

Dear Editors and Reviewers:

We are very grateful for the careful and thorough review given to our manuscript entitled **“Incidence and risk factors for postoperative complications after robotic resection of colorectal cancer: an analysis of 1040 cases based on 5-year experience at a large-scale center”** (Manuscript NO. 68370). We have made corrections in the revised manuscript and provided clarifications and additional data to address the reviewers’ comments accordingly. The comments are valuable and are responded point by point. Thus, our manuscript is improved and we hope it is now be acceptable for publication in World Journal of Gastrointestinal Surgery. The main revisions are as flowing:

Responds to the editor’s request:

We revised the article step by step according to the editor's suggestions.

Thank you for your kindly suggestions

Responds to the reviewers

Thank you very much for your kind opinion, which is very helpful to improve the quality of our article. Then I will respond to each reviewer’s comment.

Reviewer #1:

1. **Comment:** The authors have studied a large cohort of patients and as they wanted to analyze the risk factors for postoperative complications there is

no clear statement of either the primary or secondary outcomes of the study.

Authors' response: We have added in the "*Observation and Evaluation Parameters*". The primary outcomes of the study were postoperative complications.

- 2. Comment:** In the intro there is an extended background of the incidence and prevalence of CRC, at some point the authors mention that according to the IARC approximately 1.931.600 new cases and 935.200 deaths will occur, but when? or over what period of time? that is not clear.

Authors' response: We have revised it. We added the time when the global tumor epidemiology statistics was released.

- 3. Comment:** Some of the advantages of the robot described by the authors include seven degrees of freedom, could you please clarify or correct if there is a typo here.

Authors' response: There are seven degrees of freedom in the Chinese literature, so it is included in the article. The origin of the seven degrees of freedom is because the robotic arm can have seven freely rotating axes, some people call it a "seven-degree-of-freedom" manipulator. Perhaps the ambiguity was caused by the short and sloppy translation. In short, what we wanted to express was that the robotic arm is very flexible and can operate smoothly in narrow anatomical areas. To avoid ambiguity, we deleted the expression- "seven-degree-of-freedom".

- 4. Comment:** Staging of the patients described the use of CT scan and x rays,

ultrasound and other investigations, there is no mention whatsoever of colonoscopy, CEA levels nor MRI and/or EUS for rectal cancer patients.

Authors' response: At that time, we didn't pay much attention to it, so these important examinations (*e. g.* laparoscopic, MRI) were omitted and classified as other examinations. We have revised it.

- 5. Comment:** There are well known factors for complications in patients with rectal cancer, such as neoadjuvant chemoradiation, diabetes, obesity, smoking, none of these were considered as part of the study, can the authors include them and incorporate as part of the analysis or then explain why not please.

Authors' response: Neoadjuvant chemoradiation was included in the exclusion criteria of this study and some similar studies done the same. Because the negative effects of radiotherapy and chemotherapy may interfere potentially with our judgment of postoperative complications. In the original text, diabetes, obesity and smoking had been included as factors in the analysis. In the result, the research shows comorbidity (*e. g.* diabetes, cardiopathy, hypertension and other basic diseases) was an independent risk factor for severe complications.

- 6. Comment:** For the surgical procedures please avoid eponyms such as Dixon or Miles, instead should use generic denominations *e. g.* low anterior resection, abdominoperineal excision. Need to define robotic assisted vs totally robotic, this is not clear.

Authors' response: We have revised it and defined robotic-assisted surgery and totally robotic surgery.

7. **Comment:** In the statistical analysis it is not clear why the authors chose to use significant p values as < 0.1 when typically it is accepted to be < 0.05 , please use conventional parameters or explain the reasons for this.

Authors' response: In the actual statistical analysis process of this research, we chose to use significant p values as < 0.05 . We have revised it.

8. **Comment:** LOS of 7-8 days is quite extended, however this could be cultural, and is not a major item.

Authors' response: As you said, this could be cultural. Maybe we choose a longer period of time to observe the postoperative status of patients for safety. Maybe the impact of weekend rest days extended the postoperative hospital stay.

9. **Comment:** The authors also reported overall complications of 12% vs 33%, this is high however I think it would be more appropriate to report complications that are CD III or above as they are more relevant.

Authors' response: This study reported a large variation in complications, so we thought it was important to explain why. Only for anastomotic leakage, previous clinical trials have reported that the rate ranged from 0 to 13%, with no significant difference between robotic, laparoscopic and open surgery techniques. The reason for such a huge variation was not only the different evaluation criteria for anastomotic leakage but also the surgeons'

techniques. As for complications that are CD III or above, we have added its discussion content.

10. Comment: Finally in the conclusion the authors stated robotic surgery is safe and feasible, please avoid this language this is not a phase I or II study with a design for those types of assessment, instead please use terms such as association with.

Authors' response: In discussion, we mentioned the safety and feasibility of robotic surgery by discussing other studies and making comparisons. In the conclusion, we have revised it.

Reviewer #2:

Comment: This paper is well-documented about "Incidence and risk factors for postoperative complications after robotic resection of colorectal cancer in 1040 cases". It seems to be an important paper with a large number of cases. It is well analyzed and discussed.

Authors' response: Thanks for giving us such a positive review. However, the scientific quality of this research needs to be further improved, and we will further improve.

Reviewer #3:

1. **Comment:** However, the true limit of this manuscript is to treat colon and rectal cancer in the same way, today we know that these 2 tumors represent 2 distinct entities.

Authors' response: Some studies combined colon and rectal cancer together for analysis. But if being discussed separately, the research of robotic surgery for colon and rectal cancer will be more detailed. Many objective and subjective limitations prevented us from distinguishing colon cancers from rectal cancers.

2. **Comment:** Why insert operations that involved multi-organ removal?

Authors' response: As the article said, there were cases with peripheral organ tumor invasion or **organ diseases** requiring surgery, which require multiple organ resection. The complication rate of these cases was different from other cases, so multiple organ resection was included as an independent variable. In few cases with peripheral organ tumor invasion, multiple organ resections are unavoidable.

3. **Comment:** Why not insert rectal tumors undergoing neoadjuvant therapy?

Authors' response: Neoadjuvant chemoradiation was included in the exclusion criteria of this study and some similar studies done the same. Because the negative effects of radiotherapy and chemotherapy may interfere potentially with our judgment of postoperative complications.