In the present study, Dr. Kim and colleagues provided a PCA-DA based prediction model to distinguish OVC serum samples from other type of cancer or normal samples, including benign tumor, healthy serum within Korean population. The authors collected large number samples from multiple hospitals which somehow provided high creditable to the result and LOME were demonstrated to be a useful strategy for OVC screening. The study was performed rigorously and the findings are quite interesting. However, I have several concerns to the data analysis.**

**1, I wonder to know whether the demographical and more clinical information to the samples were accessible. It would be helpful and useful if the most important confounder could be taken as the predictors such as gender, age.**

**2, I recommend the authors to provide the SEN, SPE and ACC with 5-fold cross-validation, therefore, the performance of the prediction would be more stable.**

**3, The reason to apply PCA-DA was not mentioned in the manuscript, why not random forest, SVM? Any better performance of PCA-DA for current dataset or some other reasons?**

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**1, The concept of 'LOw-Mass-ion discriminant Equation' was invented by the authors in 2014 (Int J Cancer). In my opinion, it is a pipeline or strategy for LOME, However, when I saw the 'Equation', I would think it looks like 'structural equation' et al. I suggest the authors could give some background introduction to LOME in this paper since we didn't see any explicit equation in the manuscript.**

**2, For the conclusion section, the authors claimed they developed a cancer-screening tool by profiling LMIs in the blood, therefore, I suggest the author submit and publish the script for the analysis in github or Bioconductor so that the further research could evaluate the pipeline. The authors also claimed the method could be applicable for OVC screening, however, this conclusion should be carefully, at least, this should be make detail explanation in the discussion section. I’d like to see the comparison between this method with other potential cancer screen methods.**