



# Reply to Early colon cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up

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Laparoscopic surgery for the treatment of right colon cancer has rapidly evolved over the past few years. This procedure is considered as feasible and effective in terms of short-term and long-term outcomes. Laparoscopic right colectomy (LRC) is performed by a small number of surgeons and, in most of cases, it was performed with an extracorporeal anastomosis.<sup>1</sup>

The recent ESMO guidelines with a Level of Evidence (LE) IV reported that for right-sided colonic cancers, the benefits of laparoscopic approach are less obvious since anastomosis must be hand sewn, which requires a laparotomy.<sup>2</sup>

The current state of the art for the treatment of the right colon cancers as reported by Fabozzi *et al.*<sup>3</sup> in their papers, by right laparoscopic colectomy with intracorporeal anastomosis despite the technical challenging.

However, in the past few years, many studies comparing the intracorporeal anastomosis (IA) versus the extracorporeal anastomosis (EA) in LRC were conducted<sup>1 4–8</sup> with a higher level of evidence. These papers assessed short-term and long-term outcomes of LRC.

Milone *et al.*<sup>1</sup> in their multicentric, comparative and prospective study (LE III) evaluated the safety of IA versus EA in 512 patients submitted to an LRC. They concluded that the IA represents the better way to perform the anastomosis after LRC.

van Oostendorp *et al.*<sup>4</sup> in their meta-analysis of about 24 non-randomised studies comparing IA versus EA reported morbidity, mortality and length of stay; moreover, they also investigated the rates of anastomotic leak rate, ileus, incisional surgical site infection (SSI) and incisional hernia, concluding that IA in LRC is associated with reduced short-term morbidity and decreased length of hospital stay suggesting faster recovery.

Hanna *et al.*<sup>5</sup> in their retrospective multi-centre study of about 195 patients evaluated

both long and short terms outcomes, with a follow-up of 5.7 years, concluding that IA in LRC is associated with similar postoperative and oncologic outcomes compared to EA. Furthermore, IA may overcome the EA about many advantages in terms of flexibility of specimen extraction, even if it burdened by a higher rate of minor complications (Grade II of Dindo classification).

In another prospective study (LE III) published by Shapiro *et al.*,<sup>6</sup> a total of 191 consecutive patients who underwent LRC for neoplasm with IA and EA were evaluated. The mean follow up for the two group of patients was 33.7 months for EA group and 28.8 months for IA one. They evaluated both short and long terms outcomes. They concluded that LRC with IA were associated with improved short- and long-term outcomes. The rates of postoperative complications requiring intervention and incisional hernias were decreased.

Abrisqueta *et al.*<sup>7</sup> in their retrospective study of 173 patients concluded that the IA represent a safe and feasible alternative for creating an ileo-colic anastomosis. It involves a similar rate of complications and may prevent some of the drawbacks presented by EA.

The most relevant data highlighted by previous studies<sup>1 4–7</sup> is the reduction of the operating time and reduction of incisional hernias in the groups treated with IA anastomosis ensuring in any case adequate oncological outcomes.

These data are consistent with the conclusions of a recent meta-analysis.<sup>8</sup> Out of a total of 1717 patients, the authors confirmed that LCR with IA is a safe alternative to EA.

However, each of the previous studies does not provide for the highest level of evidence but in any case provides that LCR can be effectively performed through an IA.

More generally, there is a broad consensus in the surgical current practice<sup>9</sup> that a

laparoscopic approach for the treatment of a right colon cancer overcomes a laparotomic approach in terms of morbidity and mortality, although well-structured randomised trials are desirable about this issue.

Also three different meta-analyses from 2013 to the present<sup>4 10 11</sup> report as the laparoscopic approach in right colectomies for cancer is comparable to the open approach and also the intracorporeal anastomosis has advantages in terms of short and long terms outcomes, with a reduction of incision hernia.

## CONCLUSION

In conclusion at best of our knowledge laparoscopic right colectomy with intracorporeal anastomosis is technically feasible and reproducible, ensuring all advantages of laparoscopy over the open approach. Moreover, every study reports no differences in oncological outcomes between the open and laparoscopic approach. Intracorporeal anastomosis also ensure a reduction of incisional hernia in long term outcomes.

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## REFERENCES

1. Milone M, Elmore U, Di Salvo E, *et al.* Intracorporeal versus extracorporeal anastomosis. Results from a multicentre comparative study on 512 right-sided colorectal cancers. *Surg Endosc* 2015;29:2314–20.
2. Labianca R, Nordlinger B, Beretta GD, *et al.*, ESMO Guidelines Working Group. Early colon cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol* 2013;24(Suppl 6):vi64–72.
3. Fabozzi M, Cirillo P, Corcione F. Surgical approach to right colon cancer: From open technique to robot. State of art. *World J Gastrointest Surg* 2016;8:564–73.
4. van Oostendorp S, Elfrink A, Borstlap W, *et al.* Intracorporeal versus extracorporeal anastomosis in right hemicolectomy: a systematic review and meta-analysis. *Surg Endosc* Epub ahead of print: 10 Jun 2016. DOI: 10.1007/s00464-016-4982-y
5. Hanna MH, Hwang GS, Phelan MJ, *et al.* Laparoscopic right hemicolectomy: short- and long-term outcomes of intracorporeal versus extracorporeal anastomosis. *Surg Endosc* 2016;30:3933–42.
6. Shapiro R, Keler U, Segev L, *et al.* Laparoscopic right hemicolectomy with intracorporeal anastomosis: short- and long-term benefits in comparison with extracorporeal anastomosis. *Surg Endosc* 2016;30:3823–9.
7. Abrisqueta J, Ibañez N, Luján J, *et al.* Intracorporeal ileocolic anastomosis in patients with laparoscopic right. *Surg Endosc*; 30:65–72.
8. Ricci C, Casadei R, Alagna V, *et al.* A critical and comprehensive systematic review and meta-analysis of studies comparing intracorporeal and extracorporeal anastomosis in laparoscopic right hemicolectomy. *Langenbecks Arch Surg*. Epub ahead of print: 5 Sep 2016. DOI:10.1007/s00423-016-1509-x
9. Arezzo A, Passera R, Ferri V, *et al.* Laparoscopic right colectomy reduces short-term mortality and morbidity. Results of a systematic review and meta-analysis. *Int J Colorectal Dis* 2015;30:1457–72.
10. Vignali A, Bissolati M, De Nardi P, *et al.* Extracorporeal vs. Intracorporeal Ileocolic Stapled Anastomoses in Laparoscopic Right Colectomy: An Interim Analysis of a Randomized Clinical Trial. *Laparoendosc Adv Surg Tech A* 2016;26:343–8.
11. Feroci F, Lenzi E, Garzi A, *et al.* Intracorporeal versus extracorporeal anastomosis after laparoscopic right hemicolectomy for cancer: a systematic review and meta-analysis. *Int J Colorectal Dis* 2013;28:1177–1186.