Surgical treatment of Rectal Cancer

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Principles of surgery in colorectal cancer

- Resect primary with adequate margins alongwith regional lymphnodes
- Intramural spread of adenoca is upto 2 cm
- Gen rule : 5 cm margin for resection
- Submucosal lymphatics proceed through muscle coat to subserosal plexus

- Lymphatics follow vascular pedicles
- Ist echelon: epicolic, paracolic
- 2nd echelon: intermediate
- 3rd echelon: principal
- 3rd echelon involvement = M1
- Skip LN mets: poor prognosis

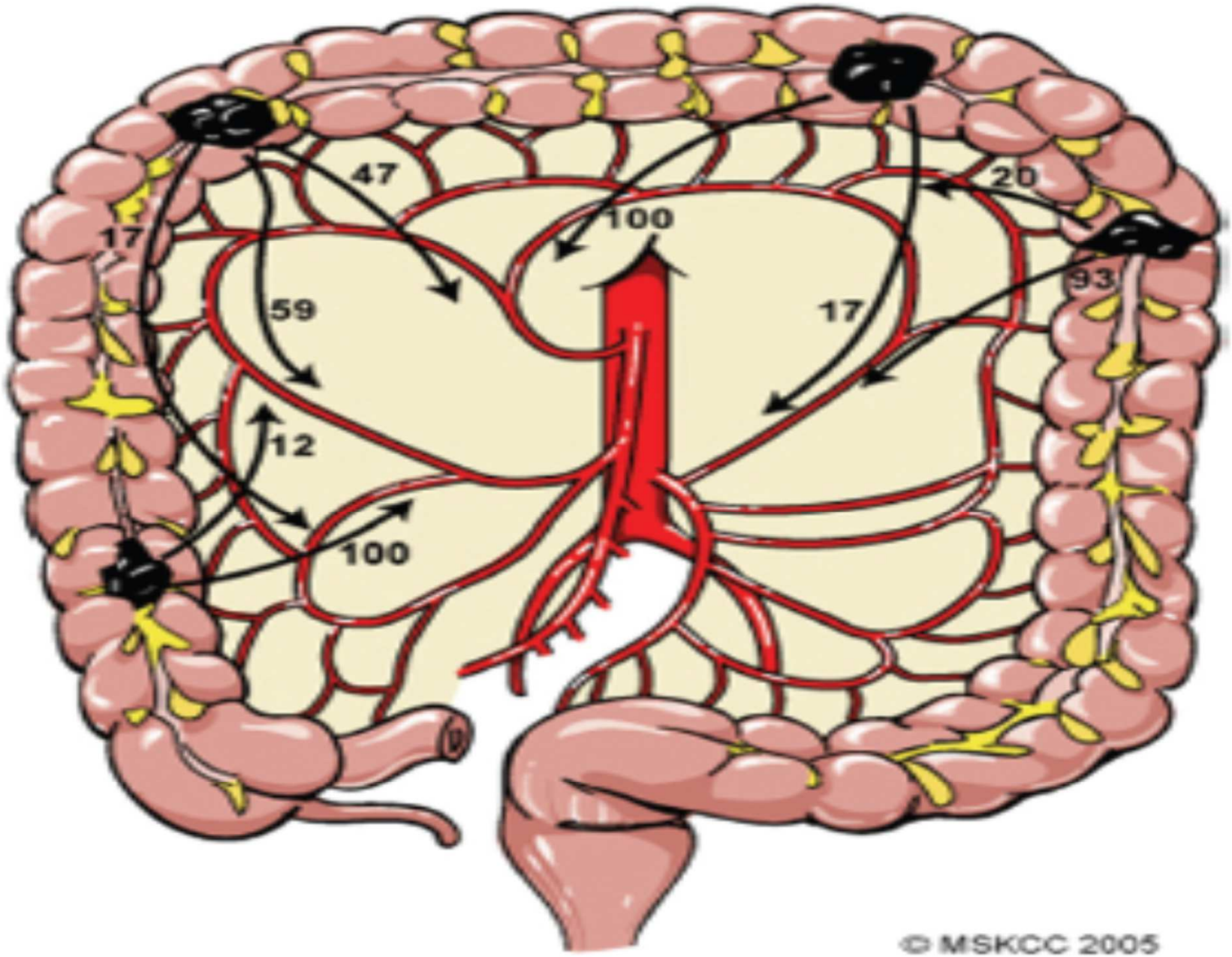
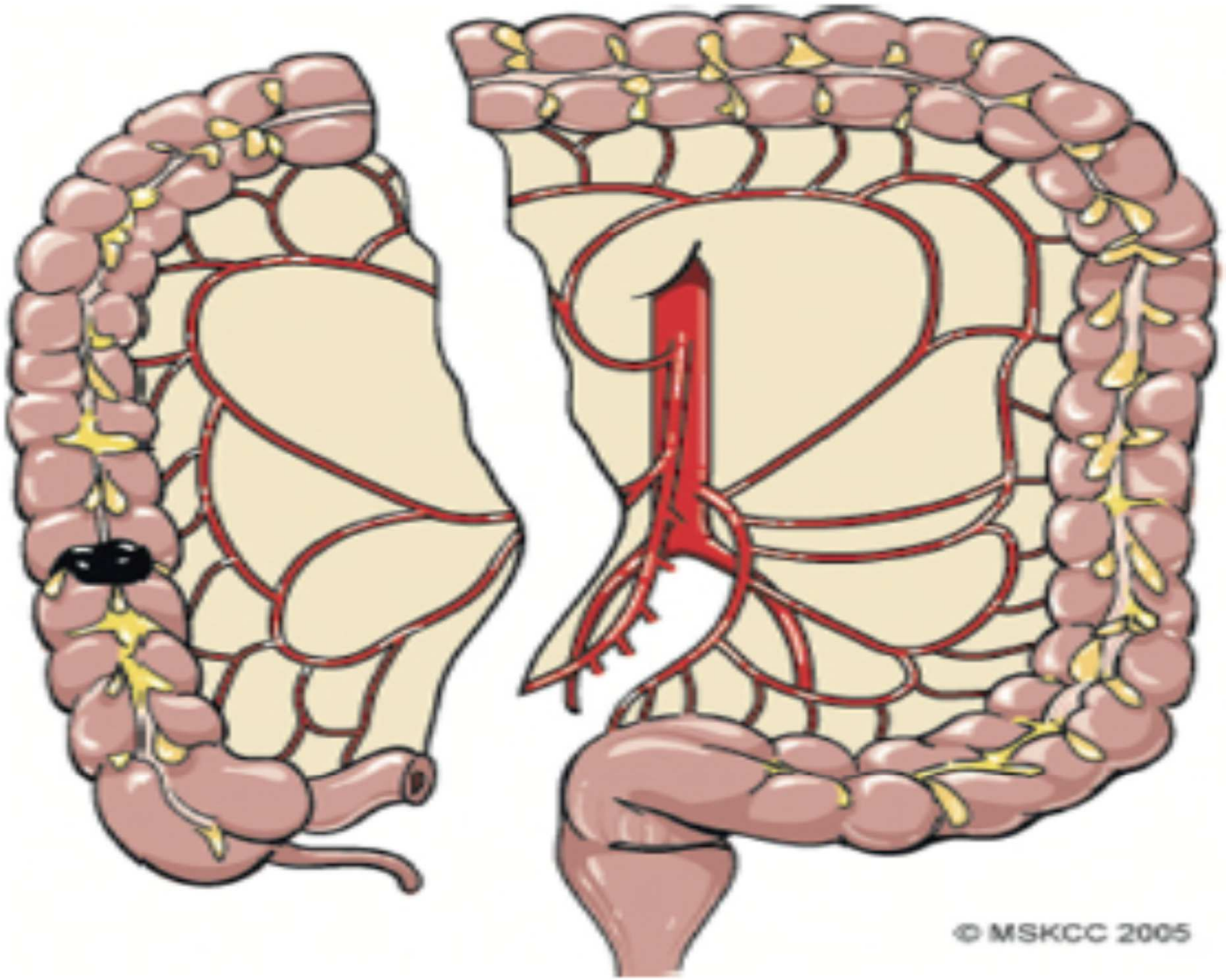


FIGURE 164-5 Lymphatic drainage for colon cancer. (From Memorial Sloan-Kettering Cancer Center, 2005.)

Extent of resection in colon

- Primary is removed with excision of Lymphnode basin so as to include 1st and 2nd echelon LN.
- Lymphadenectomy usually necessitates ligation of feeding vessels
- Length of bowel dependent upon how much vascularised colon can be left behind after lymphadenectomy



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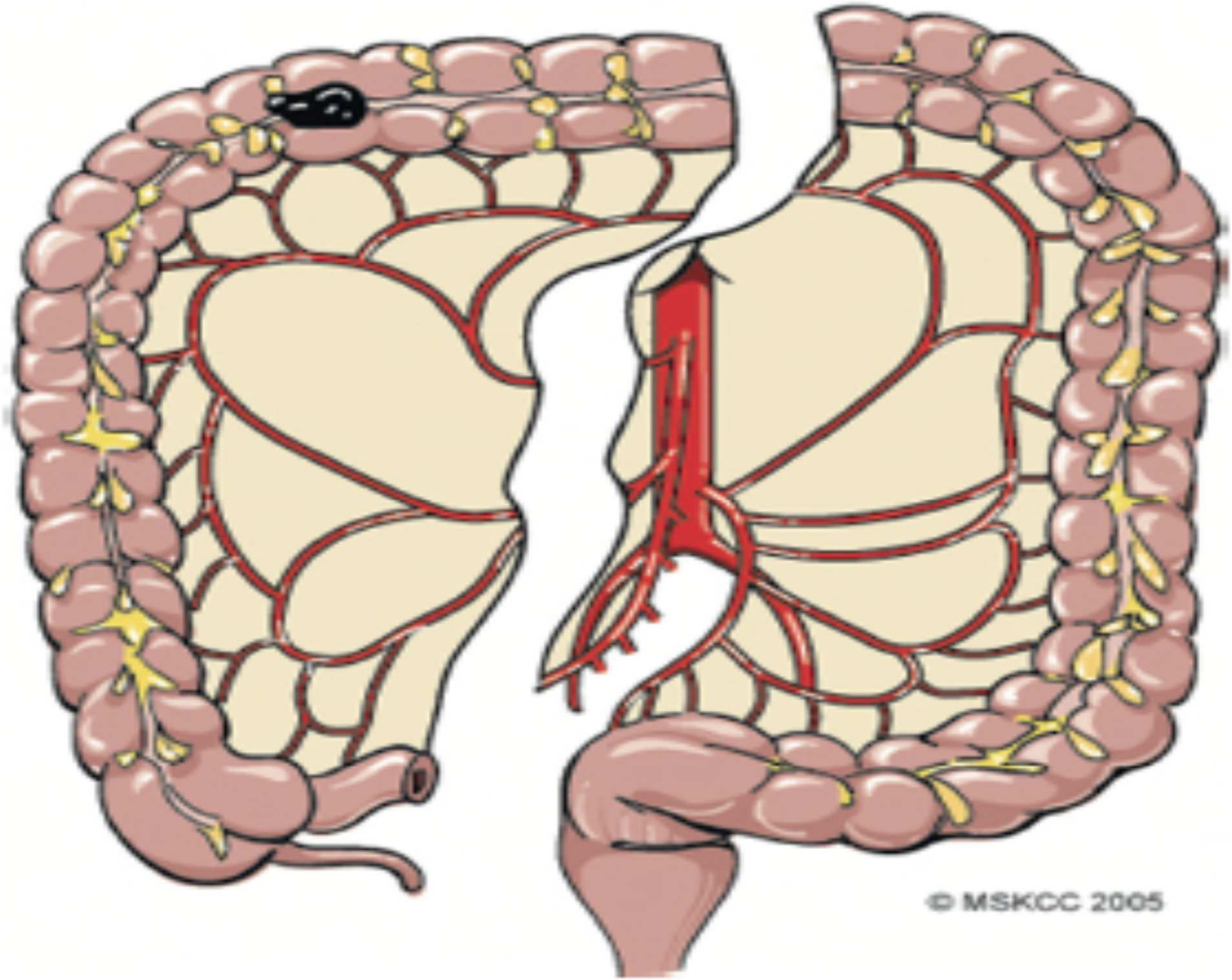

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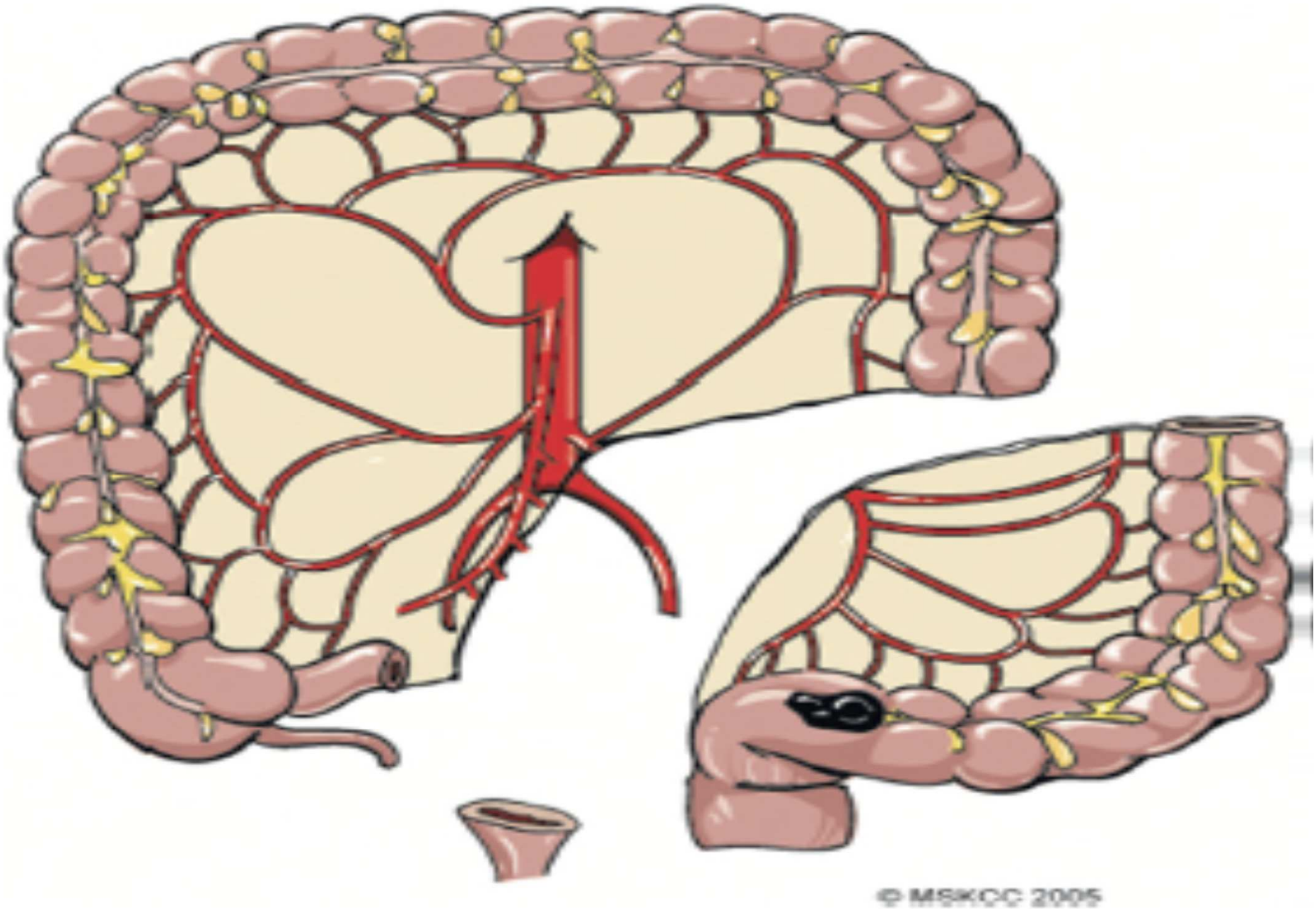

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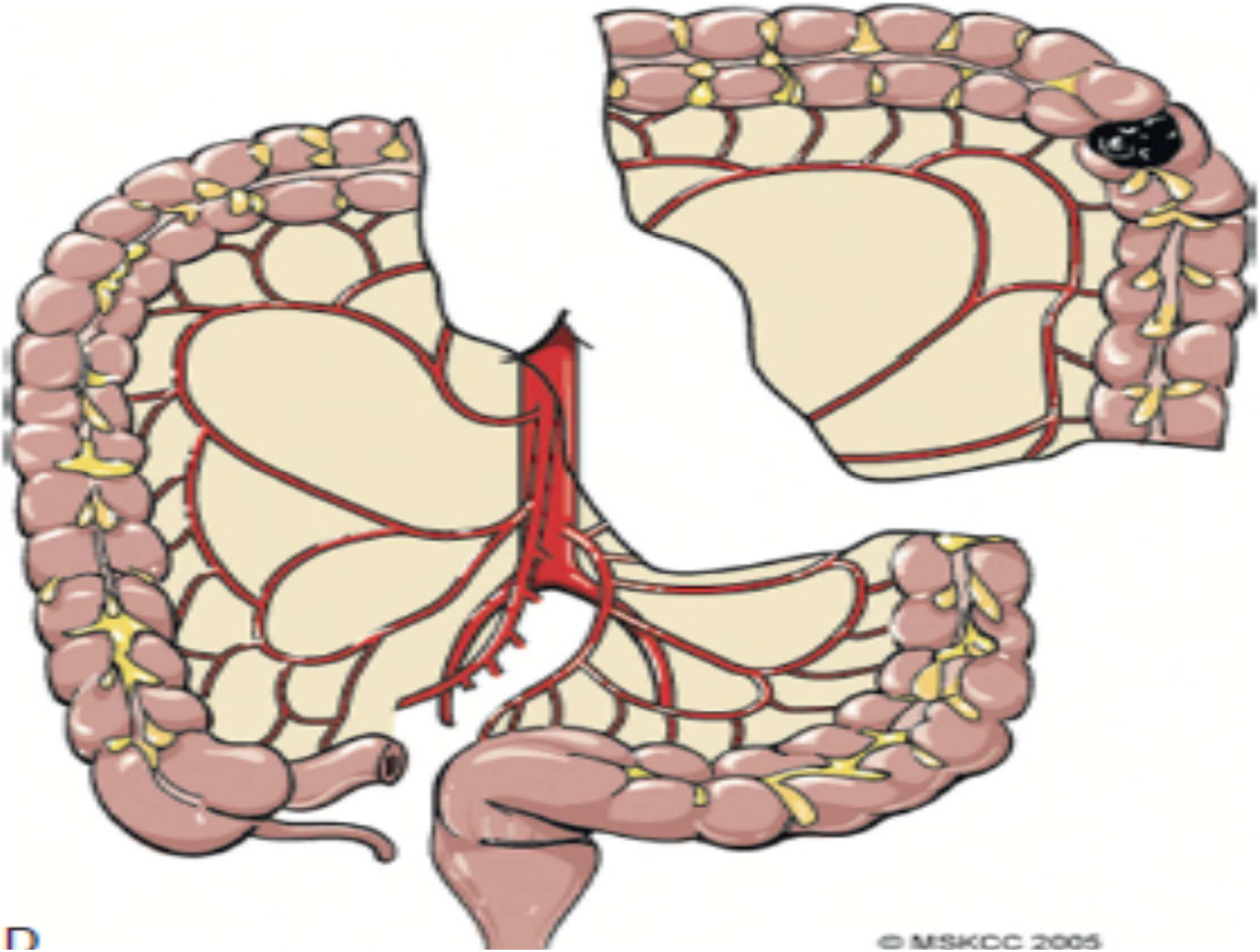
D
© MSKCC 2005

No of LN to be harvested ?

- Ideally 12
- May be difficult to achieve after Neoadjuvant treatment
- Specific biomarkers may be more important than getting 12 LN

Marks et al, Dis Col Rectum Jul 2010
Scabini et al , World J of Gastrointest Surg 2012

- 7-8 cm from anal verge: watershed
- Proximal to this: drainage along sup rectal vessels
- Distal to this: Dual drainage
- Along middle rectal & Inferior rectal vessels BUT predominant drainage along sup rectal vessels

Mesorectum

- Fat, lymphatics, lymphnodes around the rectum enclosed in a single fascial envelope
- Total excision of the same by sharp dissection the key to reducing local recurrence
- TME (Total Mesorectal excision)

Heald R J, Lancet 1993

Abdominoperineal resection

- Time tested for > 100 yrs
- Used to be the Gold standard for low rectal lesions when adequate margin cannot be obtained preserving sphincter complex
- Superior rectal vessels ligated distal to L colic origin. (low tie)
- Sigmoid divided and TME performed
- Distally skin disc around anal verge included

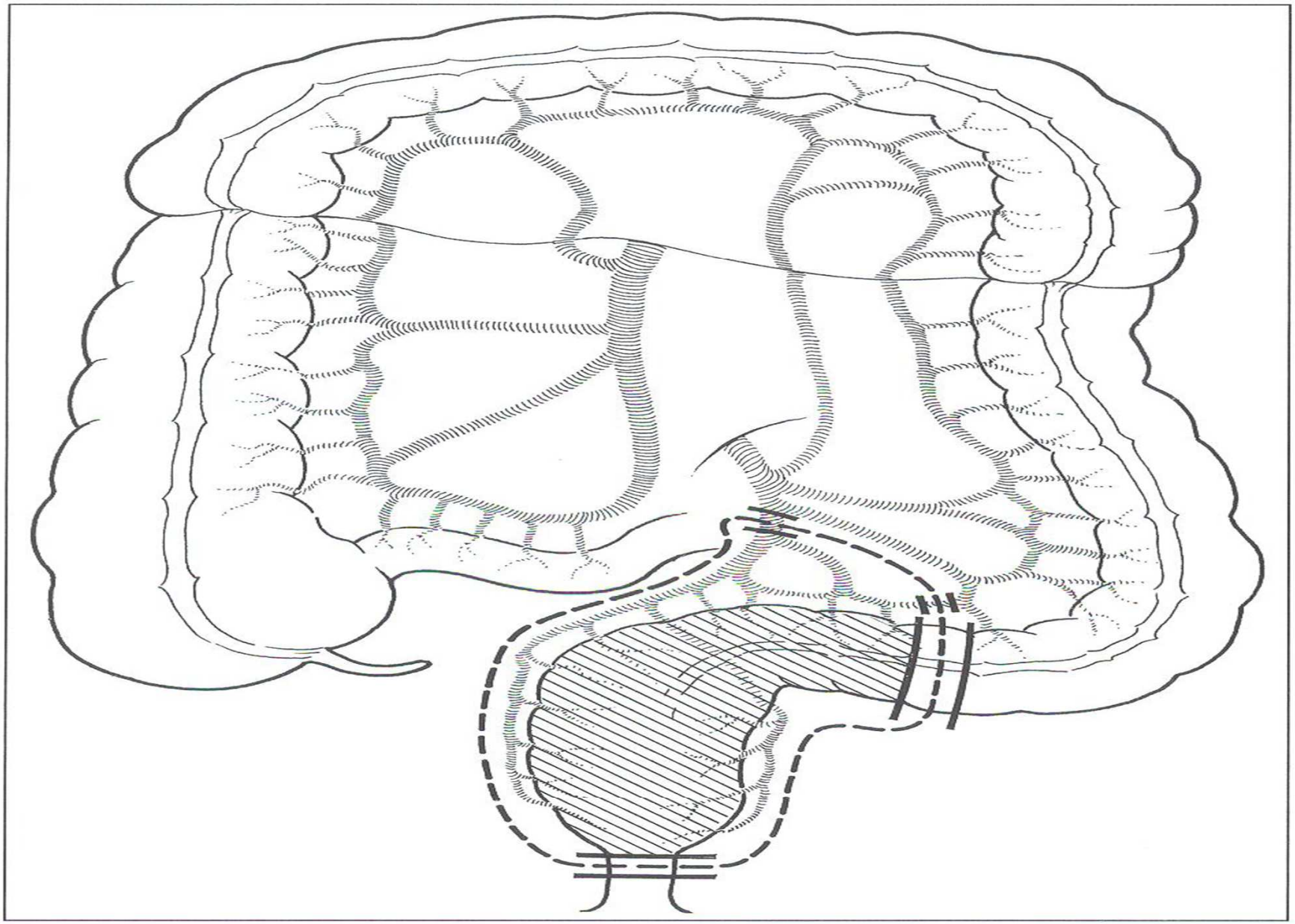

Figure 30.23 Site of division of inferior mesentery vessels for low tie. The shaded area represents the amount of tissue to be resected. The colon can be divided at the level of the distal sigmoid.

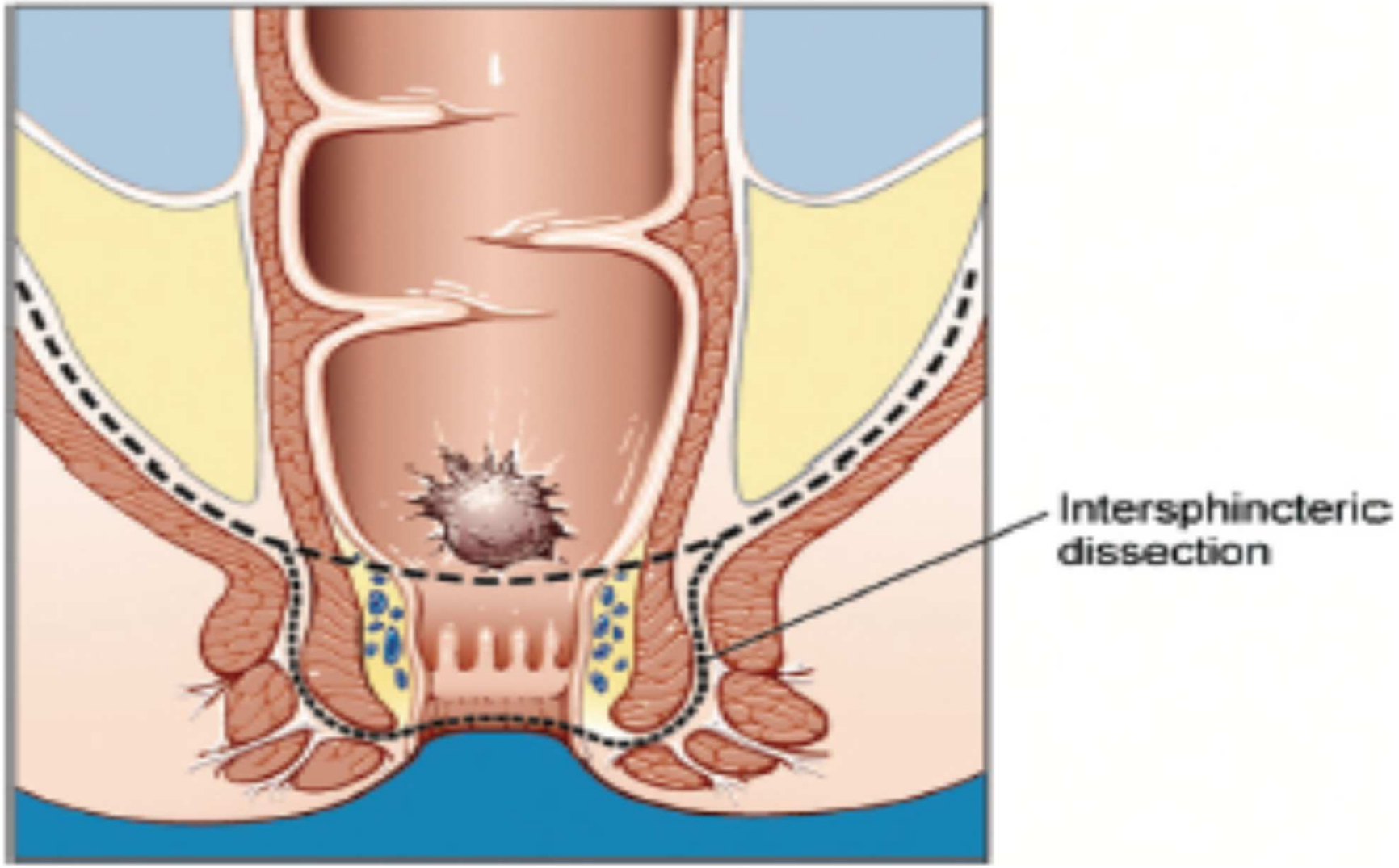

FIGURE 164-7 The technique of intersphincteric resection allows for additional distal margin for tumors located at the anorectal ring. (From Rullier E, Laurent C, Bretagnol F, et al: Sphincter-saving resection for all rectal carcinomas: the end of the 2-cm rule. *Ann Surg* 241:465, 2005.)

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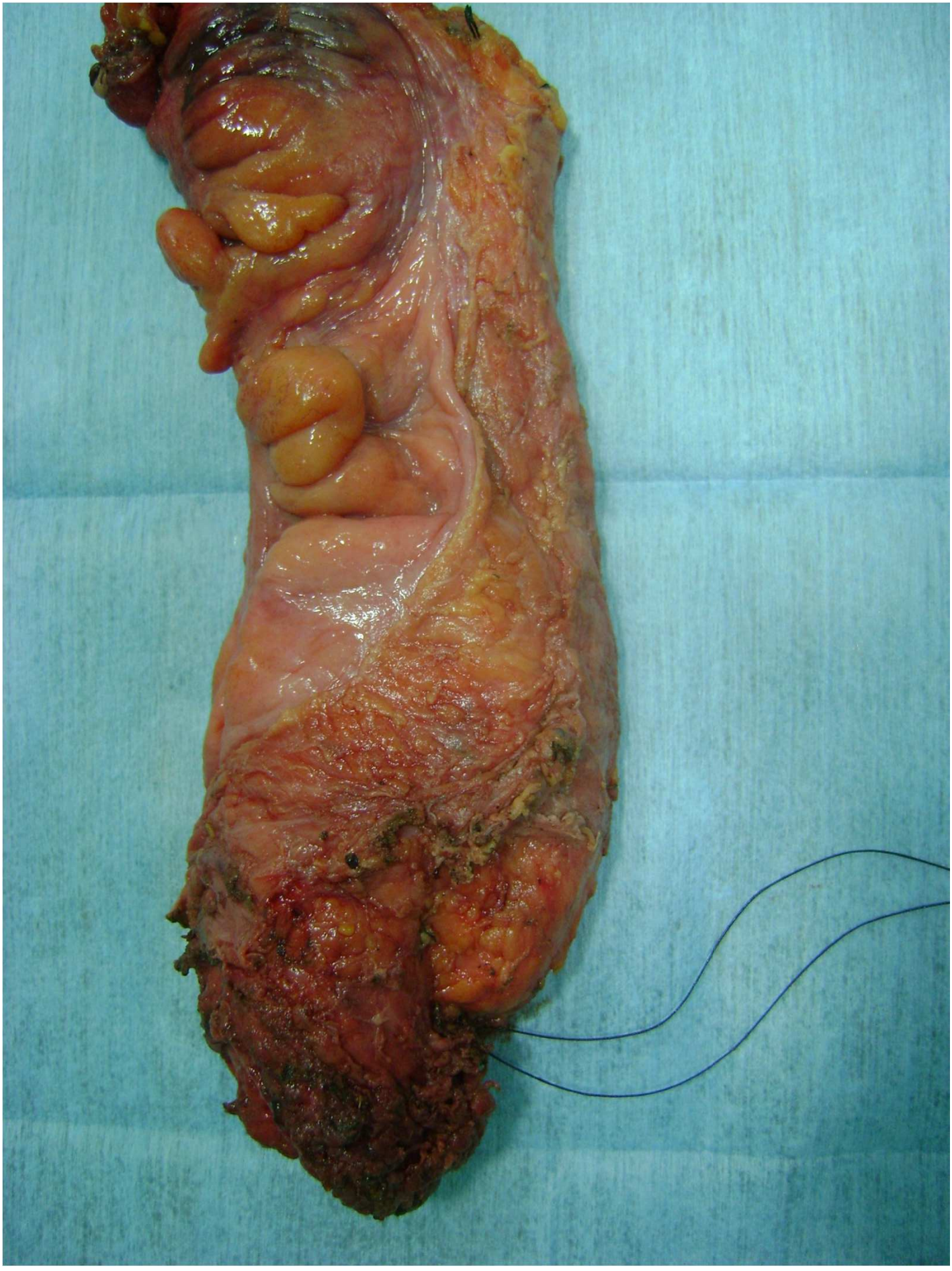
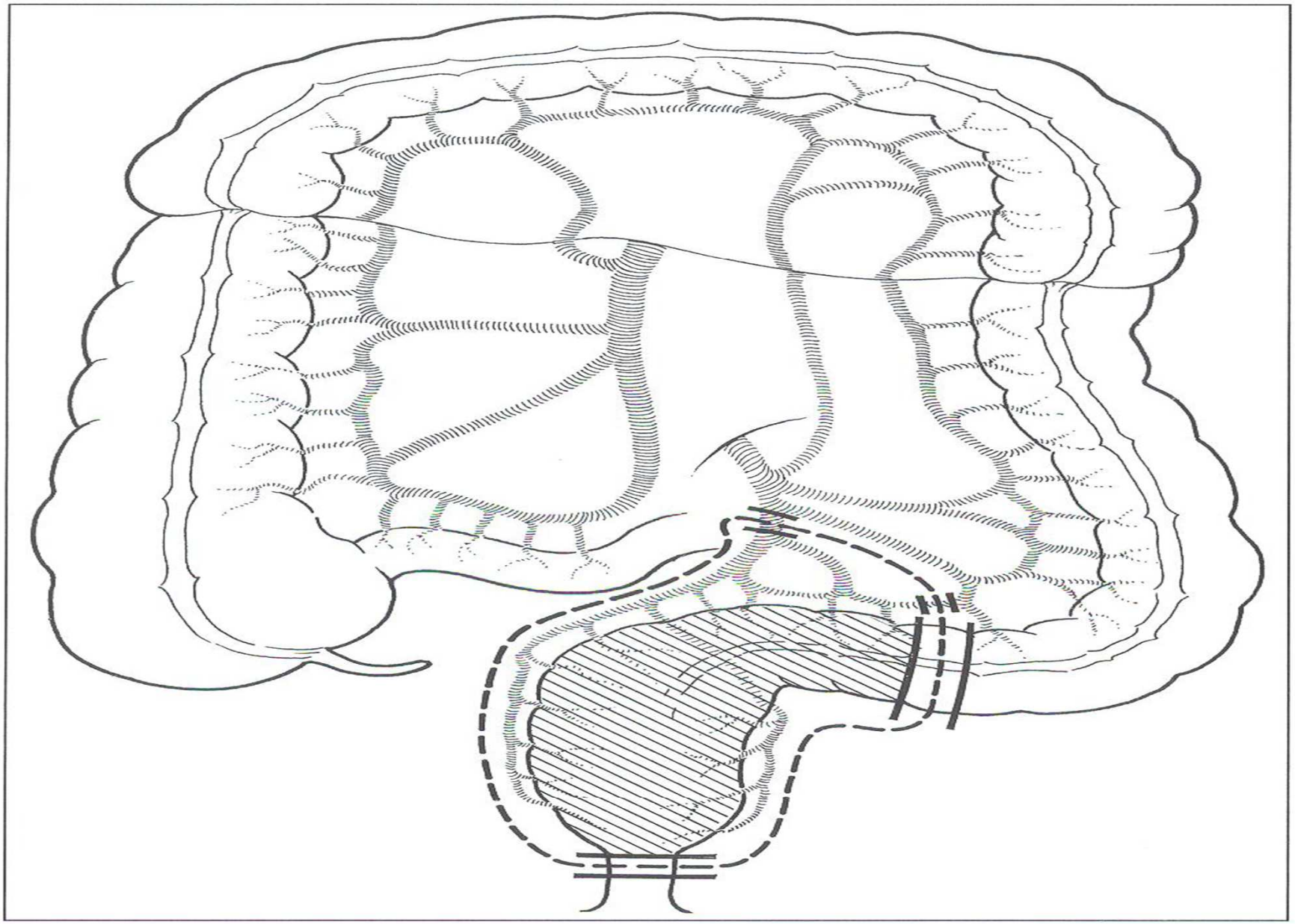


HIGH TIE OR LOW TIE



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Advantages/Disadv of APR

- No issue of distal margin
- Anastomotic dehiscence obviated
- Anterior resection syndrome obviated

Have to live with Permanent colostomy

Inconvenience in socialising ?

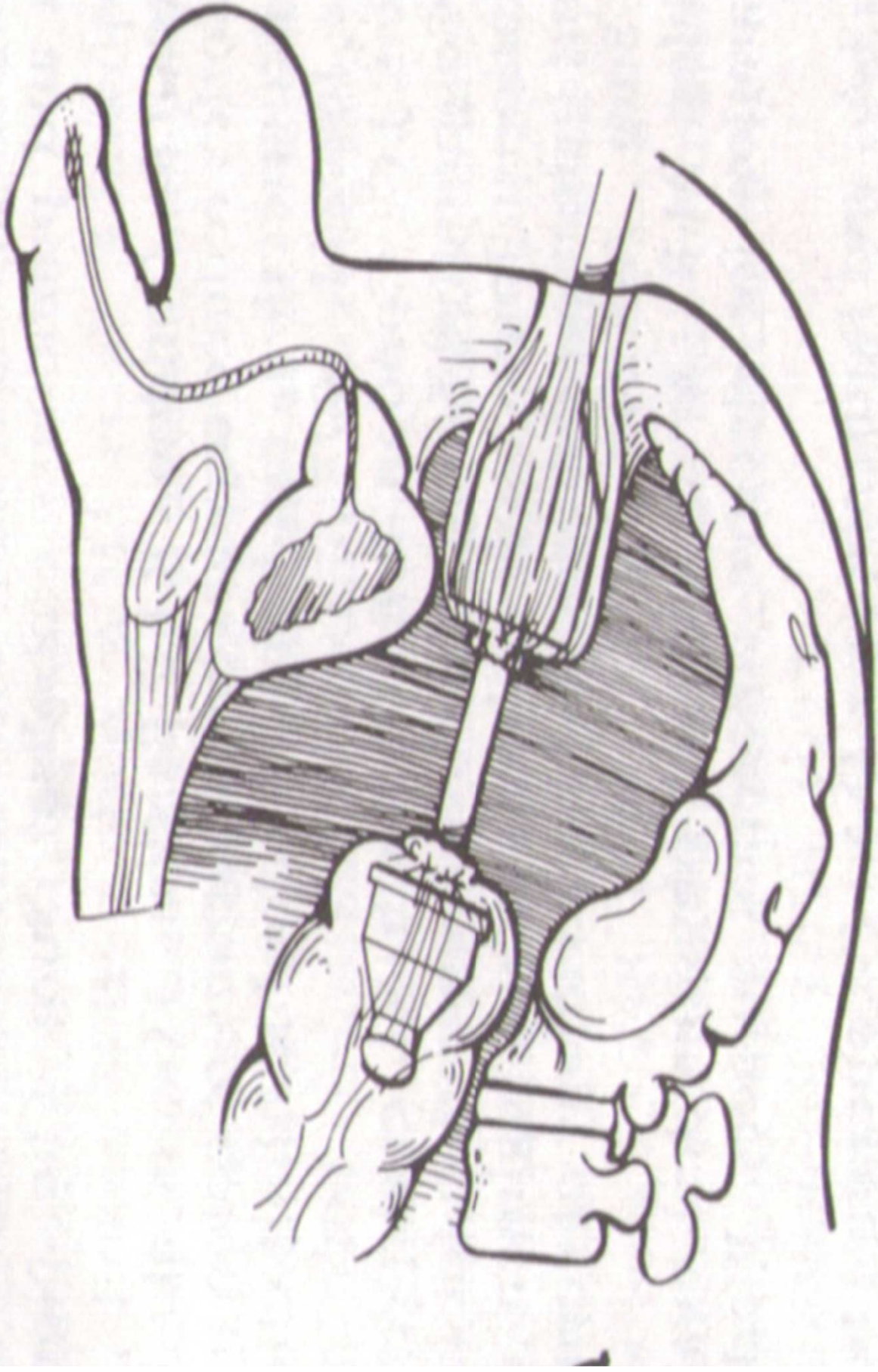
Phantom sensation

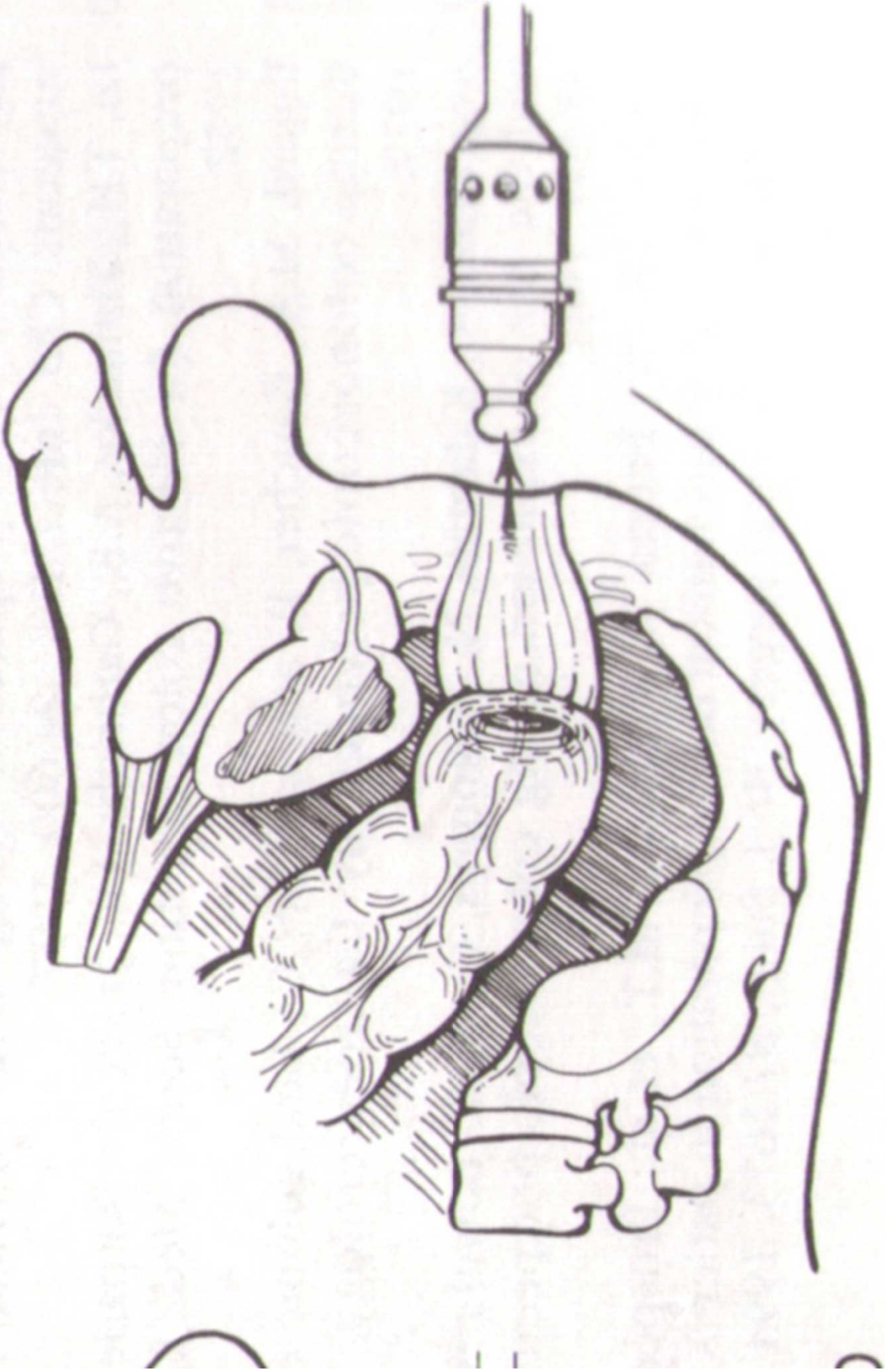
But…..

- Colostomy irrigation
- Ostomy clubs
- Ostomy Association of Kerala

Low anterior resection (LAR)

- For lesions in mid/low rectum
- Defined as resection of rectum with negative proximal, distal and radial margins with excision of fat, fascia, lymphatics around the rectum with clearance of the pelvic sidewalls (Total Mesorectal excision) as a single envelope, preserving the autonomic nerves
- Proximal dissection same





Advantages/Disadv of LAR

- Ant resection syndrome

- Data from Dept of SGE under peer review shows that out of a total of 40 patients (2 yrs) 9 (22%) had major symptoms and 13(32%) had minor symptoms
- Severity decreases at one year

Anterior resection (high)

- Upper rectum: Anterior resection (high)
- Superior rectal vessels ligated distal to L colic origin.
- Proximal level of bowel division : based on adequate vascularity
- Distal level of resection: in such a way that the mesorectum atleast 5 cm distal to lesion is included in the specimen.

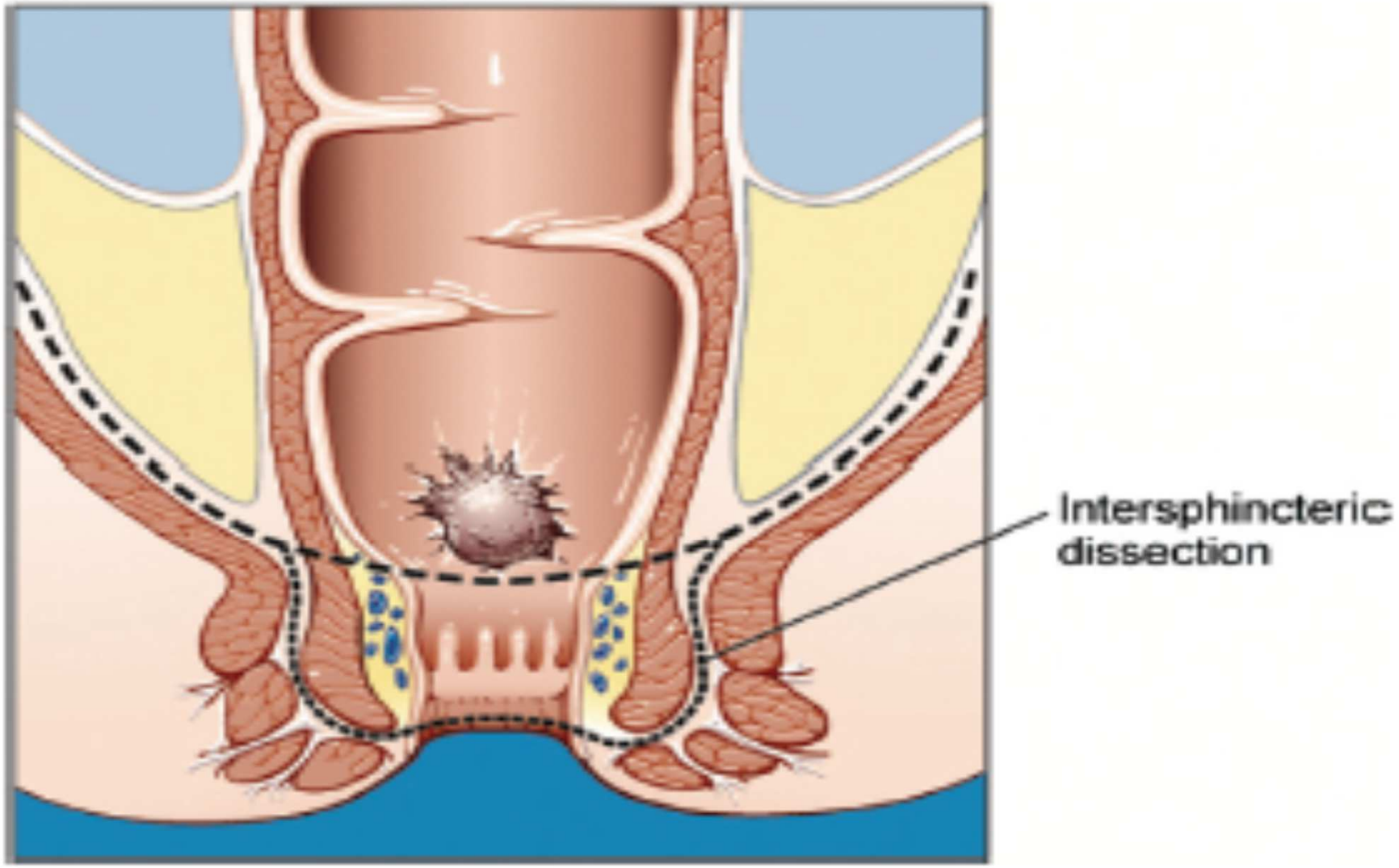
Ultralow anterior resection (uLAR)

- Similar to LAR
- Anastomosis at the level of pelvic floor

How is surgery after Neoadj Radn ?

- Damn difficult
- Tissues become thick, fibrosed
- Compliance of the rectal stump is compromised
- But it does make radial margins neg
- Diversion ideal
- Use healthy bowel for atleast one end

- T1, T2 lesion around 4 cm from verge



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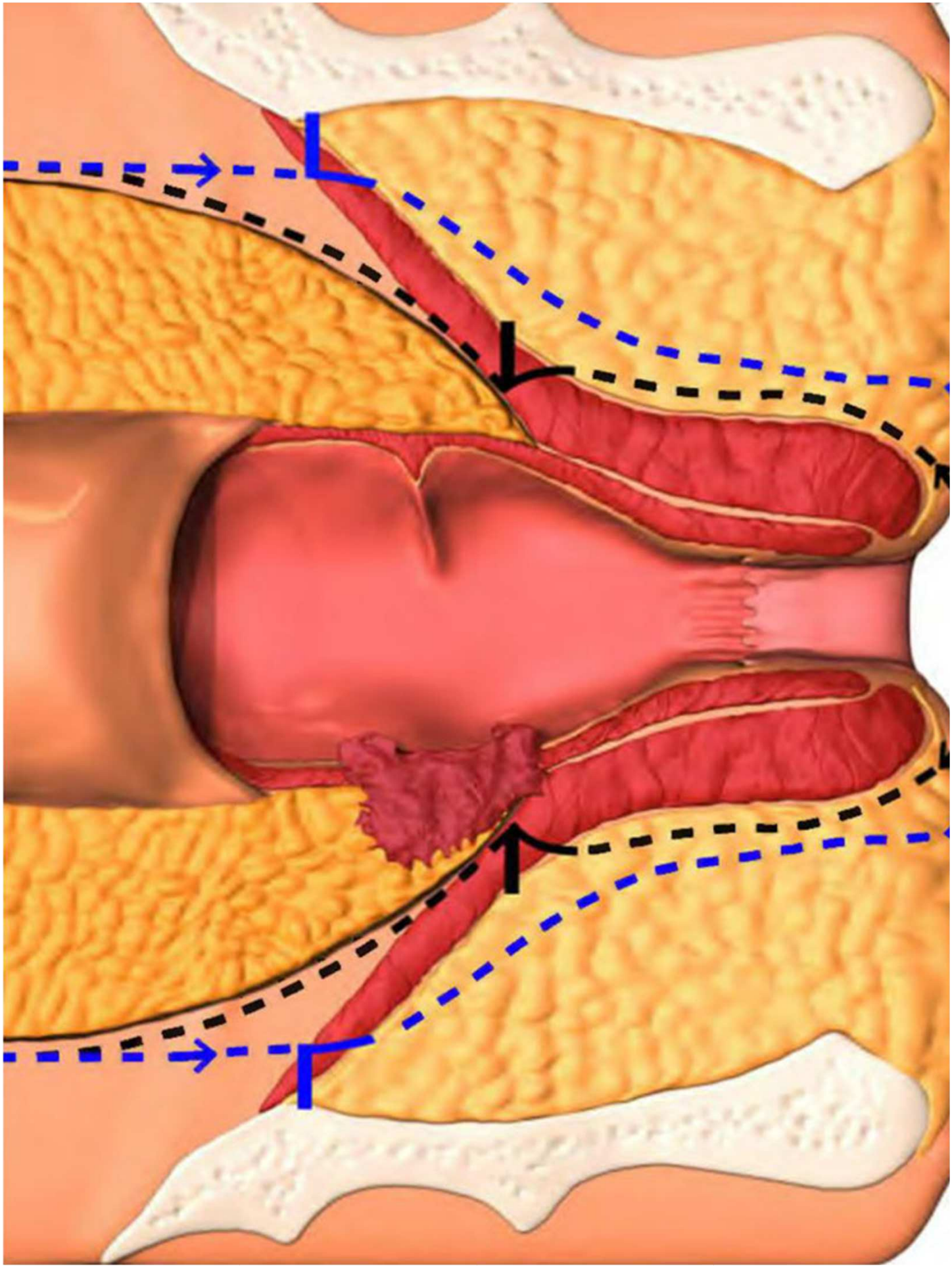
ELAPE

- Extralevator Abdominoperineal excision
- Prone position
- Wider excision of levator muscles
- Results ?
- Stockholm cancer registry – cautious optimism

Mark Prytz et al Int J colorectal diseases 2014



Local excision

- Polypoidal tumours
- Well differentiated
- Within 10 cm from verge
- Involving , 30 % of circumference

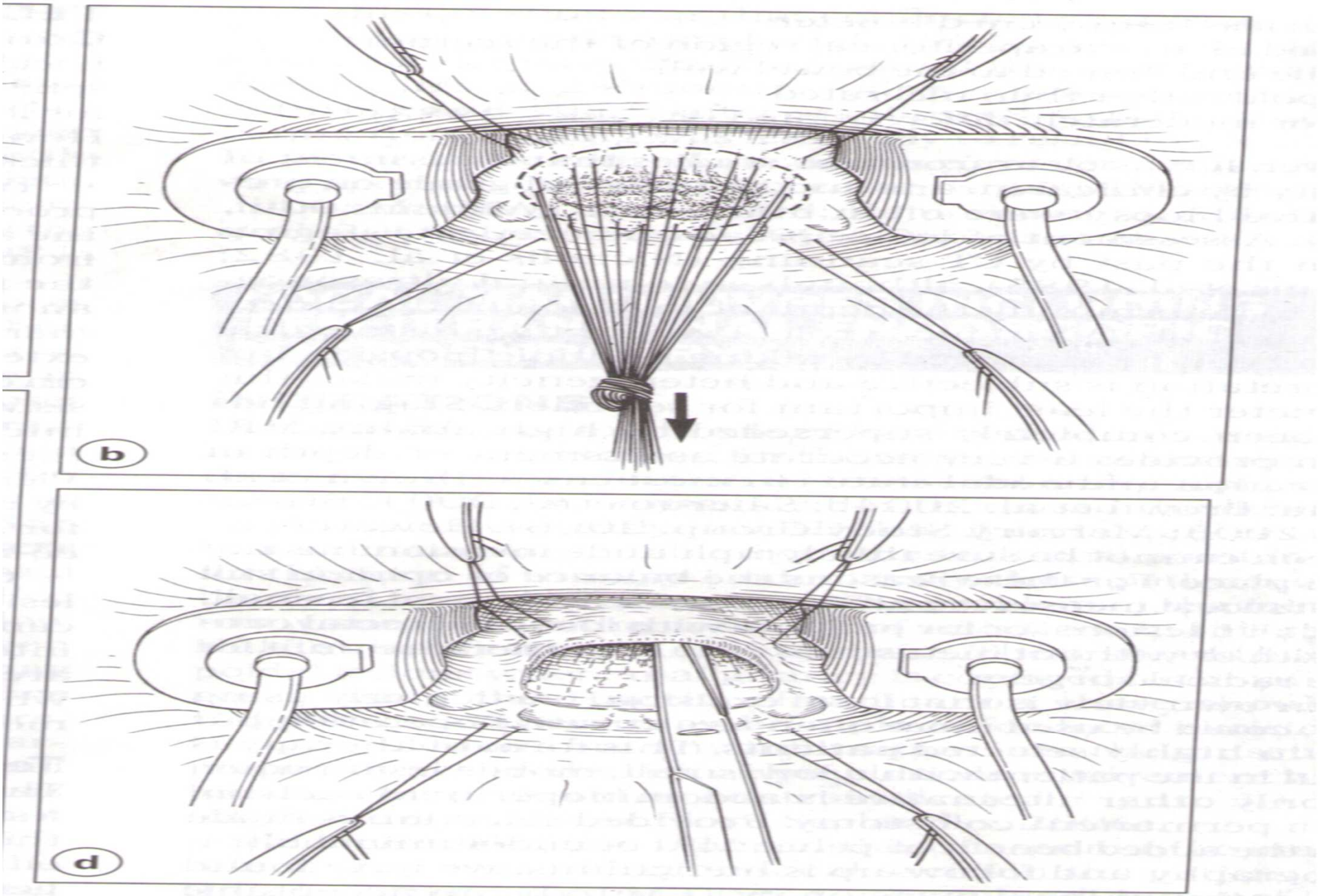


Figure 30.105 Transanal excision of rectal cancer (see text).

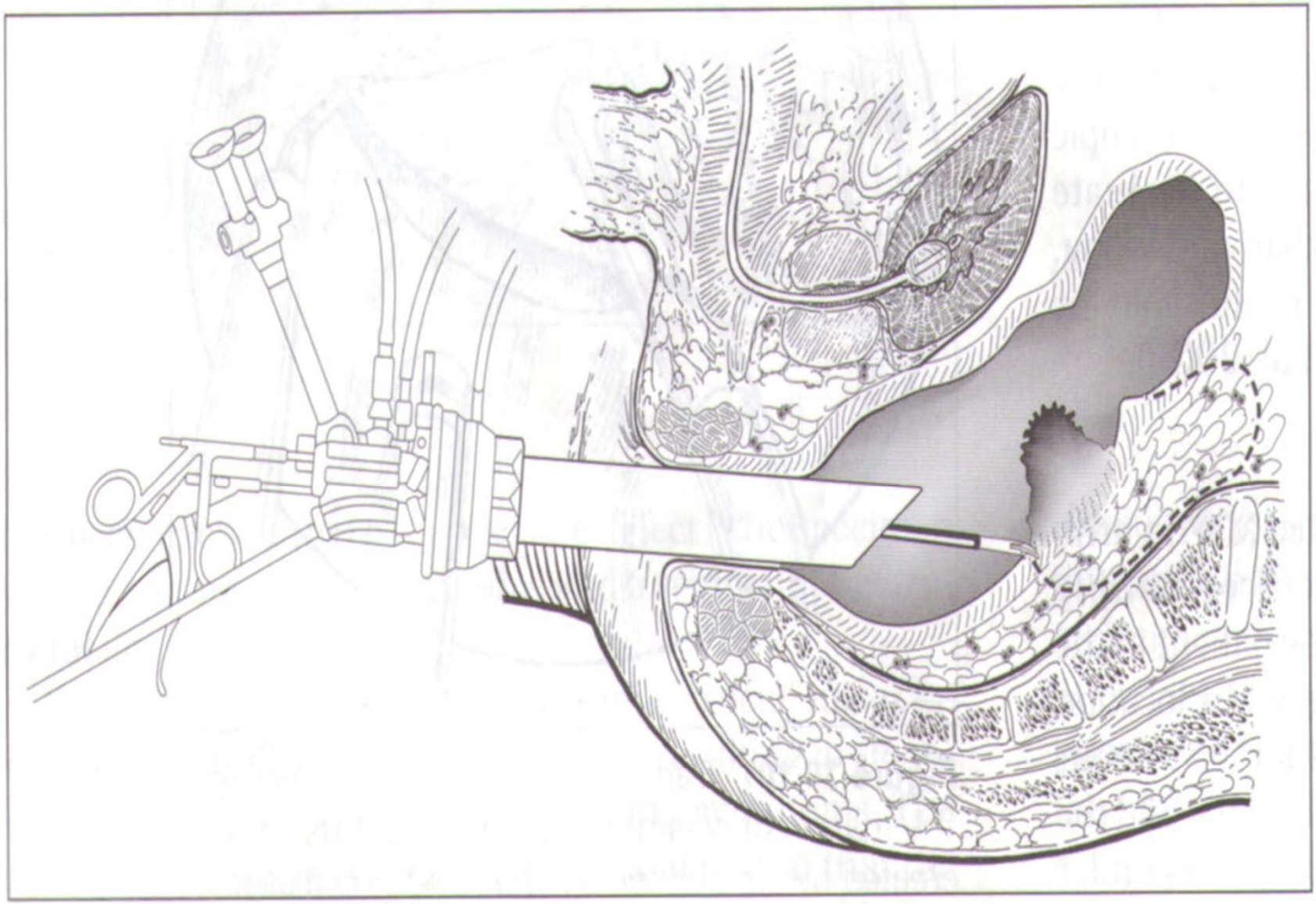
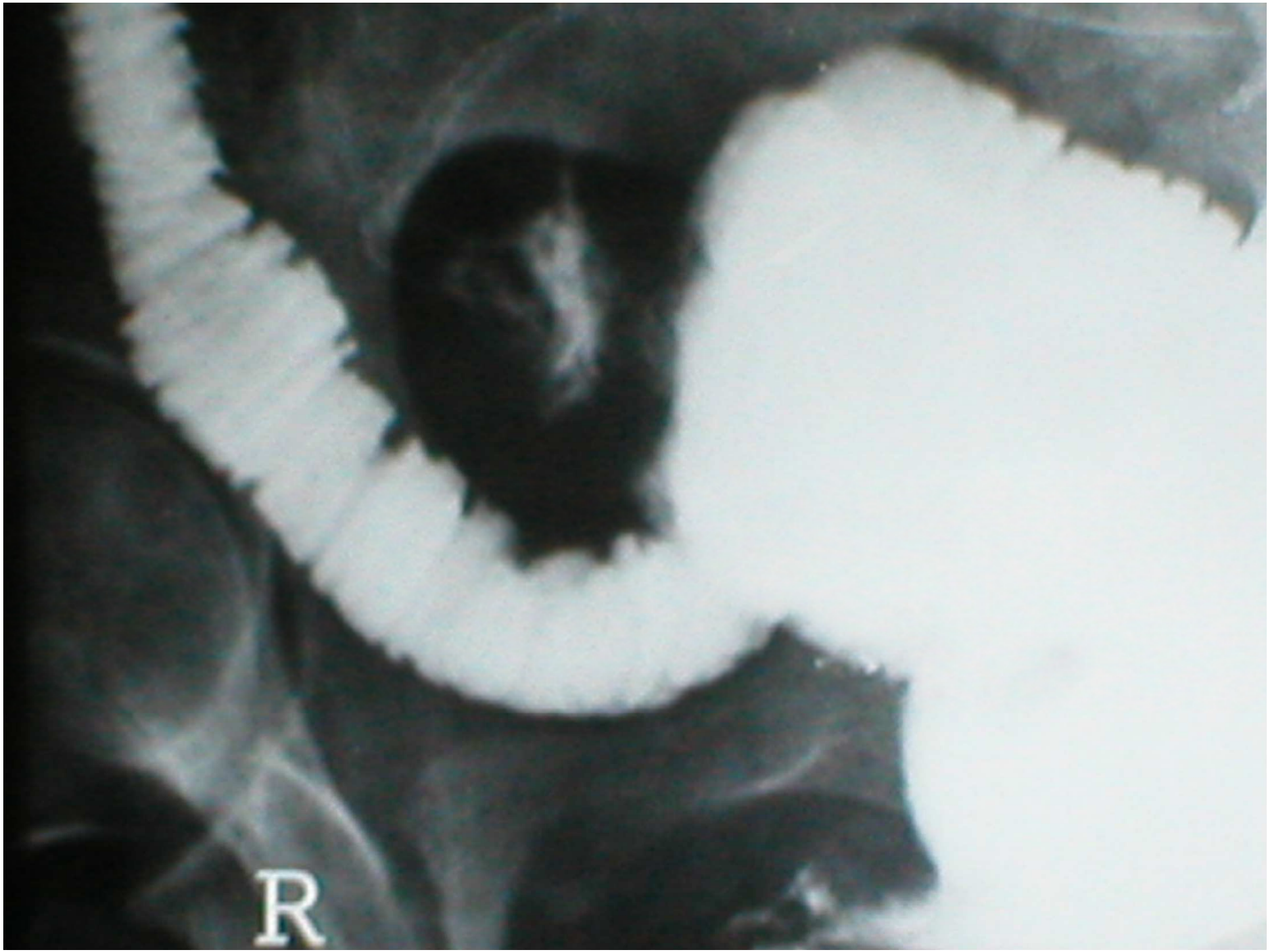


Figure 30.108 Transanal endoscopic microsurgery for resection of a posterior rectal tumour v
to harvest any locally involved lymph nodes.

Lap rectal cancer surgery

- Shown to be feasible in well conducted trials
- Results comparable
- Lap more time consuming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