Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Deriving cut-off values through meta-analysis of individual studies

Dear Editor,

We have read with the great interest a letter to editor by Tandaju et al. [1] "Deriving cut-off values for continuous predictors of severe outcomes in COVID-19 through meta-analysis of individual studies: a comment on the article by Hariyanto et al." regarding one of our article titled "Inflammatory and hematologic markers as predictors of severe outcomes in COVID-19 infection: A systematic review and meta-analysis." [2] While it is not common to perform receiver operating characteristic (ROC) curves on meta-analysis study, however we think that it is still possible and also methodologically valid to perform ROC curves analysis based on study-level data [3,4]. Several previously published meta-analysis have already done the same before us. They generated pooled ROC curve analysis based on sensitivity, specificity, and ROC curve of study-level data [5-7]. Their studies were even cited by many other studies, meaning that another authors have acknowledged the results from their studies. We also agree that in meta-analysis, each studies will be given different weights according to the sample size and its variance in the fixed-effects or random-effects models, however if we look at the forest plot for each variables in our study, there is no study which have dominant weights and almost all included studies have similar weights from 5 to 7%. Finally, we also agree that ROC curve analysis from study-level data could produce some bias, therefore the cut-off values from our study should be used with caution and as stated in our 'Conclusion' section that further study is still needed regarding specific threshold levels for each of the laboratory markers. Thank you very much for your interest in our study.

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Declaration of Competing Interest

None.

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