

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 78931

Title: Impact of abdominal composition on anastomotic leakage in rectal surgery: a BMI- and sex- matched study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 06237100

Position: Peer Reviewer

Academic degree: FEBS, MHSc

Professional title: Research Assistant Professor, Surgeon

Reviewer's Country/Territory: Portugal

Author's Country/Territory: China

Manuscript submission date: 2022-08-02

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-08-02 22:37

Reviewer performed review: 2022-08-15 01:25

Review time: 12 Days and 2 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input checked="" type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
https://www.wjgnet.com

Peer-reviewer statements	Peer-Review: [<input checked="" type="radio"/>] Anonymous [<input type="radio"/>] Onymous Conflicts-of-Interest: [<input type="radio"/>] Yes [<input checked="" type="radio"/>] No
-------------------------------------	---

SPECIFIC COMMENTS TO AUTHORS

This manuscript highlights a relevant issue related with the preoperative factors for anastomotic leakage (AL): abdominal composition. In this study the different parts of body composition are assessed independently and related to the AL development. A positive correlation was found between VFA, APD and TD and AL, including a multivariable analysis using artificial intelligence (AI) methods. This is one of the strengths of this study, supporting its importance. Nonetheless, not only a refinement of the methods section but also a rearrangement of the contents in the methods and results sections are strongly recommended as in the following examples: In the methods section of the abstract, some results are included in an improper manner. Additionally, this section should briefly mention statistical techniques, in particular those which are innovative (as AI methods). In the definition section of the manuscript, anatomic rectal cancer definition should be included. The results section of the manuscript contains some issues that should be presented in the “Methods” (most of what is in the first paragraph of “Feature importance analysis” section), and the results of the item “Feature importance analysis” should be developed a little further. Concerning the limitations of the study, they are clearly presented. However, the future directions of the topic should be described, mainly to overcome some of the study constraints, as its retrospective design and small sample size, among others. Some language issues should be revised.

PEER-REVIEW REPORT

Name of journal: *World Journal of Gastrointestinal Surgery*

Manuscript NO: 78931

Title: Impact of abdominal composition on anastomotic leakage in rectal surgery: a BMI- and sex- matched study

Provenance and peer review: Unsolicited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 02534290

Position: Editorial Board

Academic degree: MD, MSc, PhD

Professional title: Doctor, Professor, Surgeon, Surgical Oncologist

Reviewer's Country/Territory: Romania

Author's Country/Territory: China

Manuscript submission date: 2022-08-02

Reviewer chosen by: AI Technique

Reviewer accepted review: 2022-08-16 05:16

Reviewer performed review: 2022-08-16 18:17

Review time: 13 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input checked="" type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
https://www.wjgnet.com

Peer-reviewer statements	Peer-Review: [Y] Anonymous [] Onymous Conflicts-of-Interest: [Y] Yes [] No
-------------------------------------	---

SPECIFIC COMMENTS TO AUTHORS

The title reflect the main subject/hypothesis of the manuscript. The abstract summarize and reflect the work described in the manuscript, the key words are accurate. The backgorund is adequately describing the background, present status and significance of the study The methods are described in adequate detail. The research objectives are achieved by the experiments used in this study. The study contributes to the research in this fiels by adding data an their results. The manuscript interpret the findings adequately and appropriately, highlighting the key points concisely, clearly and logically. The findings and their applicabilit are stated in a clear and definite manner. The discussions are accurate and the paper's scientific significance and/or relevance to clinical practice is sufficiently exposed. The figures, diagrams and tables sufficient, good quality and appropriately illustrative of the paper contents The overall manuscript is well, concisely and coherently organized and presented. The grammar and style are OK. The manuscript is prepared according to the STROBE statement. NB. The informed consent and the ethics approval are issued in Chinese. the biostatistics and English proofing certificate are issued by specialists in the affiliated university not by an international accredited company. The original findings of the manuscript consist in the exploration of the components of the abdominal cavity as visceral fat, adiposity of the abdominal wall, skeletal muscle, anteroposterior diameter of the abdominal cavity and its transverse diameter in question as risk factor for the anastomotic leakage. This hypothesis is confirmed through a retrospective comparative matched cased study in which cases are mathce donly by BMI and sex and compared through many variables. The results found that some of the variables as the visceral fat area is directly correlated



**Baishideng
Publishing
Group**

7041 Koll Center Parkway, Suite
160, Pleasanton, CA 94566, USA
Telephone: +1-925-399-1568
E-mail: bpgoffice@wjgnet.com
<https://www.wjgnet.com>

with the risk of anastomotic dehiscence, and transverse diameter and the antero-posterior diameter are inversely associated with the risk of anastomotic leakage. These are important and worthy findings to be taken into account when operating a patient with rectal cancer. However, in the group of patients with AL, some known risk factors are present and those are independent risk factors that were identified in previous studies. The authors did not a statistical analysis of the variables coding the components of the abdomen to see if those are revealed as independent risk factor in a univariate analysis. Therefore, the study may contain a bias because of the superposition of multiple risk factors in the studied group. If the authors would remove from the analysis the patients that had lower levels of hemoglobine, lower albumin levels, then it would be more evident that the abdominal compounds would have more influence on the results. The intraoperative blood loss was already indicated as elated to the amount of visceral fat, so the 2 factors are interconnected. Nevertheless the article brings new insights and evidence in the direction of preoperative risk factors for anastomotic leakage. There are alomst 52 risk factors identified for anastomotic leakage in anterior rectal resections it is almost impossible to design studies in which to study only a few of them isolated. The future reseasrch would have to bring more cases into analysis ans employ artificial intelligence to analyse the preoperative factors.