

Responding to reviewer comments

Reviewer 1

Comment No.1: Dear author's I was pleased to review your interesting paper. I have only 2 comments' Please highlight the limitations of your study. There are some implications in patients with previous vaccination?

Answer:

1. Many thanks to the reviewers for their meaningful questions. I have highlighted the limitations of the study in the last paragraph of the discussion section of the main text in an attempt to highlight them emphatically.
2. Thank the reviewers for the issues raised here. Unfortunately, the study is unable to explain how the presence or absence of vaccination affects patients at this time, as the GEO dataset we selected does not have information on patient vaccination. This is also explained in the last paragraph of our discussion section, e.g. "The COVID-19 dataset (GSE180226) is based on comparing the integration of gene expression...", which is one of the limitations of the study. However, the reviewer's idea is very promising, and in the future, we expect to carry out a follow-up study using patients' vaccination or not as an exposure factor, thanks again for the reviewer's valuable suggestions.

Reply to the editor

Comment No. 1: The quality of the English language of the manuscript does not meet the requirements of the journal. Before final acceptance, the author(s) must provide the English Language Certificate issued by a professional English language editing company.

Answer: We attach great importance to the editor's comment, and we have submitted the final manuscript to a professional language service company for revision and polishing, and the language editing certificate has been uploaded to the attachment.

Comment No. 2: Before final acceptance, when revising the manuscript, the

author must supplement and improve the highlights of the latest cutting-edge research results, thereby further improving the content of the manuscript. To this end, authors are advised to apply a new tool, the Reference Citation Analysis (RCA). RCA is an artificial intelligence technology-based open multidisciplinary citation analysis database. In it, upon obtaining search results from the keywords entered by the author, "Impact Index Per Article" under "Ranked by" should be selected to find the latest highlight articles, which can then be used to further improve an article under preparation/peer-review/revision. Please visit our RCA database for more information at(<https://www.referencecitationanalysis.com/>)

Answer: We are very grateful to the editors for their valuable comments. From what we understand, RCA is indeed a very valuable citation tool. We found and cited a valuable literature related to PDHB through the RCA tool²¹. We also thanked them in the acknowledgments section.