Dear Editor and Reviewers,

Thank you very much for giving us an opportunity to revise our manuscript. We appreciate the editor and reviewers very much for their constructive comments and suggestions on our manuscript entitled "AWGS2019 vs EWGSOP2 criterion for diagnosing sarcopenia to predict long-term prognosis in Chinese patients with gastric cancer after radical gastrectomy" (Manuscript NO: 63949).

Those comments are very helpful for revising and improving our paper, as well as the important guiding significance to other research. We have studied the comments carefully and made corrections which we hope meet with approval. The main corrections are in the manuscript and the responds to the reviewers' comments are as follows.

Replies to the reviewers' comments:

Reviewer 1

Comments:

General comments

1. The authors describe a prospective observational study showing that sarcopenia diagnosed by the latest AWGS2019 and EWGSOP2 criteria is a predictor of OS in Chinese gastric cancer patients. However, the date of approval from the ethics committee for this study was December 18, 2014, and the AWGS2019 criteria did not exist at that time, so there should be a discrepancy between the study design that was condoned at that time and the content of this retrospective cohort study.

Response: Indeed, it is a discrepancy here about the study design. This study was a part of our observational study and all the data were collected prospectively. We have make it clear about the study design in the paper.

2. In addition, the authors suggest that the predictive model using AWGS2019-sarcopenia had better predictive power than the predictive model using EWGSOP2-sarcopenia, but the proportional hazards model cannot be interpreted as superior or inferior predictive power. Such research ethical and statistical misunderstandings play havoc with the paper's readers and require accurate description.

Response: Yes, we completely agree with your comments. So we have applied C index, AIC and time-ROC to compare these two models. We have revised the method and results parts.

Specific comments

1. Figure 1 does not accurately show the difference between the AWGS2019 and EWGSOP2 criteria. The details of the algorithm for the diagnosis described in the existing report should be accurately drawn up with the reference paper notated in the figure legends.

Response: Thank you. We have modified the Figure 1 to be more distinct.

2. As mentioned in the general commment, the exact content of this study that was condoned must be stated in the methods section. In the proportional hazards model, the reason why some of the parameters that were found to be significantly different in the univariate analysis were excluded in the multivariate analysis should be stated in the results section. Interpretation of predictors should also be discussed again. If the authors can't do that, then the conclusion needs to be changed.

Response: Thank you very much for such constructive comments. We have revised the method and result parts to explain the reason why some of the parameters that were found to be significantly different in the univariate analysis were excluded in the multivariate analysis. And we have revised description of model comparison to better support our conclusion.

Reviewer 2

Comments:

1. Abbreviations that appear for the first time in the Abstract (AWGS2019, EWGSOP2) and Method (L3) need to be clearly defined.

Response: Thank you. We have revised it in the revised paper.

2. Are there any recommended cut-off points for CT diagnosis of low skeletal muscle mass in AWGS2019 and EWGSOP2？Please list.

Response: Yes, we have added cut-off points in the method part.

3. What is the specific method of grip strength measurement?

Response: We have rewritten method parts in the revised paper

4. How long is the short-term weight loss in the data collection section.

Response: We have found inaccuracy in the data of weight loss. So we have removed relevant parts.

5. In results section, "Compared with AWGS2019-sarcopenic patients, EWGSOP2-sarcopenia patents had a higher ratio of male (p < 0.001)", but P =0.018 for the gender variable in Table 1. At The same time, "The two groups were comparable in terms of age, BMI, Albumin, Asa grade, Charlson Comorbidity Index scores, and other

characteristics", but there was no statistical difference in the relevant factors in Table 1. Please check the data carefully.

Response: Thank you for the comment. "Comparable" should mean "no statistical difference".

6. Comments for CCI in Table 1.

Response: Thank you. We have added it in the revised paper.

7. Explanation of A and B in Fig. 2.

Response: We have added it in the revised paper.

8. "The AWGS2019-Sarcopenia also led to a greater odds ratio in the multivariate model used here than The EWGSOP2-Sarcopenia (odds ratio 2.453 vs 1.550)" in the discussion section, which should be The HR value.

Response: YES! It's a mistake here. We have revised it.

8. Nutritional support has a great influence on sarcopenia. Should preoperative patients with nutritional support be excluded?

Response: We have considered this question at the beginning. But current evidences showed that short-term nutrition support would not influence the component of sarcopenia criterion (PMID: 31849458 (90 days nutrition support and exercise would not influence SMI and hand-grip); 31734121 (nutrition support would not improve SMI and hand-grip at 6 months and 12 months separately)). And our data were obtained within specific time limit before surgery (CT within 1 month; Hand-grip and 6-m test within 7 days). So we have no excluded these patients in the final analysis.

Reviewer 3

Comments:

1. Please provide core tip for this manuscript as journal style.

Response: Thank you. We have add core tip in the revised paper.

2. Keywords should be selected according to MeSH.

Response: Thank you. We have revised it in the revised paper.

3. Methods and results in abstract should be revised to make it more readable.

Response: We have rewritten the methods and results in abstract in the revised paper.

4. Conclusion section was missed in the of manuscript.

Response: We have add conclusion section in the revised paper.

5. The figure resolution was low, please upload high quality image.

Response: We have update the figure in the revised paper.

6. Please specify in the table which the p values belong to which statistical test.

Response: We have revised it in the revised paper.

7. Please describe detail of AWGS2019 and EWGSOP2 criterion for diagnosis of sarcopenia in the separate table.

Response: We have revised Figure 1 to make it more distinct of the two criteria.

8. It is more interesting, if ROC curve was conducted for show the prediction ability of AWGS2019 and EWGSOP2 multivariable models.

Response: We have add time-ROC in the revised paper.

Once again, thank you very much for your constructive comments and suggestions which would help us both in English and in depth to improve the quality of the paper.

Kind regards,

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