Reviewer’s report

Title: Laparoscopy-Assisted Colectomy as an Oncologically Safe Alternative for Patients with Stage T4 Colon Cancer: A Propensity-Matched Cohort Study

Version: 0 Date: 22 Dec 2017

Reviewer: Pieter Tanis

Reviewer’s report:

This is a retrospective cohort study during a 10 year period in a single institution, determining the value of laparoscopy for locally advanced colon cancer. This is not something new, and there have been several cohort studies published, and these have been pooled in published meta-analysis. However, this is still a substantial number of patients with propensity score matching, which might still be valuable to publish in the absence of randomized studies. The conclusion should be weakened, because it is not possible to definitively conclude that laparoscopic resection of a locally advanced cancer is oncologically safe based on the present data, given the single institution setting (restricted external validity), and the non-randomized design. So, it should be modified with words such as "appears to be safe for selected patients in centres with expertise in minimally invasive surgery".

The authors has used "pathologic" T4 colon cancer as an inclusion criterion. However, the decision to use a laparoscopic or open approach is made preoperatively. Therefore, inclusion should actually be based on clinical T4 stage. Please comment.

The authors mention that there is "confounding bias", but probably it is rather "allocation bias", because it several factors determine the decision for a specific surgical approach and it is likely that the more easy cases are selected for laparoscopy. Please comment.

The introduction can be shortened.

Why were "early" conversions (<30 min) ignored? Preemptive conversion is especially important to include in a study on locally advanced colon cancer. This should be included in an "intention to treat" analysis and these cases should not be included in the open group. Additionally, most other studies on conversion have included these preemptive conversions in the laparoscopic group.

There is an essential difference between pT4a and pT4b regarding the implications for a laparoscopic approach. Just serosal ingrowth (pT4a) is not more difficult than operating on a pT3 case. The problems for a laparoscopic approach are the large bulky tumours with ingrowth in other organs. Table 1 demonstrates that more than 60% of the cohort consisted of pT4a. The authors should analyse the outcome parameters separately for the pT4a and pT4b group. Furthermore, the baseline table should include the number of multivisceral resections and mean tumour size, which are both important baseline variables determining the surgical approach.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.
Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.
Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.
No

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