

# Comment on “Extended Versus Standard Complete Mesocolon Excision in Sigmoid Cancer. A Multicenter Randomized Controlled Trial”

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Despite being sometime after its publication, our bibliography group read with interest the article by Planellas et al<sup>1</sup> that compared extended complete mesocolic excision (e-CME) to standard complete mesocolic excision for sigmoidectomy. Planellas et al analyzed the total number of lymph nodes harvested, morbidity, survival, and functional results from 93 patients with sigmoid cancer included in a randomized trial conducted in 4 Spanish centers. The authors concluded that extending lymphadenectomy to include the inferior mesenteric vein territory did not increase the number of lymph nodes or improve recurrence or survival rates.

We broadly agree with the authors' conclusions that are in line with the conclusions of an article on the same subject comparing high versus low ligation of the inferior mesenteric artery by our group.<sup>2</sup> We observed a median gain of one lymph node harvested from the additional tissue. We also experienced similar study limitations such as a small sample size, absence of standardized pathology analyses among centers, and absence of information about hypogastric plexus damage during lymphadenectomy. However, we feel there were additional limitations to the study by Planellas et al that could raise questions about their conclusions.

The first limitation concerns anatomy. For most colorectal surgeons, dealing with sigmoid carcinoma always includes the high ligation of the inferior vein close to the inferior border of the pancreas, to allow tension-free colorectal anastomosis. In other words, sectioning of the inferior mesenteric vein at the level of the inferior mesenteric artery coupled with sigmoid resection does not leave any colonic length for a tension-free high colorectal anastomosis. Another anatomic consideration is that the extension of lymphadenectomy toward the mesenteric vein must not impair sexual or urinary function, as the nerves involved in these functions are the preaortic sympathetic nerves and the parasympathetic pelvic nerves that are always preserved in left colonic surgery. Another point is the statement that “lymphatic system develops in close association

with the venous system and lymph drainage usually runs parallel to venous drainage.” In our opinion, the lymphatic system develops rather in close association with the arterial system; in clinical experience as according to the literature, the lymphatic invasion in advanced sigmoid cancer occurs more in the preaortic-caval lymphatic nodes than in the spleno-mesenteric-portal nodes.<sup>3</sup>

The second limitation concerns histology. The authors argued that e-CME could provide a mean total number of extracted nodes of  $36.5 \pm 15.9$  and based their study on a single publication.<sup>4</sup> However, to date this high number of harvested nodes has never been reproduced in the literature for left colectomy. The authors reported a median of 20 harvested nodes in the e-CME group with a maximum of 27 lymph nodes, which is far from the 36 cited as a reference. Therefore, the estimated number of 84 patients (42 per arm) required given in the methodology for the study is widely underestimated and this might influence the interpretation of the results of the study.

The third question is about the number of patients having had neoadjuvant treatment. How do the authors explain that for sigmoid cancer, 97.8% of patients received neoadjuvant treatment? Apart from a few specific perspective trials, this treatment is not considered as a standard of management for colon cancer; unless, the patients had rectal cancer instead, which is considered as another pathology. The fact that so many patients received preoperative chemoradiotherapy raises questions as to the true location of the cancer and renders the results confusing.

A fourth remark concerns the surgical technique. When the surgeon removed the mobile segment of the sigmoid, splenic flexure should have been systematically mobilized, otherwise tension-free anastomosis is impossible between the descending colon and the rectum. Other details imply that the sigmoid was not totally removed, and thus there would be fewer nodes harvested.

The fifth question is why was the Low Anterior Resection Syndrome questionnaire used for patients having had sigmoid resection? This would be appropriate only if the patients included in the study had middle or low rectal resection instead of sigmoid resection (see question 3 about neoadjuvant therapy). This questionnaire should not have been used in this study. A similar point concerns the use of a questionnaire on genitourinary function, as there should be no difference between the 2 groups because the e-CME refers to inferior mesenteric vein curage that is some distance from the aortic sympathetic plexus and the hypogastric superior plexus, and at least 10 cm from the nervi erigentes. Another intriguing feature is that the e-CME patients were mainly males (63%) and standard complete mesocolic excision patients were 48.9% males, as if some of the patients undergoing e-CME had rectal cancer instead of sigmoid cancer.

In conclusion, taking these limitations together, we wondered whether the study by Planellas et al had included only sigmoid cancer patients or if it included some patients with rectal cancer. We believe that there are several biases in this study that could affect the conclusion. We would appreciate the comments from the authors on these points.

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**REFERENCES**

1. Planellas P, Marinello F, Elorza G, et al. Extended versus standard complete mesocolon excision in sigmoid cancer. a multicenter randomized controlled trial. *Ann Surg*. 2022;275:271–280.
2. Girard E, Trilling B, Rabattu PY, et al. Level of inferior mesenteric artery ligation in low rectal cancer surgery: high tie preferred over low tie. *Tech Coloproctol*. 2019;23:267–271.
3. Van Schaik CJ, Boer LL, Draaisma JMT, et al. The lymphatic system throughout history: from hieroglyphic translations to state of the art radiological techniques. *Clin Anat*. 2022;35:701–710.
4. Bertelsen CA, Neuenschwander AU, Jansen JE, et al; Danish Colorectal Cancer Group. Disease-free survival after complete mesocolic excision compared with conventional colon cancer surgery: a retrospective, population-based study. *Lancet Oncol*. 2015;16:161–168.