

*Dear Editors and reviewers:*

*On behalf of my co-authors, we thank you so much for approving our manuscript. We appreciate editors and reviewers very much for all the positive and constructive comments and suggestions on our manuscript entitled "Overexpression of CD155 associated with PD-1 and PD-L1 expression on immune cells, rather than tumor cells in microenvironment of breast cancer" (NO.: 58345). These precious suggestions would no doubt help us to improve this and many further manuscripts.*

*We had studied all the suggestions from reviewers and editors and made revisions which marked in red in the paper. We tried our best to revise our manuscript according to the comments and answered all the questions raised by editors and reviewers which are listed below. In addition, we have also got the MedE, as suggested by Editors, to make serious English language editing for our manuscript. Attached please find the revised version. We hope we had reached the requirement by the reviewers and editors. Thank you again for all your kindness and hard work. Looking forward to hearing from you soon.*

*All the best wishes.*

*Yours sincerely*

*Rui-bin wang*

Responds to the reviewer's comments:

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: CD155 is one ligand of T cell immunoglobulin and ITIM domain expressed in various cell types, including antigen-presenting cells and tumor cells and the interaction limits cell function through feedback inhibition. Normal tissues have no or low expression of CD155 but malignancies have upregulated expression, which plays a key role in tumor cell invasion and migration. PD-1 is an immune checkpoint molecule and the interaction inhibits biological functions of effector T-cells. PD-1 expression on breast cancer TILs was related with different clinicopathological characteristics. However, whether the exhausted phenotypes of effector TILs and PD-L1 is related to the CD155 expression on breast cancer has not been reported. In this study, the authors investigated the distribution of CD155 expression and their relationship with PD-L1 and phenotypes of exhausted CD4+ and CD8+ effector TILs to illustrate the effect of CD155 expression on immune microenvironment of breast cancer patients. Overall, this study is well designed and the manuscript is well written. Some minor comments:

1. Manuscript requires a minor editing.

***Responses: Thanks for the comment. The article has been modified as required.***

2. The data in tables are very interesting, however, please check the tables again, and edit it. Some of the phrase are too redundancy.

***Responses: Thanks for the suggestion. The redundant phrase have been deleted from the tables.***

3. A background is missing for the abstract.

**Responses: Thanks for the nice remind. The background and AIM has been added in the abstract. Page 3, line6-14 and a core tip was added Page 4, line 17-22 and Page 5, line 1-3**

Responds to the Editorial Office's comments:

Editorial Office's comments

Authors must revise the manuscript according to the Editorial Office's comments and suggestions, which are listed below:

(1) *Science Editor*. 1 Scientific quality: The manuscript describes a retrospective study of the overexpression of CD155 associated with PD-1 and PD-L1 expression on immune cells, rather than tumor cells in microenvironment of breast cancer. The topic is within the scope of the WJCC. (1) Classification: Grade B and Grade C; (2) Summary of the Peer-Review Report: The authors investigated the distribution of CD155 expression and their relationship with PD-L1 and phenotypes of exhausted CD4+ and CD8+ effector TILs to illustrate the effect of CD155 expression on immune microenvironment of breast cancer patients. Overall, this study is well designed and the manuscript is well written. The questions raised by the reviewers should be answered; and (3) Format: There are 3 tables and 1 figure. A total of 31 references are cited, including 4 references published in the last 3 years. There are no self-citations. 2 Language evaluation: Classification: Two Grades B. No language editing certificate was provided. 3 Academic norms and rules: The authors provided the Biostatistics Review Certificate, the signed Conflict-of-Interest Disclosure Form and Copyright License Agreement, and the Institutional Review Board Approval Form, and written informed consent. No academic misconduct was found in the CrossCheck detection and Bing search. The preprint of this study was presented at: <https://www.researchsquare.com/article/rs-14683/v1> 4 Supplementary comments: This is an unsolicited manuscript. The study was supported by Beijing Municipal Committee of Science and Technology, Beijing Municipal Administration of Hospitals. The topic has not previously been published in the WJCC. 5 Issues raised:

(1) Please visit the following website for the professional English language editing companies we recommend: <https://www.wjgnet.com/bpg/gerinfo/240>;

**Responses: Thanks for the suggestion. Language writing has been edited accordingly.**

(2) The "Author Contributions" section is missing. Please provide the author contributions;

**Responses: Thanks for the notification. The "Author Contributions" have been added. Page2, line 4-9**

(3) The authors did not provide the approved grant application form(s). Please upload the approved grant application form(s) or funding agency copy of any approval document(s);

**Responses: Thanks for the comment. The grant approval document(s) have been provided.**

(4) The authors did not provide original pictures. Please provide the original figure documents. Please prepare and arrange the figures using PowerPoint to ensure that all

graphs or arrows or text portions can be reprocessed by the editor;

***Responses: Thanks for the comment. The original figure have been provided.***

(5) The “Article Highlights” section is missing. Please add the “Article Highlights” section at the end of the main text. 6 Re-Review: Required. 7 Recommendation: Conditional acceptance.

***Responses: Thanks for the notification. The “Article Highlights” have been added. Page 14, line7-22 and Page 15, line1-12***