PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (http://bmjopen.bmj.com/site/about/resources/checklist.pdf) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

| TITLE (PROVISIONAL) | Laparoscopic versus open left hemicolectomy for left-sided colon cancer: protocol for a systematic review and meta-analysis |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| AUTHORS             | Du, Qiang; Yang, Yang; Zhang, Jianhao; Liu, Xueting; Wang, Yong; Yang, Lie |

VERSION 1 – REVIEW

| REVIEWER            | Laffin, Michael  |
|---------------------|------------------|
|                     | University of Alberta, Surgery |
| REVIEW RETURNED     | 07-Mar-2022      |

**GENERAL COMMENTS**
The protocol describes a systematic review and meta-analysis focusing on open versus laparoscopic left hemicolectomy. Some issues are:

1) The primary outcome is actually three separate outcomes and not clearly defined

2) The planned use of a fixed-effect model for certain analysis will limit the generalizability of the results.

3) There is no plan or details on how the authors will try and obtain missing data (i.e. contacting authors)

| REVIEWER            | Rausei, Stefano  |
|---------------------|------------------|
|                     | ASST della Valle Olona |
| REVIEW RETURNED     | 07-Mar-2022      |

**GENERAL COMMENTS**
Du et al. present a protocol for a systematic review and meta-analysis. Sincerely, this is the first time for me (accounting for >500 contributions as reviewer) to read and evaluate for publication a protocol about this type of articles. The study could present interesting aspects, but I suggest to specify the prospective collection of studies considered for the analysis and the variables to analyse.

| REVIEWER            | Feo, Claudio F |
|---------------------|----------------|
|                     | University of Sassari Department of Medical Surgical and Experimental Sciences |
| REVIEW RETURNED     | 09-Apr-2022     |

**GENERAL COMMENTS**
The authors aim to investigate whether laparoscopic techniques can be safely used for left colon cancers. They present a detailed meta-analysis protocol comparing laparoscopic left hemicolectomy with the open approach. The methods are exhaustive and clear, statistical analysis is
appropriate, and reference list is updated. All relevant outcomes of interest are included (intraoperative, postoperative and oncological) and methodology seem appropriate. I recommend the article for publication.

VERSION 1 – AUTHOR RESPONSE

Response to Reviewer #1:
1. “The primary outcome is actually three separate outcomes and not clearly defined “
Response: We fully agree with your comment, and have added the corresponding information in the revised manuscript as follows:
In “MATERIALS AND METHODS” (line 18, page 5): “In this study, tumor recurrence was defined as any recurrence confirmed by imaging or pathology, including local recurrence and systemic recurrence. DFS was defined as the duration from the date of surgery to confirmed recurrence or death from any cause, and OS was defined as the duration from the date of surgery to the date of proven death from any cause.”
2. “The planned use of a fixed-effect model for certain analysis will limit the generalizability of the results.”
Response: Thanks for your suggestion and we understand that the results of the fixed effects model can only be generalized to the included studies. Therefore, we have made the following changes to the selection of the effect model in the Statistical Analysis section.
In “Statistical Analysis” (line 22, page 8): “We considered that high heterogeneity existed if the value of P<0.1 or I2 >50%. When the heterogeneity was 0, the fixed-effects model was used, and when the heterogeneity was between 0-50%, the fixed-effects model was used. We will conduct subgroup analyses, based on different study design types, and meta-regression so that we can explore the potential causes of heterogeneity and reduce it as accurately as possible when heterogeneity exceeded 50%. If the heterogeneity is too high, then qualitative analysis was performed.”
3. “There is no plan or details on how the authors will try and obtain missing data (i.e. contacting authors)”
Response: We agree with you and have made an update.
In “Data Extraction” (line 41, page 7): “We will be sending emails to the authors of these trials asking for stratified data on left hemicolectomy. Meanwhile, for the missing data of other studies, we will also send an email to ask for.”

Response to Reviewer #2:
1. “The study could present interesting aspects, but I suggest to specify the prospective collection of studies considered for the analysis and the variables to analyses.”
Response: We appreciate your suggestions and will update the included articles once our study has formally started, and we have also defined the primary outcomes.
In “MATERIALS AND METHODS” (line 18, page 5): “In this study, tumor recurrence was defined as any recurrence confirmed by imaging or pathology, including local recurrence and systemic recurrence. DFS was defined as the duration from the date of surgery to confirmed recurrence or death from any cause, and OS was defined as the duration from the date of surgery to the date of proven death from any cause.”

VERSION 2 – REVIEW

| REVIEWER | Laffin, Michael |
|----------|----------------|
|          | University of Alberta, Surgery |
| REVIEW RETURNED | 29-May-2022 |

| GENERAL COMMENTS | The authors have significantly improved their manuscript, but as indicated in my first review, have still not defined a clear and singular |
Response to Reviewer #1:
1. “The authors have significantly improved their manuscript, but as indicated in my first review, have still not defined a clear and singular primary outcome.”

Response: Thank you very much for your suggestion and we are aware of the problem. We have made the following modifications in the revised manuscript.

In “MATERIALS AND METHODS” (line 5, page 5): “In this study, 5-year disease-free survival which was defined as the duration from the date of surgery to confirmed recurrence or death from any cause was considered primary outcome, with tumor recurrence, 5-year over survival, perioperative outcomes and postoperative outcomes as secondary outcomes. In this study, tumor recurrence was defined as any recurrence confirmed by imaging or pathology, including local recurrence and systemic recurrence. OS was defined as the duration from the date of surgery to the date of proven death from any cause.”