Reviewer's report

Title: Survival after laparoscopic and open surgery for colon cancer: a comparative, single-institution study

Version: 2 Date: 11 December 2014

Reviewer: Marco Allaix

Reviewer's report:

The Authors have conducted a retrospective study comparing the outcomes in 227 patients undergoing laparoscopic resection and in 233 patients undergoing open resection for colon cancer. Patients converted from lap to open surgery were excluded from the oncologic analysis. They found survival advantages in stage II colon cancer after lap surgery.

I have several concerns.

Major Compulsory Revisions

1. The mean follow-up period in the lap group is almost 13 months shorter than in the open group.
   - Is this difference statistically significant?
   A shorter follow-up might be a reason for the differences observed in terms of survival. This should be stated as limitation of the study.
   - Please report the follow-up period as median and range.

2. Why did the authors exclude converted patients? Conversion to open surgery is considered by some authors a predictor for poor survival even though recent large studies have reported no adverse oncologic effects of conversion. This should be analyzed and discussed in detail throughout the manuscript.
   - The sentence at page 6, line 2-4 (The analysis ...open resection.), does not make any sense. Please rephrase it.
   - How many of the 227 patients laparoscopic patients were converted? This information is missing in the manuscript.
   - I suggest to revise both study groups, also reporting the number of patients who were included in the oncologic analysis.

3. A multivariate analysis is needed to better clarify the impact of the laparoscopic approach on long-term survival, since the 2 patients populations are heterogeneous in terms of tumor stage and # lymph nodes retrieved.

Minor Essential Revisions

1. the manuscript needs a revision by a native English speaker
2. The results should be reported as mean and SEM or as median and range, and not both.

3. Please report the P value even if the difference between variables is not statistically significant.

4. The first sentence in the abstract and the sentence at page 3, line 6-8 (However, ...open surgery (2,6-8), are not supported by the available evidence. All most recent metaanalyses of randomized controlled trials (RCTs) have shown similar outcomes after laparoscopic or open colon resection for cancer. There is general consensus that laparoscopic and open surgery are oncologically equivalent. Except for the Barcelona trial, no RCTs have been published showing better results after laparoscopy.

Also the sentence at page 3, line 14-16 (Other reports.....open surgery) should be rephrased (excluding ref #9 from the sentence) since most of the cited studies are case series (some with very short follow-up, and including rectal cancer patients) and not comparative studies.

5. The authors should quote more recent metaanalyses.

6. There are too many (15) Authors for a single-institution study.

Marco E. Allaix

**Level of interest:** An article of limited interest

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.