

### 3 SCIENTIFIC QUALITY

Please resolve all issues in the manuscript based on the peer review report and make a point-by-point response to each of the issues raised in the peer review report, and **highlighted the revised/added contents with yellow color in the revised manuscript**. Note, authors must resolve all issues in the manuscript that are raised in the peer-review report(s) and provide point-by-point responses to each of the issues raised in the peer-review report(s); these are listed below for your convenience:

Reviewer #1:

**Scientific Quality:** Grade C (Good)

**Language Quality:** Grade B (Minor language polishing)

**Conclusion:** Minor revision

**Specific Comments to Authors:** The study presents high quality and deals with important clinical issue, such type of study is needed. The aim of this retrospective study was to thoroughly scrutinize and contrast the anesthetic impacts of propofol and sevoflurane on patients who are undergoing radical resection of gastric cancer, specifically in relation to cognitive function and negative emotion. By collecting and analyzing comprehensive data, authors shed light on optimizing anesthesia selection and management strategies to preserve cognitive function and promote positive emotional outcomes in this specific patient population. This is a well-designed study and the manuscript is well written. This study is a retrospective study with some confounding factors, but it has an important guiding significance for clinical treatment. Relevant prospective research should be carried out. The writing of this paper is fluent and in line with the standard. I recommend to accept the manuscript after minor revision. I have only few small remarks that authors should address properly. - in discussion section please provide study strong points and study limitation section - please correct typos. The paper can be accepted only after addressing all the issues and another subsequent review. I recommend to accept the manuscript after minor revision.

Thank you for your valuable feedback and positive appraisal of our study. We appreciate your acknowledgement of the importance of this clinical issue and the quality of our study. We have carefully considered your comments and addressed them accordingly:

**Strong Points and Limitations:**

Our study possesses several strong points, including a comprehensive data analysis that rigorously compares the effects of propofol and sevoflurane anesthesia on cognitive function, anxiety, and depression in patients undergoing radical resection of gastric cancer. By considering comprehensive data from both groups, we provide a thorough assessment of the impact of these anesthetic agents. The findings of our study have important clinical relevance, as they contribute valuable insights into anesthesia selection and management strategies for optimizing patient outcomes and promoting postoperative recovery.

However, it is important to acknowledge the limitations of our study. Firstly, the retrospective design introduces inherent limitations such as selection bias and confounding factors. Although efforts were made to control for these factors, prospective research would strengthen the validity of our findings. Additionally, the sample size of 80 patients, while adequate for our analysis, may still be relatively small, potentially limiting the generalizability of our results. Furthermore, we did not specifically stratify the analysis based on age, which could influence the results given potential age-related differences in anesthesia effects and patient outcomes. Future studies should consider age stratification to provide a more comprehensive understanding. Despite these limitations, our study contributes valuable insights into optimizing anesthesia selection in patients undergoing radical resection of gastric cancer. By addressing these aspects, we aim to provide a balanced interpretation of the results and encourage further research in this field.

Correction of Typos: We apologize for any typos in the manuscript. During the revision process, we have thoroughly proofread the manuscript to correct any errors and ensure its accuracy and clarity.

We thank the reviewers for their valuable feedback and assure them that we have address all the issues raised during the revision process. We are committed to improving the manuscript and providing a comprehensive and well-written study.

Reviewer #2:

**Scientific Quality:** Grade C (Good)

**Language Quality:** Grade B (Minor language polishing)

**Conclusion:** Minor revision

**Specific Comments to Authors:** With pleasure, I reviewed the article entitled: "Comparative Impact of Propofol and Sevoflurane Anesthesia on Cognitive Function and Emotional State in Gastric Cancer Patients Undergoing Radical

Resection” by the authors Aohan Li et al. The authors present a retrospective analysis in which the effects of propofol and sevoflurane anesthesia on postoperative cognitive function, anxiety, depression, and organ function in patients undergoing radical resection of gastric cancer are compared. This is an interesting topic and analysis have certainly be explored further in the future. The manuscript is well-written and the authors need to be acknowledged for all the work. The limitations including a small sample size and only a single center for contouring. Furthermore, the long-term outcomes were not assessed; thus, it is unclear whether the obtained results are associated with lasting effects. Further studies need to include more participants.

We sincerely appreciate your time and effort in reviewing our manuscript titled "Comparative Impact of Propofol and Sevoflurane Anesthesia on Cognitive Function and Emotional State in Gastric Cancer Patients Undergoing Radical Resection." We are glad to hear that you found the topic interesting and acknowledge the quality of our work. We have taken note of your comments and have addressed them below:

Small sample size and single center: We acknowledge the limitations of our study, including the relatively small sample size and the inclusion of patients from a single center. These factors may introduce selection bias and limit the generalization of our findings. However, it is worth noting that we made efforts to control for confounding variables in our analysis. We appreciate your suggestion for future studies to include more participants and involve multiple centers to enhance the external validity of the results.

Long-term outcomes not assessed: We acknowledge that our study focused on assessing the immediate postoperative effects of propofol and sevoflurane anesthesia on cognitive function, anxiety, depression, and organ function. As such, the long-term implications of these effects remain unknown. Future studies should consider evaluating long-term outcomes to determine if the observed results have lasting effects.

We are grateful for your feedback and input. We have take these limitations into account in future research, aiming to enhance the robustness and generalizability of our findings.

Reviewer #3:

**Scientific Quality:** Grade D (Fair)

**Language Quality:** Grade C (A great deal of language polishing)

**Conclusion:** Major revision

**Specific Comments to Authors:** The study is aimed to compare the effects of propofol and sevoflurane anesthesia on postoperative cognitive function, anxiety, depression, and organ function in patients undergoing radical resection of gastric cancer. The title is “Comparative Impact of Propofol and Sevoflurane Anesthesia on Cognitive Function and Emotional State in Gastric Cancer Patients Undergoing Radical Resection”. 1. The sample size of the study is relatively small. 2. Several factors influence the outcome of the study. Please discuss these. 3. Please add more details of pharmacophysiology of propofol and sevoflurane on the cognitive function and the emotional state. 4. Please review the literature and add more details in the discussion section 5. Please also add the limitations of the study. 6. What is the new knowledge of the study? 7. Please recommend to the readers “How to apply this knowledge?”.

We sincerely appreciate your critical evaluation of our manuscript titled "Comparative Impact of Propofol and Sevoflurane Anesthesia on Cognitive Function and Emotional State in Gastric Cancer Patients Undergoing Radical Resection." We have carefully considered your comments and addressed them below:

Regarding the small sample size: We acknowledge that our study included a relatively small sample size, which may have implications for the generalizability of our findings. We have added a discussion on this limitation in the manuscript to highlight the need for future studies with larger sample sizes to validate and strengthen our results.

Factors influencing study outcomes: We appreciate your suggestion to discuss the factors that may influence the outcomes of our study. In the revised manuscript, we have added a section to discuss the potential confounding factors, such as patient characteristics, comorbidities, and surgical factors, which could impact the observed effects of propofol and sevoflurane anesthesia on postoperative cognitive function, anxiety, depression, and organ function.

More details on the pharmacophysiology of propofol and sevoflurane: We have included an expanded discussion on the pharmacophysiology of propofol and sevoflurane, specifically focusing on their potential effects on cognitive function and emotional state. This addition provides a deeper understanding of the mechanisms through which these agents may exert their influence.

Review of the literature: In response to your comment, we have conducted a more thorough review of the relevant literature and included additional details in the discussion section. This allows for a more comprehensive comparison and contextualization of our findings within the existing scientific knowledge.

Addition of study limitations: We have addressed your suggestion to include a section on the limitations of our study. In this section, we discuss the retrospective design, potential biases, and the need for prospective studies with longer follow-up for assessing lasting effects.

New knowledge of the study: We have emphasized the novel contributions of our study in the revised manuscript. Specifically, our study provides valuable insights into the comparative effects of propofol and sevoflurane anesthesia on cognitive function, emotional state, and organ function in patients undergoing radical resection of gastric cancer. These

findings contribute to the existing literature on anesthesia selection and management in this patient population.

Recommendations for applying the knowledge: We have added a section to the conclusions discussing the implications of our study findings and providing recommendations for clinical practice. This have guide the readers on how they can apply this knowledge to optimize anesthesia selection and improve postoperative outcomes in patients undergoing radical resection of gastric cancer.

We appreciate your feedback and suggestions, which have greatly enhanced the quality and comprehensiveness of our manuscript.

## 6 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:*

The manuscript has been peer-reviewed, and it is ready for the first decision.

Language Quality: Grade B (Minor language polishing)

Scientific Quality: Grade C (Good)

### *(2) Company editor-in-chief:*

I have reviewed the Peer-Review Report, full text of the manuscript, and the relevant ethics documents, all of which have met the basic publishing requirements of the World Journal of Gastrointestinal Oncology, and the manuscript is conditionally accepted. I have sent the manuscript to the author(s) for its revision according to the Peer-Review Report, Editorial Office's comments and the Criteria for Manuscript Revision by Authors. Before final acceptance, uniform presentation should be used for figures showing the same or similar contents; for example, "Figure 1 Pathological changes of atrophic gastritis after treatment. A: ...; B: ...; C: ...; D: ...; E: ...; F: ...; G: ...". **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. In order to respect and protect the author's intellectual property rights and prevent others from misappropriating figures without the author's authorization or abusing figures without indicating the source, we have indicate the author's copyright for figures originally generated by the author, and if the author has used a figure published elsewhere or that is copyrighted, the author needs to be authorized by the previous publisher or the copyright holder and/or indicate the reference source and copyrights. Please check and confirm whether the figures are original (i.e. generated de novo by the author(s) for this paper). If

the picture is 'original', the author needs to add the following copyright information to the bottom right-hand side of the picture in PowerPoint (PPT): Copyright ©The Author(s) 2023. Authors are required to provide standard three-line tables, that is, only the top line, bottom line, and column line are displayed, while other table lines are hidden. The contents of each cell in the table should conform to the editing specifications, and the lines of each row or column of the table should be aligned. Do not use carriage returns or spaces to replace lines or vertical lines and do not segment cell content.

1. Thank you for your suggestion. We apologize for any inconsistencies in the figures. We have ensure that the figures demonstrating similar contents follow a uniform presentation format, as recommended. We have revise the figures and provide the original figure documents in accordance with your guidelines.
2. To ensure clarity, we have prepared and arrange the figures using PowerPoint, allowing for easy reprocessing.
3. Thank you for emphasizing the formatting requirements for tables. We have format the tables according to the standard three-line format, showing only the top line, bottom line, and column line.