

Peer Review File

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Reviewer A

1. Table 1 is unnecessary; the process is already stated in the text. Moreover, it does not report the search strategy but part of the methods section. The string is poor and I do not believe it could catch all the relevant literature on the subject

Response:

Thanks for your comments. Table 1 was added according to the submission requirements when submitting the manuscript to the journal, and we have re-added the detailed search strategy in Table 1.

2. The "tumor localization" chapter deals with tumor localization in laparoscopic or robotic surgery and not with identification of the line of transection.

Response:

Thanks for your comments. We believe that the main purpose of determining the tumor location intraoperatively is to determine the resection line, and our description of determining the resection line is not contradictory to "Tumor localization".

3. Additionally I cannot understand the difference with preoperative injection of a dye in terms of saving operative time

Response:

Thanks for your comments. The preoperative injection of other dyes such as India ink does allow for rapid localization of the tumor, but there is a risk of leakage affecting the surgical field, and although the description in our manuscript was intended to be concise, it can easily lead to misunderstandings. We have revised it accordingly (see Page 4, lines 111-112).

4. In the chapter "LNs navigation" the conclusions are clearly stated however it is too long and repetitive, it could benefit by abbreviation.

Response:

Thanks for your comments. We have streamlined the conclusions in the "LNs navigation" section by removing unnecessary sections (see Page 10, lines 320-327).

5. In "ICG administration" is it not appropriate to state: "and so on", better list all the possible variant (in addition to those already stated: dilution, time interval between injection and acquisition...)

Response:

Thanks for your comments. We removed the inappropriate wording "and so on". However, except for the variant summarized in the manuscript (dilution, time interval between injection and acquisition...), other variables are difficult to summarize from the published literature, and we have tried to achieve a complete summary.

Reviewer B

1. The review is generally a fine read, and a comprehensive review of the literature has been performed. However, the English could be improved, mostly simplified, and proofreading would probably make it more “readable.”

Response:

Thanks for your comments. We have embellished the manuscript and streamlined the language.

2. Papers including cancers of the gastroesophageal junction SHOULD be included. Multiple papers on the use of ICG in these cancers would be relevant to include.

Response:

Thanks for your comments. We reincorporated the status of ICG application in gastroesophageal junction cancer (see Page 10, lines 310-319).

3. Line 47 That robotics place new demands on “surgeons' operating level” makes no sense; explain in depth (including references) or delete.

Response:

Thanks for your comments. We agree with you that such a statement is indeed inappropriate, and we have removed it.

4. Lines 212-252 Here, the paper becomes very “one-sided” as no gastric or gastroesophageal cancer papers are included; several on AL in these settings should be included. Please see: [10.1093/dote/doab056](https://doi.org/10.1093/dote/doab056)

Response:

Thanks for your comments. Our description of the "Evaluation of anastomotic perfusion" section only covers colorectal cancer, which is indeed relatively one-sided, and we have reviewed the literature to organize and add a section on gastric and esophageal cancer. (see Pages 12-13, lines 392-414).

5. Lines 318-339 Intraoperative submucosal ICG injection: [10.1007/s00464-022-09684-y](https://doi.org/10.1007/s00464-022-09684-y)

Response:

Thanks for your comments. Our manuscript consolidates the published studies so far and finds that the mode of ICG injection in most studies was endoscopic submucosal injection 1-3 days before surgery. Based on our review of the literature, the subserosal injection may be more likely to result in ICG leakage and blurred surgical views. There are also studies that claim that intraoperative subserosal injection is less accurate than submucosal injection (10.1097/SLA.0b013e3181927267), but this needs to be confirmed by further studies. And some studies have shown that significant fluorescence can still be observed up to 7 days after ICG injection (10.1007/s00464-008-9938-4, 0.1159/000458450). Combined with a summary of the literature (Table 2) our description in the manuscript prefers to recommend the preoperative endoscopic injection method.

6. Lines 341-374 Several quantification algorithms for ICG-FI exist. Please see, and comment: 10.1007/s00423-023-02780-0, 10.1007/s00423-020-01966-0

Response:

Thanks for your comments. The quantitative assessment of ICG fluorescence has not been studied much in the field of gastric and colorectal carcinoma, and no practical and reliable observation parameters and cut-off values have been established. We briefly summarize this area in the manuscript for future researchers' reference and active research.

Reviewer C

1. Various applications have been made using NIR in fluorescent navigation surgery. For example, the use of fluorescent material for clips for intraoperative evaluation and changing the material of ureteral catheters to fluorescent material has been reported. This is useful from a different perspective from the current local injection and intravenous injection, and synergistic effects may be obtained by using them together. We believe an additional note on this would appeal more to the reader. [1-3]

[1] Ryu S, Okamoto A, Nakashima K, Hara K, Ishida K, Ito R, Nakabayashi Y, Eto K, Ikegami T: Usefulness of Preoperative Endoscopic Fluorescent Clip Marking in Laparoscopic Gastrointestinal Surgery. *Anticancer Res* 2020, 40(11):6517-6523.

[2] Ryu S, Ishida K, Okamoto A, Nakashima K, Hara K, Ito R, Nakabayashi Y: Laparoscopic fluorescence navigation for left-sided colon and rectal cancer: Blood flow evaluation, vessel and ureteral navigation, clip marking and trans-anal tube insertion. *Surgical oncology* 2020, 35:434-440.

[3] Ushimaru Y, Ohigawa A, Yamashita K, Saito T, Tanaka K, Makino T, Takahashi T, Kurokawa Y, Yamasaki M, Mori M et al: Real-time ureteral identification with novel, versatile, and inexpensive catheter. *Surg Endosc* 2020, 34(8):3669-3678.

Response:

Thanks for your comments. We think your suggestion is nice, and we have added this section to the manuscript (see Pages 4-5, lines 132-137, and Page 12, lines 387-391).

2. The advantages of ICG are mentioned, but the disadvantages are not.

Response:

Thanks for your comments. We did describe in the manuscript the disadvantages of ICG, such as the problem of false positives of ICG in detecting sentinel lymph nodes (lines 187-191), the problem of ICG not specifically identifying tumors and metastatic lymph nodes (lines 244-246), and the failure of ICG to significantly help individuals in severe remission after neoadjuvant chemotherapy (lines 291-309)...

3. Intraoperative intravenous ICG has been reported to evaluate fine vascular geometry.

Response:

Thanks for your comments. We have reviewed the literature and understand that the use of ICG to assess vascular geometry is mainly used in the field of neurosurgery and vascular surgery, such as aneurysms, arteriovenous fistulas, and Vascular bypass surgery.

Reviewer D

1. According to the Narrative Review checklist, you should indicate “narrative review/literature review” in manuscript title, please check and revise.

Title	1	Identify the report as a Narrative Review or Literature Review.	Page 1/Line 1-4	Title /Paragraph 1
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Response:

Thanks for your comments. We have indicated “narrative review” in the manuscript title as required.

2. You’ve mentioned Chen and Friso’s study, please kindly indicate the references to those sentences respectively.

study by **Chen et al.**, the metastasis rates of LNs beyond the D2 scope (No.10 and 14v) in this study were 17.8% and 27.6%, respectively, with a diagnostic sensitivity of 87.5% in the No.14v fluorescent station. Further studies are needed to guide surgeons on whether to dissect LNs beyond the D2 scope but showing ICG fluorescence.↵

reported in this study, especially in patients with cirrhosis. Recently, **Friso et al.** used ICG-FI to identify the resection edge of CRLM, and all 16 lesions were successfully

Response:

Thanks for your comments. We have supplemented the missing references.

3. You’ve mentioned “stud**ies**”, while only one reference was cited in this sentence. Please check. (You could either choose to revise it to "study" or to give **more than one**

reference in this sentence. In the latter case, please keep the citations consecutively in text.)

patients (174.76±51.6 vs. 192.63±59.9) (40). Some studies have shown that prolonged surgery time increases the risk of postoperative complications (41). Compared to other

Response:

Thanks for your comments. we changed “studies” to "study", for only one reference was cited in some sentence.

4. Check if any references are missing in this sentence since you've mentioned “some studies”.

to mention its feasibility in reducing the extent of gastric LND. In addition, some studies have found a high rate of positive fluorescent LNs beyond the D2 scope, and

Response:

Thanks for your comments. We checked all sentences containing "some studies" and added references to the sentences that were missing any references.