

ADVANCES IN
**RECTAL CANCER
MANAGEMENT**

NEW INSIGHTS FOR EVIDENCE-BASED PRACTICE

NAPOLI 12 FEBBRAIO 2025

Presidente **Vincenzo Pilone**

Coord. Scientifico **Roberto Peltrini**

CONGRESSO REGIONALE
SIPAD CAMPANIA



“The perfect TME”: *parametri qualitativi di* *una TME*

PAOLO DELRIO

ISTITUTO NAZIONALE DEI TUMORI
IRCCS - FONDAZIONE “G. PASCALE”



ISTITUTO NAZIONALE TUMORI
IRCCS - Fondazione Pascale

THE MESORECTUM: A PARADIGM SHIFT IN RECTAL CANCER SURGERY

In a historic, innovative and paradigm-shifting manuscript published in 1982 in the *British Journal of Surgery*, Professor R. J. (Bill) Heald (a very dear friend for almost 40 years) first described the importance of the mesorectum in rectal cancer. Previously, many anal sphincters had been unnecessarily sacrificed to create permanent colostomies under the misguided notion that the distal resection margin rather than the mesorectum was the fundamental important metric by which the quality of rectal cancer surgery could be judged. Heald first defined the mesorectum as the bi-lobed fatty tissue between the rectum and Waldeyer’s fascia. Surgery before Heald’s work often resulted in remnants of mesorectum being left behind in the pelvis. The mesorectum may contain tumour cells even distal to the tumour, which Heald showed to be associated with local recurrence. Removal of all this fatty tissue was dubbed ‘total mesorectal excision’ (TME).

Heald’s proposal 40 years ago led to many subsequent advancements, including the recognition of the importance of the circumferential resection margin as being free of tumour and the ability to gain essentially a microscopically tumour-free margin. Heald’s TME, the dissection in the “holy plane” to produce a complete or near complete TME specimen as described above, has been the foundation upon which entire national programmes have been built. Certainly, the United Kingdom, Germany, Belgium, Ireland, Poland and many other countries/regions led the way. Most recently, Heald’s four-decade-old concept of TME undertaken in a multidisciplinary setting was supported in the United States by the creation of the American College of Surgeons Commission on Cancer National Accreditation Program for Rectal Cancer.

There have been many additions to Heald’s concept of TME, including

preoperative imaging, the multi-disciplinary team approach, and appropriate use of neoadjuvant and now total neoadjuvant therapy. It is interesting to peruse this landmark paper to realize that what we now take for granted as appropriate best practice surgery was so radical and so novel that the *British Journal of Surgery* published a case series in which only five patients formed the basis of the conclusions. Since that time, the emphasis has shifted towards the method used to perform TME, which now includes a wide array of techniques such as laparotomy, hand-assisted surgery, laparoscopy and transanal TME.

Heald’s TME ... has been the foundation upon which entire national programmes have been built

I recommend this historic paper by Heald and colleagues not only to every surgeon who practices rectal cancer surgery, but to every physician who manages patients with rectal cancer. We all owe a huge debt of gratitude to Heald for his remarkable vision and passion for optimized outcomes in rectal cancer surgery.

*Steven D. Wexner
Department of Colorectal Surgery,
Cleveland Clinic Florida,
Weston, FL, USA.
e-mail: wexners@ccf.org*

Competing interests
The author declares no competing interests.

ORIGINAL ARTICLE Heald, R. J., Husband, E. M. & Ryall, R. D. The mesorectum in rectal cancer surgery — the clue to pelvic recurrence? *Br. J. Surg.* **69**, 613–616 (1982)
RELATED ARTICLE Wexner, S. D. & Berho, M. E. The rationale for and reality of the new National Accreditation Program for Rectal Cancer. *Dis. Colon Rectum* **60**, 595–602 (2017)



The Perfect Total Mesorectal Excision Obviates the Need for Anything Else in the Management of Most Rectal Cancers

Richard John Heald, CBE, MChir, FRCS¹ Ines Santiago, MD¹ Oriol Pares, MD¹ Carlos Carvalho, MD¹
Nuno Figueiredo, MD, PhD¹

¹Digestive Unit, Champalimaud Cancer Center, Champalimaud Centre for the Unknown, Lisbon, Portugal

Clin Colon Rectal Surg 2017;30:324–332.

Address for correspondence Richard John Heald, CBE, MChir, FRCS, Digestive Unit, Champalimaud Cancer Center, Champalimaud Centre for the Unknown, Avenida Brasília, 1400 - 038 Lisbon, Portugal (e-mail: bill.heald@me.com).

there is no significant benefit of preop RT

most patients may go straight to surgery

MRI showing no
extramesorectal disease,
threatened MRF
intersphincteric space,
EMVI

Complete mesorectum but:

- mucinous tumour
- pN positive
- pEMVI positive tumor

postoperative adjuvant chemotherapy may prolong survival



Review

Total Mesorectal Excision, an erroneous anatomical term for the gold standard in rectal cancer treatment

María Rita Rodríguez-Luna ^{a,*}, Joaquín E. Guarneros-Zárate ^b, Jorge Tueme-Izaguirre ^a

^a Residente de Segundo año Cirugía General, Hospital Angeles Mocel, México D.F Facultad Mexicana de Medicina, Universidad La Salle, México D.F., Mexico

^b Departamento de Anatomía, Facultad de Medicina, Universidad Nacional Autónoma de México, México D.F., Mexico

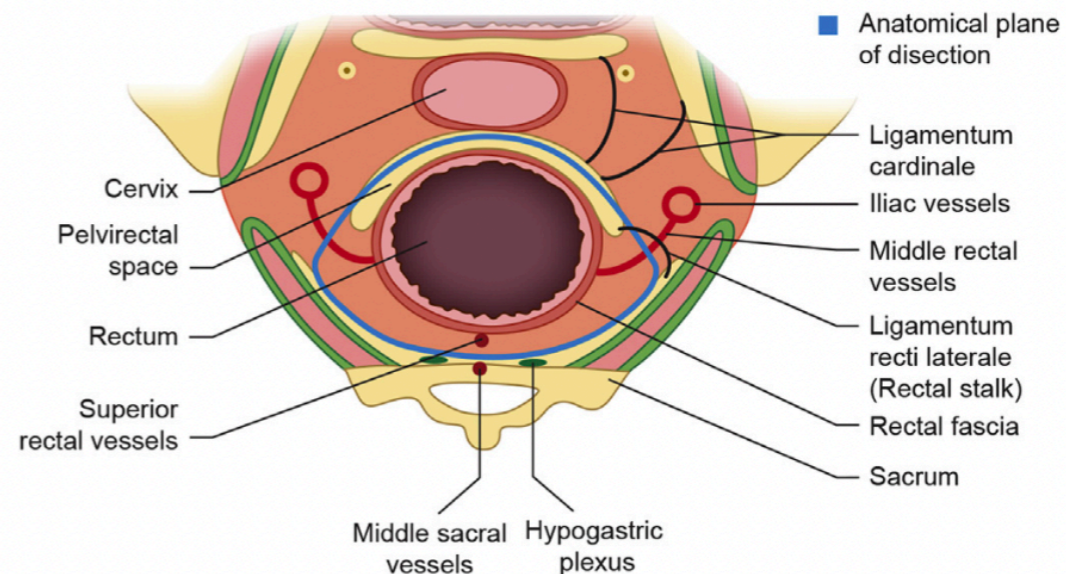


Fig. 2. The plane of dissection in Total Mesorectal Excision.

The term mesentery or mesenterium refers to a structure composed of a double layer of peritoneum in which vascular structures reach the intraperitoneal organs, so the endopelvic fascia and the lateral rectal ligament cannot be called a mesenterium, which is why the term mesorectum is wrong and is not included in the Terminologia Anatomica [21].

We consider that the term that respects these principles is Total Posterior Endopelvic Fasciectomy or Heald's Procedure. We urge the oncological and colorectal surgical communities to appreciate the academic harm [30] involved with the use of the term mesorectum.



Contents lists available at [ScienceDirect](#)

International Journal of Surgery

journal homepage: www.journal-surgery.net



Letter to the Editor

The mesorectum and mesocolon – Making sense of words



Socrates: “words are most valuable when they convey understanding”.

The very word ‘mesorectum’ is a key component of one of the great advances in surgery because surgeons have under-stood from that word that the ontogenetically determined block of tissue is also the field of spread of the cancer. The careful pursuit of the fascial planes around the mesorectum has enabled surgeons to learn more detail about the anatomy of the pelvis than has been taught by traditional cadaver dissection. These fascial layers are far more important to anatomical understanding than the disposition of the peritoneum which is variable and teaches very little.



Contents lists available at [ScienceDirect](#)

International Journal of Surgery

journal homepage: www.journal-surgery.net



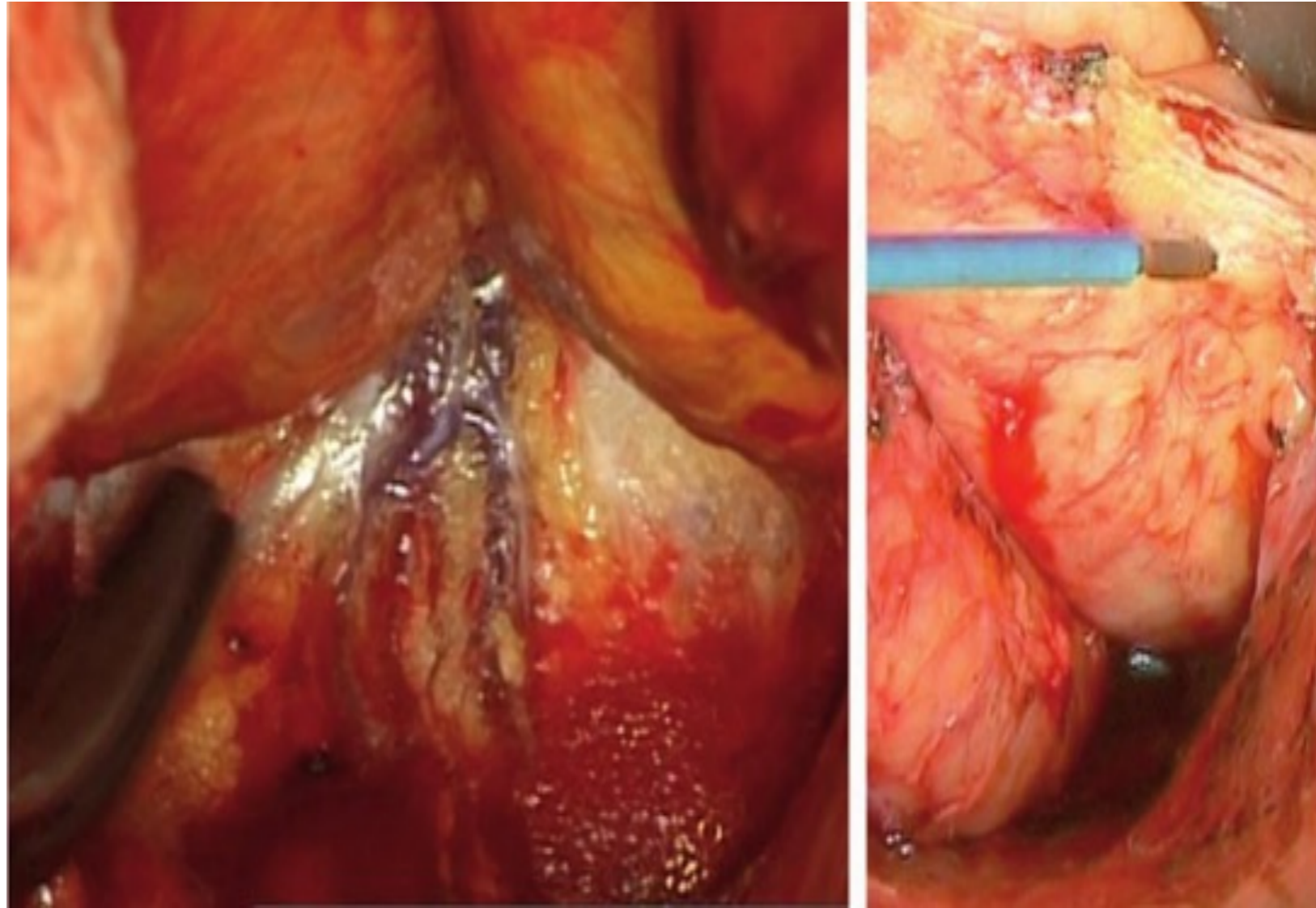
Reply

Reply to: #00291 Total Mesorectal Excision, an erroneous anatomical term for the gold standard in rectal cancer treatment'



“He who gives names according to his conception of causes, if his conception is erroneous, shall we not be deceived by him?” If Socrates were alive, he would agree that the word ‘Mesorectum’ is misleading and could lead to bad interpretations and outcomes.

TME: difficult procedure



High quality needed: makes the difference for the patient

QUALITY OF TME

Intraoperative goal



Standardize and make it reproducible in your unit

Audit results with the pathologist!!!

“macroscopic assessment of mesorectal excision (MAME)”

mesorectal plane: ‘intact mesorectum with only minor irregularities of a smooth mesorectal surface, no defect deeper than 5 mm, no coning toward the distal margin of the specimen, smooth circumferential resection margin on slicing’;

intramesorectal plane: ‘moderate bulk to the mesorectum, but irregularity of the mesorectal surface, moderate coning of the specimen is allowed, at no site is the muscularis propria visible, with the exception of the insertion of the levator muscles’;

muscularis propria plane: ‘little bulk to the mesorectum with defects down onto the muscularis propria and/or a very irregular circumferential resection margin’

“macroscopic assessment of mesorectal excision (MAME)”

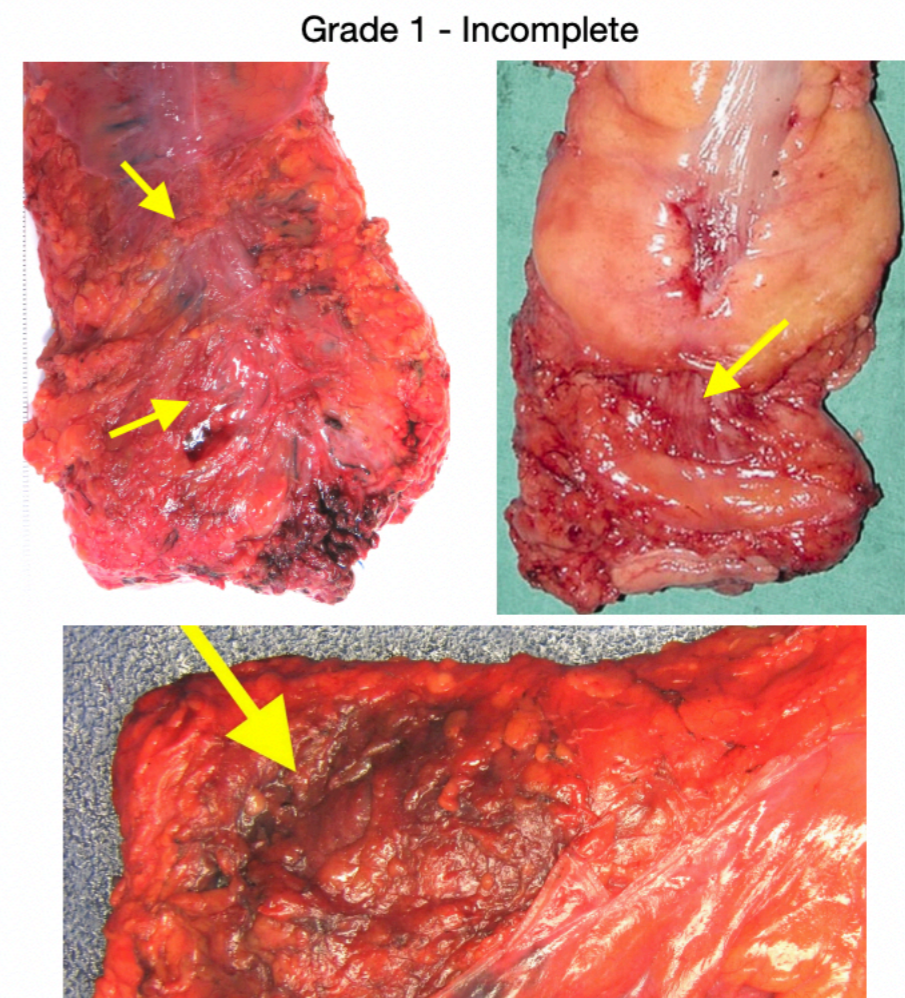
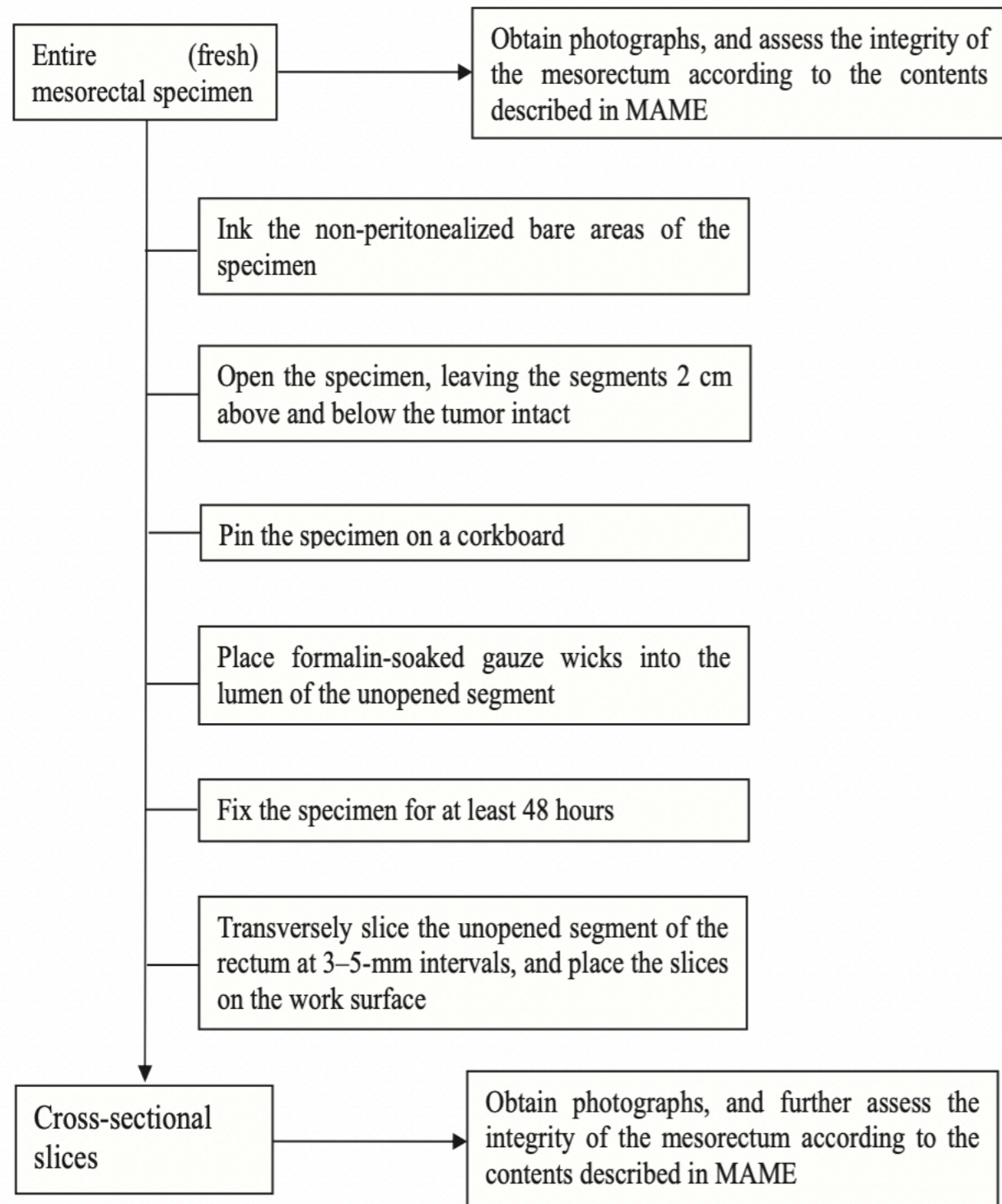


Fig. 2. Summary of the process for macroscopic pathological assessment. MAME: macroscopic assessment of mesorectal excision.

Discordance in TME specimen grading in a Prospective Rectal Cancer Trial: Are we Overestimating the Quality of our Resections ?

TME grading was largely concordant between site and central reviewers, however there was a 14% rate of major discordance

Resolution of discordances resulted in major upgrading or downgrading of final TME in 5% of cases.

	Study Site	Central Review	N
Concordance 53%	Complete	Complete	42
	Near Complete	Near Complete	6
	Incomplete	Incomplete	5
Minor Discordance 33%	Complete	Near Complete	27
	Near Complete	Complete	6
Major Discordance 14%	Complete or Near Complete	Incomplete	12
	Incomplete	Complete or Near Complete	2
	Study Site	Central Review	N=14
Reconciliation Outcomes of Major Discordances	Complete Site downgraded to IC (3)* Site downgraded to NC (4) Reviewer upgraded to C (1) No resolution achieved (1) [‡]	Incomplete	9
	Near complete Site Downgraded to IC (1)* Reviewer upgraded to NC (2)	Incomplete	3
	Incomplete Reviewer downgraded to IC (1)*	Complete	1
	Incomplete Site Upgraded to NC (1)*	Near Complete	1

Sylla et al.

Visual Abstract by @stewartwjames



#AmerSurg23

AMERICAN SURGICAL ASSOCIATION
143RD ANNUAL MEETING



APRIL 20-22, 2023
WESTIN HARBOUR CASTLE
ONTARIO, CANADA

TORONTO

M.E.R.C.U.R.Y. I° Complete

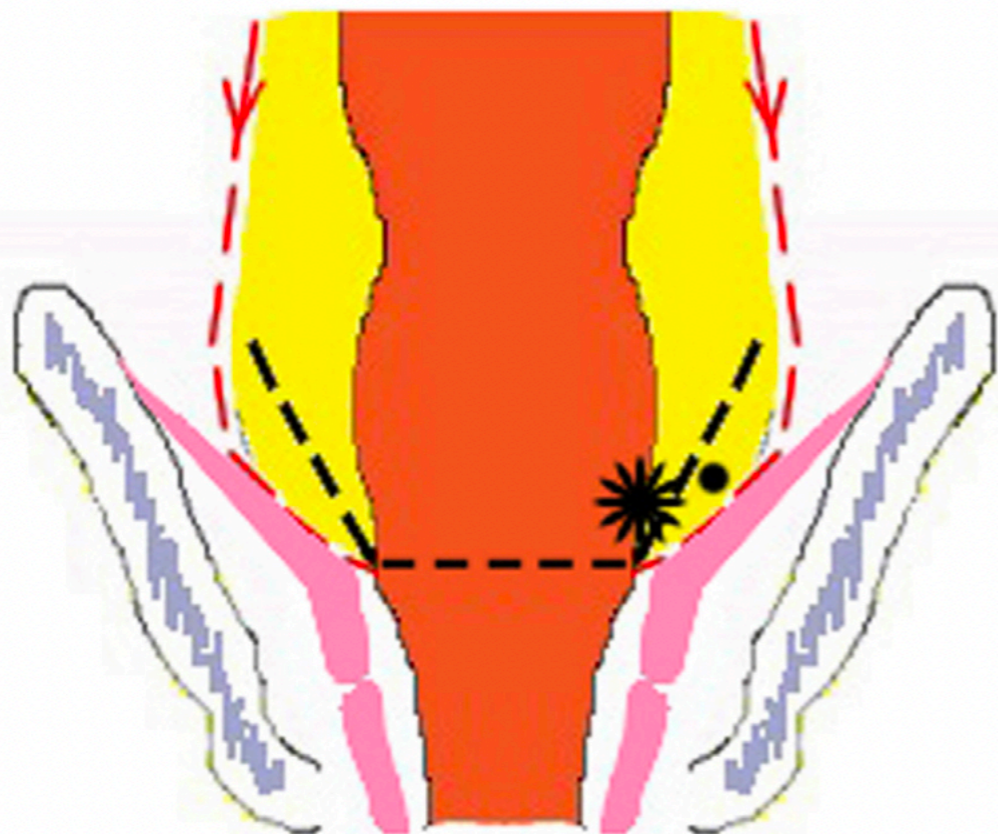
Mesorectum	Smooth, intact
Defects	Not deeper than 5mm
Coning	No coning
CRM	Smooth, regular

M.E.R.C.U.R.Y. II° Nearly complete

Mesorectum	Moderate bulk, irregular
Defects	No visible muscularis propria
Coning	Moderate
CRM	Irregular

M.E.R.C.U.R.Y. III° Incomplete

Mesorectum	Little bulk
Defects	Down onto muscularis propria
Coning	Yes
CRM	Irregular

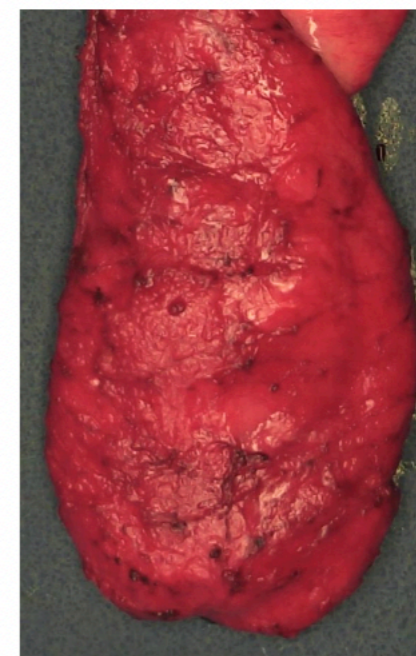


* Primary tumor
 ● Lymph node or deposit
 - - - Resection lines
 - - - Coning

Any coning should downgrade the specimen!



Coning with incomplete dissection at the distal margin



LAR specimen with no coning at distal resection margin

Extent and completeness of mesorectal excision evaluated by postoperative magnetic resonance imaging

P. Bondeven^{1,3}, R. H. Hagemann-Madsen², S. Laurberg¹ and B. Ginnerup Pedersen³

¹Department of Colorectal Surgery P, ²Department of Pathology and ³Department of Diagnostic Imaging, MRI Research Centre, Aarhus University Hospital, Aarhus, Denmark

Correspondence to: Dr P. Bondeven, Department of Colorectal Surgery P, Aarhus University Hospital, Tage-Hansensgade 2, 8000 Aarhus C, Denmark (e-mail: petefred@rm.dk)

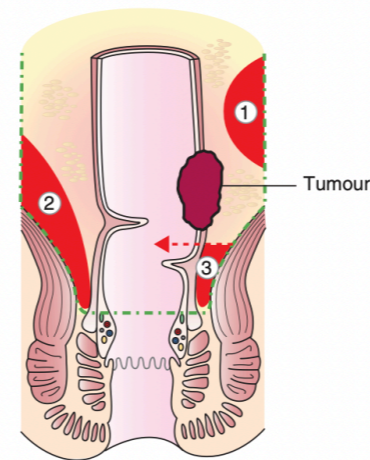
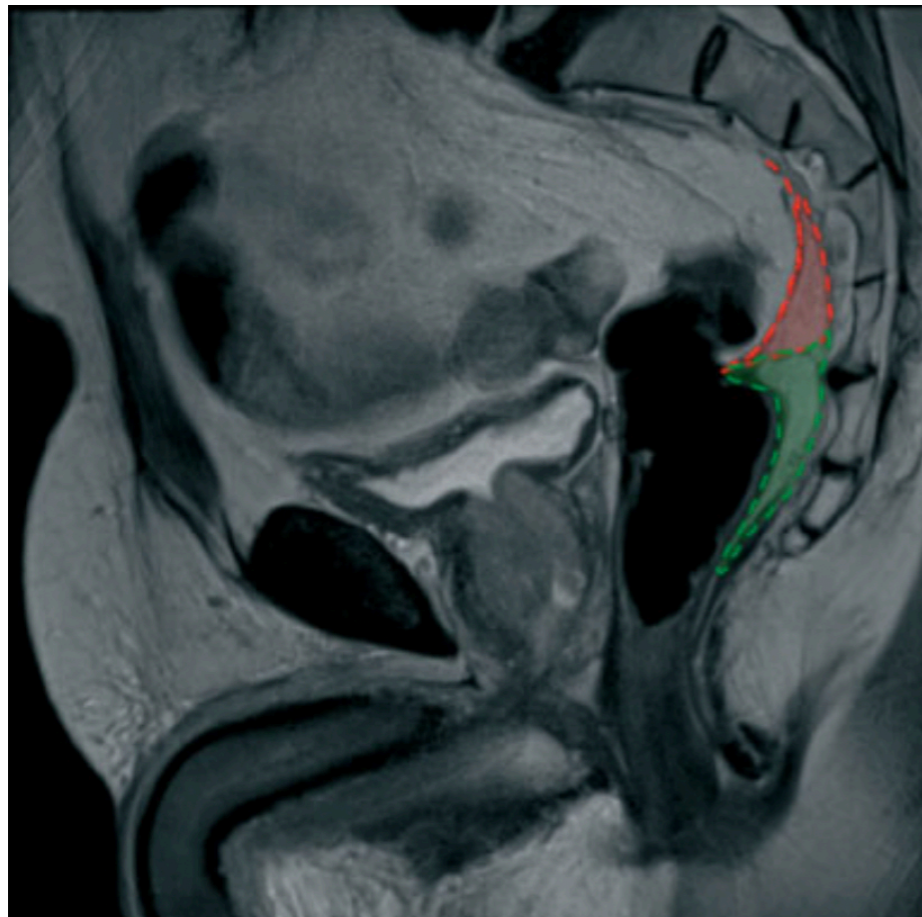


Fig. 2 Residual mesorectum according to localization following total mesorectal excision. Green dashed line indicates complete mesorectal excision. Red area (1) shows cranially located mesorectum independent of the distal level of resection. Red area (2) shows perianastomotic residual mesorectum in direct relation to the anastomosis. Red area (3) shows residual mesorectal tissue below the distal level of resection (red dashed line)

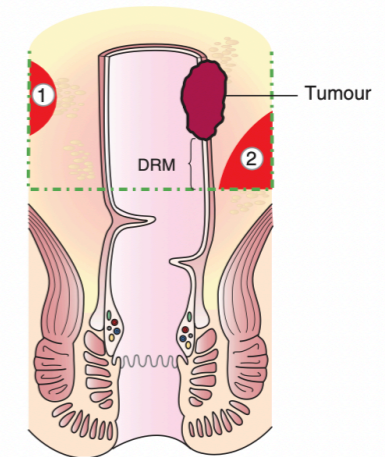


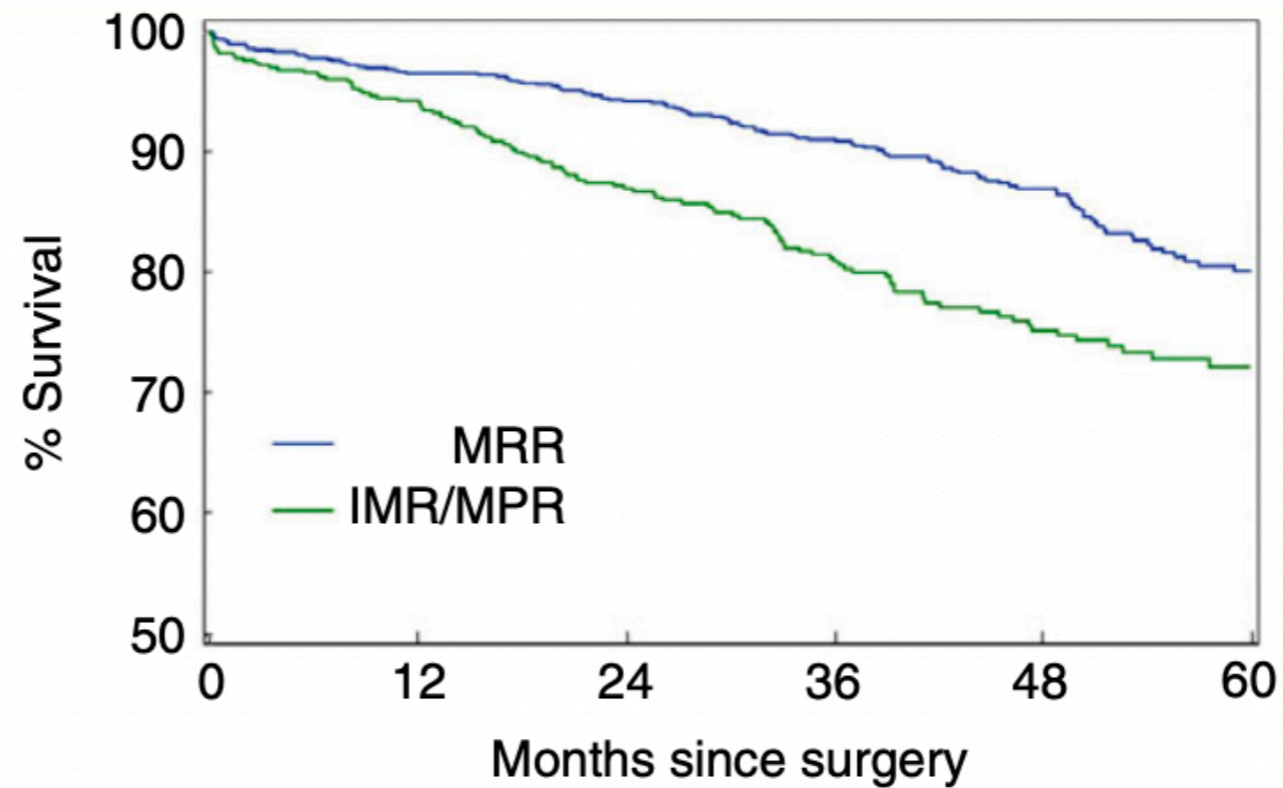
Fig. 3 Inadvertent residual mesorectum according to localization following partial mesorectal excision. Green dashed line indicates optimal dissection and perpendicular transection. Red area (1) shows cranially located mesorectum independent of the distal level of resection. Red area (2) shows perianastomotic residual mesorectum directly above the level of the anastomosis. The distal resection margin (DRM) is marked from the distal border of the primary tumour to the level of resection

Scoring the quality of total mesorectal excision for the prediction of cancer-specific outcome

D. Leonard*, **F. Penninckx†**, **A. Laenen‡**, **A. Kartheuser*** and on behalf of **PROCARE**

*Colorectal Surgery Unit, Cliniques universitaires Saint-Luc, Brussels, Belgium, †Department of Abdominal Surgery, University Clinic Gasthuisberg, Leuven, Belgium and ‡I-Biostat, Katholieke Universiteit Leuven and Universiteit Hasselt, Leuven, Belgium

Received 18 September 2014; accepted 20 December 2014; Accepted Article online 25 February 2015



Number at risk						
MRR	873	842	721	554	357	169
IMR/ MPR	507	477	382	275	187	97

MASTERING the TME

Effect of the plane of surgery achieved on local recurrence in patients with operable rectal cancer: a prospective study using data from the MRC CR07 and NCIC-CTG CO16 randomised clinical trial

Phil Quirke ¹, Robert Steele, John Monson, Robert Grieve, Subhash Khanna, Jean Couture, Chris O'Callaghan, Arthur Sun Myint, Eric Bessell, Lindsay C Thompson, Mahesh Parmar, Richard J Stephens, David Sebag-Montefiore, MRC CR07/NCIC-CTG CO16 Trial Investigators, NCRI Colorectal Cancer Study Group

Clinical Trial > J Clin Oncol. 2002 Apr 1;20(7):1729-34. doi: 10.1200/JCO.2002.07.010.

Macroscopic evaluation of rectal cancer resection specimen: clinical significance of the pathologist's quality control

Iris D Nagtegaal ¹, Cornelis J H van de Velde, Erik van der Worp, Ellen Kapiteijn, Phil Quirke, Han J M van Krieken, Cooperative Clinical Investigators of the Dutch Colorectal Cancer Group

Affiliations + expand

ISSN: 1188-0124 DOI: 10.1007/s11888-012-0124-7

Curr Colorectal Cancer Rep. 2012 Jun;8(2):90-98. doi: 10.1007/s11888-012-0124-7. Published 2012 Mar 27.

The Importance of the Pathologist's Role in Assessment of the Quality of the Mesorectum

Iwan L Bosch ¹, Iris D Nagtegaal

Affiliations + expand

ISSN: 2261-1342 PMID: PMC3343235 DOI: 10.1007/s11888-012-0124-7

ORIGINAL CONTRIBUTIONS: ASSESSMENTS OF MARKERS FOR PROGNOSIS

Does Completeness of the Mesorectal Excision Still Correlate With Local Recurrence?

Garoufalia, Zoe M.D.¹; Freund, Michael R. M.D.²; Gefen, Rachel M.D.^{1,3}; Meyer, Ryan B.S.¹; DaSilva, Giovanna M.D.¹; Weiss, Eric G. M.D.¹; Wexner, Steven D. M.D., Ph.D. (Hons)¹

Author Information 

Diseases of the Colon & Rectum 66(7):p 898-904, July 2023. | DOI: 10.1097/DCR.0000000000002551

MASTERING the TME

Review
Transanal Endorectal Resection (TAR) for Rectal Cancer: A Perspective on Oncological Safety of Transanal Endorectal Resection

Giulio Niccolò Piozzi , Se-Jin Baek , Jung-Myun Kwak, Jin Kim  and Seon Hahn Kim 

Division of Colon and Rectal Surgery, Department of Surgery, Korea University Anam Hospital, Korea University College of Medicine, Seoul 02841, Korea; guglielmopiozzi@gmail.com (G.N.P.); xezin@korea.ac.kr (S.-J.B.); jmkwak@korea.ac.kr (J.-M.K.); mrgs@korea.ac.kr (J.K.)
 * Correspondence: drkimsh@korea.ac.kr; Tel.: +82-029-205-978

Careful dissection Accurate study of anatomy

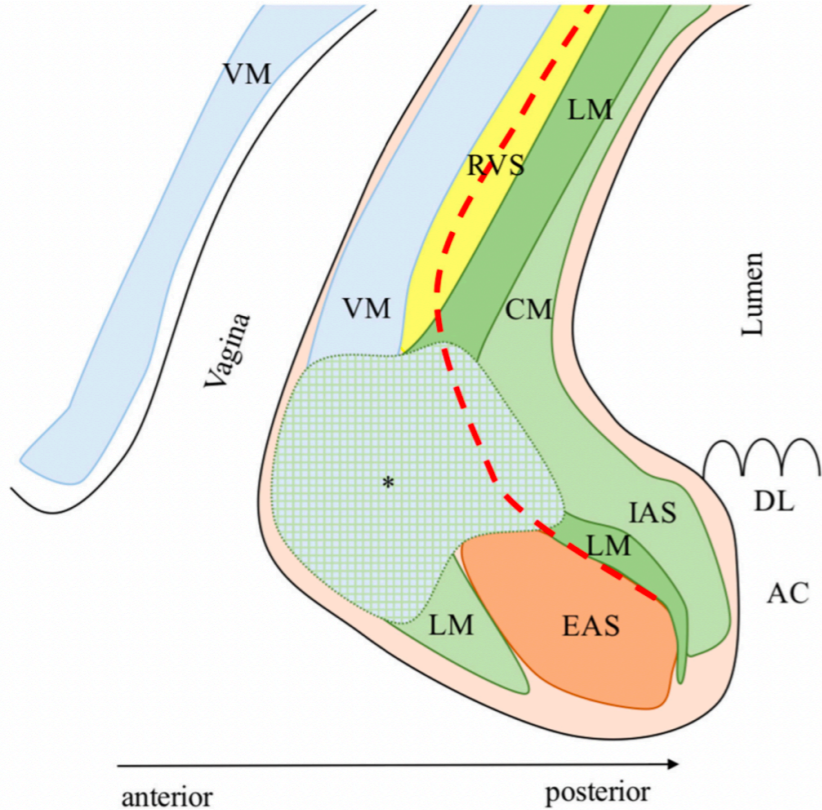


Figure 3. Female's anterior anatomy. AC: Anal canal; CM: Circular muscle of the anal canal; DL:

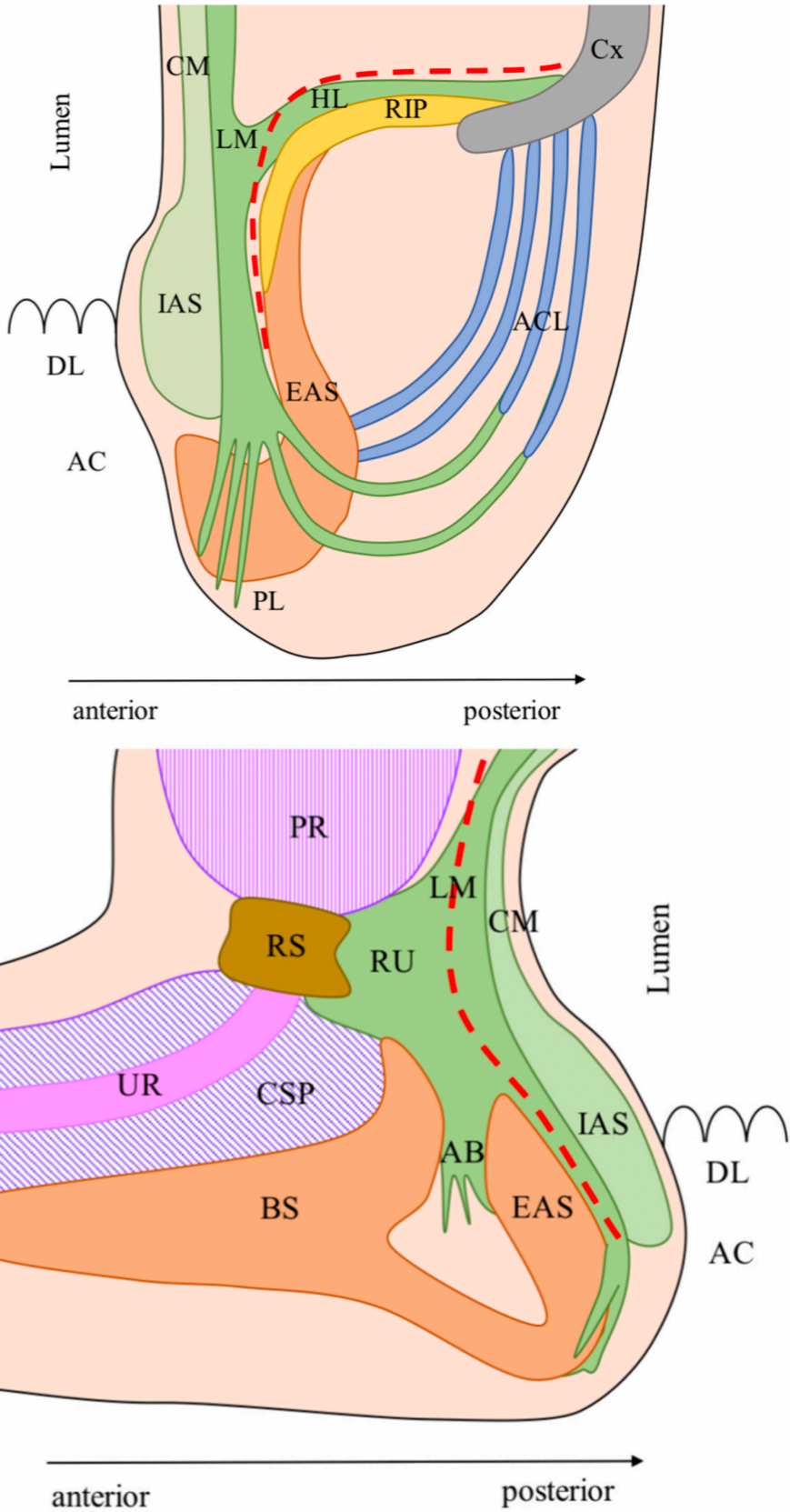


Figure 2. Male's anterior anatomy. AB: Anterior bundle of the LM; AC: Anal canal; BS: Bulbospor

Essential knowledge and technical tips for total mesorectal excision and related procedures for rectal cancer

Min Soo Cho^{ID}, Hyeon Woo Bae^{ID}, Nam Kyu Kim^{ID}

Division of Colon and Rectal Surgery, Department of Surgery, Seoul National University College of Medicine, Seoul, Korea

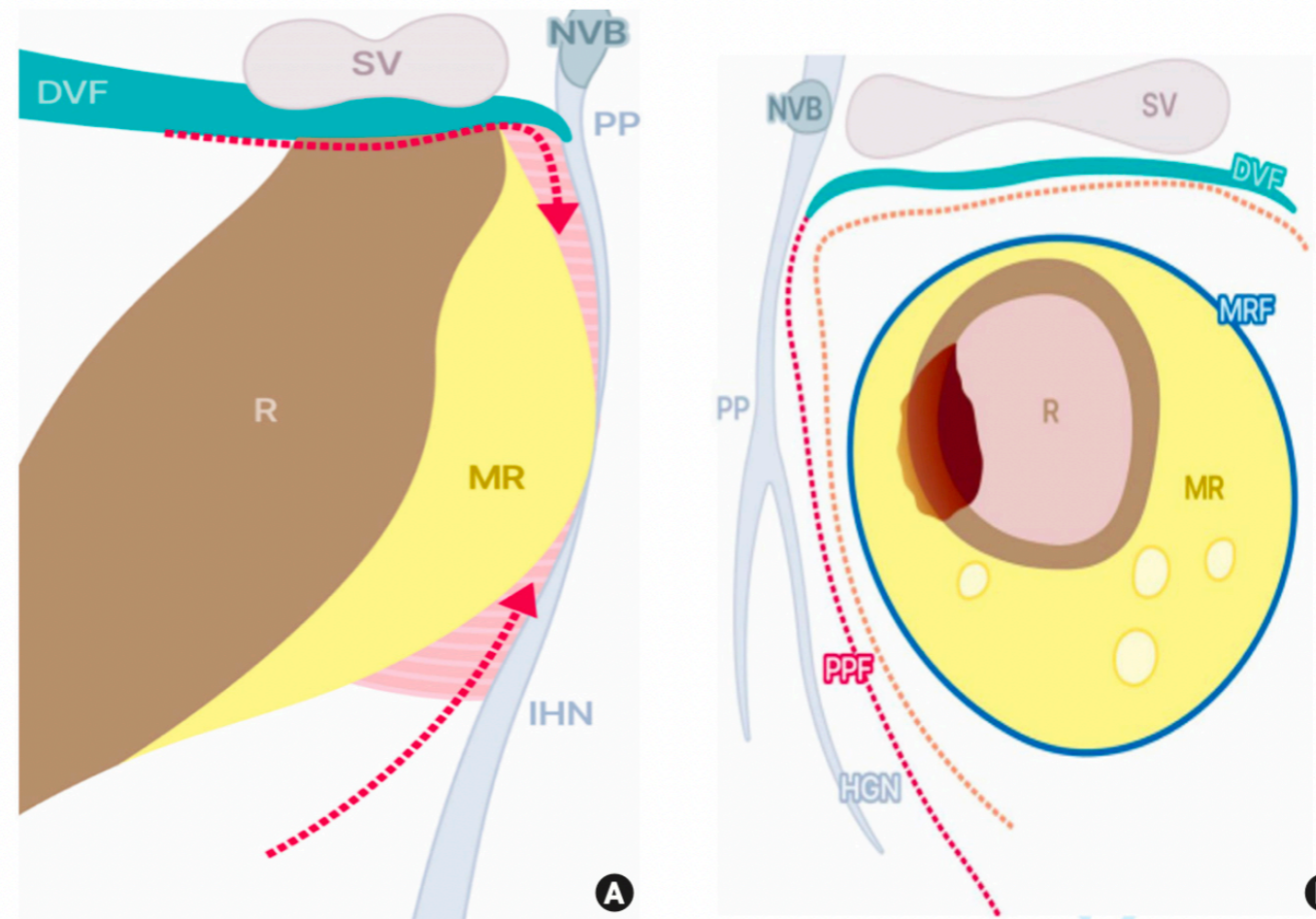
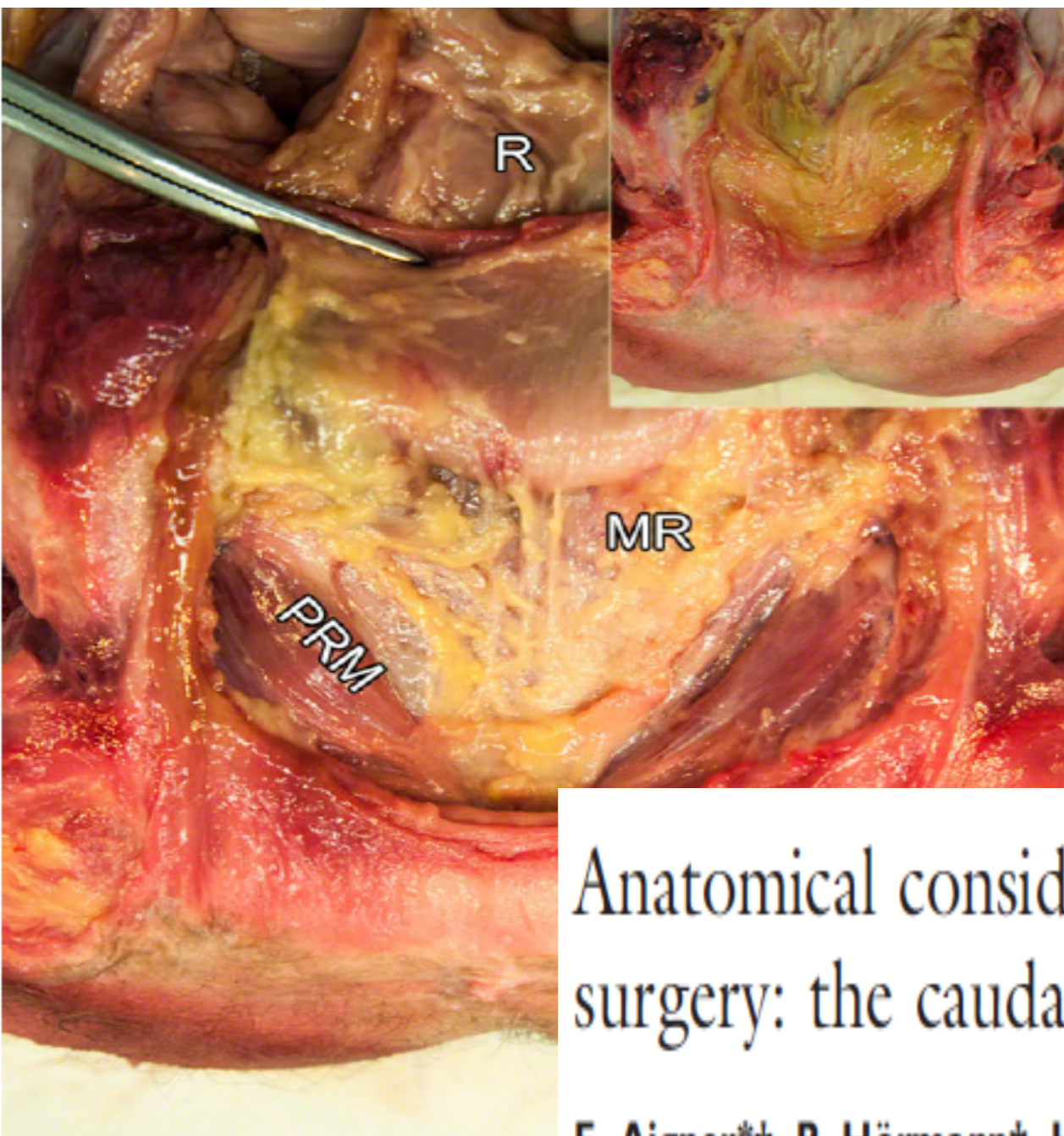


Fig. 16. Schematic images. (A) Red dotted lines depict anterolateral dissection behind the Denonvilliers fascia (DVF), and this dissection plane meets with posterolateral pelvic dissection along the parietal pelvic fascia (PPF), while preserving the hypogastric nerve (HGN) and division of rectosacral fascia. (B) The orange dotted line indicates the proposed dissection line. DVF and its lateral border meet with the PPF. Underneath

MASTERING the TA TME

Re evaluation of Anatomy



Anatomical considerations for transanal minimal-invasive surgery: the caudal to cephalic approach

F. Aigner*†, R. Hörmann‡, H. Fritsch‡, J. Pratschke*†, A. D'Hoore§, E. Brenner‡, N. Williams¶, M. Biebl*† and for the TAMIS TME Collaboration Group¹

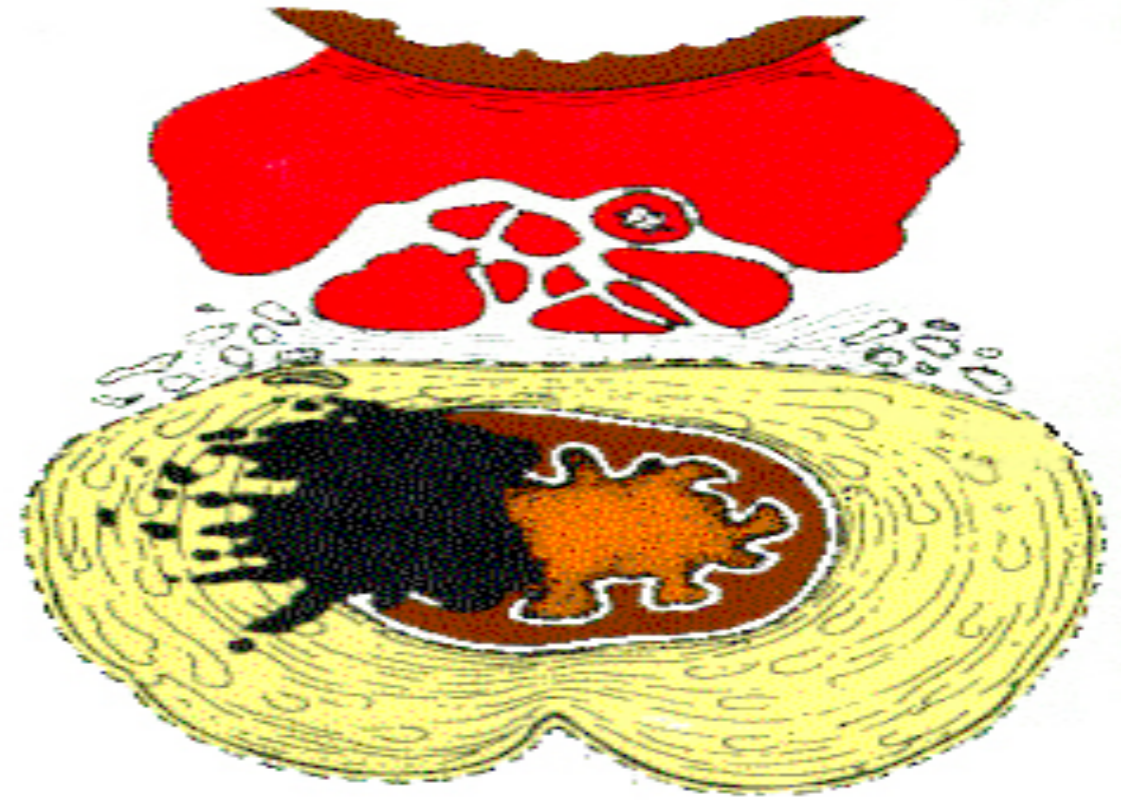
*Department of Visceral, Transplant and Thoracic Surgery, Innsbruck Medical University, Innsbruck, Austria, †Department for General, Visceral and Transplantation Surgery, Charité Universitätsmedizin, Berlin, Germany, ‡Department of Anatomy, Histology and Embryology, Division for Clinical and Functional Anatomy, Innsbruck Medical University, Innsbruck, Austria, §Department of Abdominal Surgery, University Hospitals Gasthuisberg, Leuven, Belgium and ¶National Centre for Bowel Research and Surgical Innovation, Centre for Digestive Diseases, Barts and the London School of Medicine and Dentistry, Queen Mary University London, London, UK

Received 6 July 2014; accepted 20 September 2014; Accepted Article online 23 November 2014

MASTERING the TME



OPEN



LAP



ROB



TATME

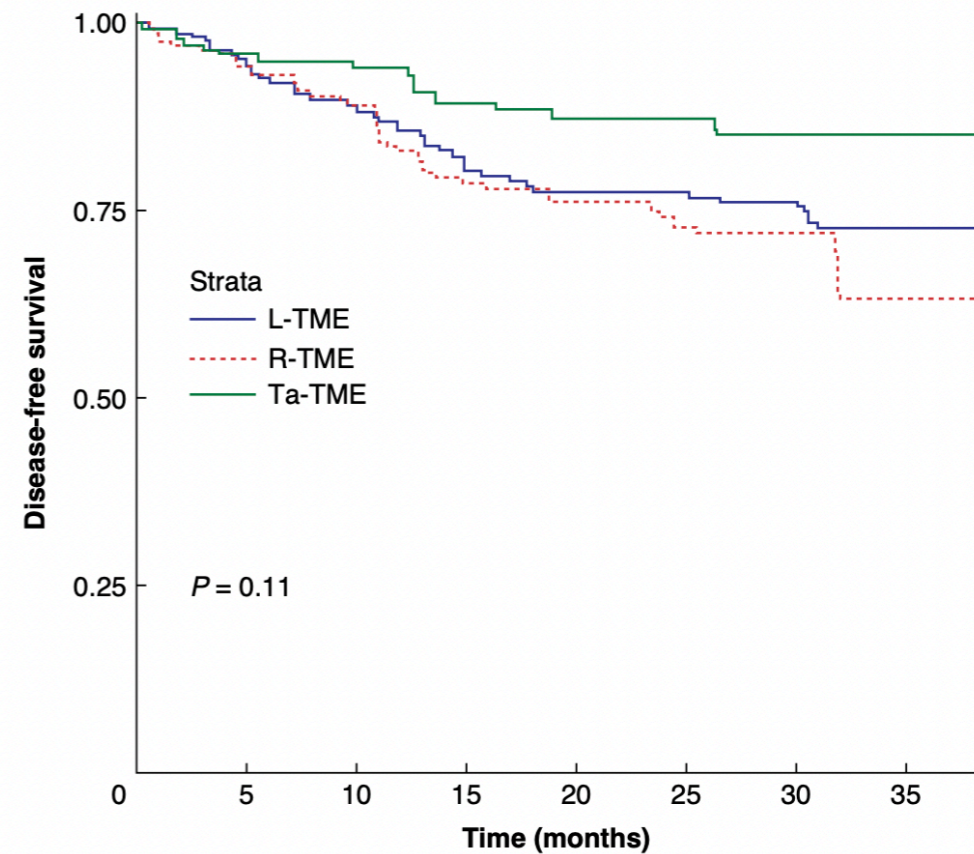
OPEN VS LAP VS ROBOTIC VS TATME



BJS Open, 2024, zrae044
<https://doi.org/10.1093/bjsopen/zrae044>
Original Article

Robotic, transanal, and laparoscopic total mesorectal excision for locally advanced mid/low rectal cancer: European multicentre, propensity score-matched study

Nicola de'Angelis¹ , Francesco Marchegiani^{2,3} , Aleix Martínez-Pérez^{4,5}, Alberto Biondi⁶ , Salvatore Pucciarelli⁷ , Carlo Alberto Schena^{1,*} , Gianluca Pellino⁸ , Miquel Kraft⁸, Annabel S. van Lieshout⁹, Luca Morelli¹⁰, Alain Valverde¹¹, Renato Micelli Lupinacci¹¹, Segundo A. Gómez-Abril⁴, Roberto Persiani⁶, Jurriaan B. Tuynman⁹, Eloy Espin-Basany⁸, Frederic Ris¹² and on behalf of the European MRI and Rectal Cancer Surgery (EuMaRCS) Study Group



No. at risk	0	5	10	15	20	25	30	35
L-TME	407	369	322	259	231	203	173	118
R-TME	367	266	229	166	139	109	85	59
Ta-TME	312	277	232	190	167	146	125	109



Contents lists available at [ScienceDirect](#)

European Journal of Surgical Oncology

journal homepage: www.ejso.com



Surgical approach for rectal cancer: A network meta-analysis comparing open, laparoscopic, robotic and transanal TME approaches



Odhrán K. Ryan ^{a,*}, Éanna J. Ryan ^b, Ben Creavin ^b, Emanuele Rausa ^c, Michael E. Kelly ^b, Fausto Petrelli ^c, Gianluca Bonitta ^c, Rory Kennelly ^b, Ann Hanly ^b, Seán T. Martin ^b, Des C. Winter ^{a,b}

^a School of Medicine, University College Dublin, Belfield, Dublin 4, Ireland

^b Department of Surgery, Surgical Professorial Unit, St Vincent's University Hospital, Elm Park, Dublin 4, Ireland

^c Division of Surgical Oncology, ASST—Bergamo Ovest, Treviglio, Italy

Technique selection should be based on individual tumour characteristics and patient expectations, **as well as surgeon and institutional expertise**



BJS Open, 2024, zrae069

<https://doi.org/10.1093/bjsopen/zrae069>

Invited Commentary

Right tool for the right job in the right way: robotic, transanal, or laparoscopic approach for rectal cancer

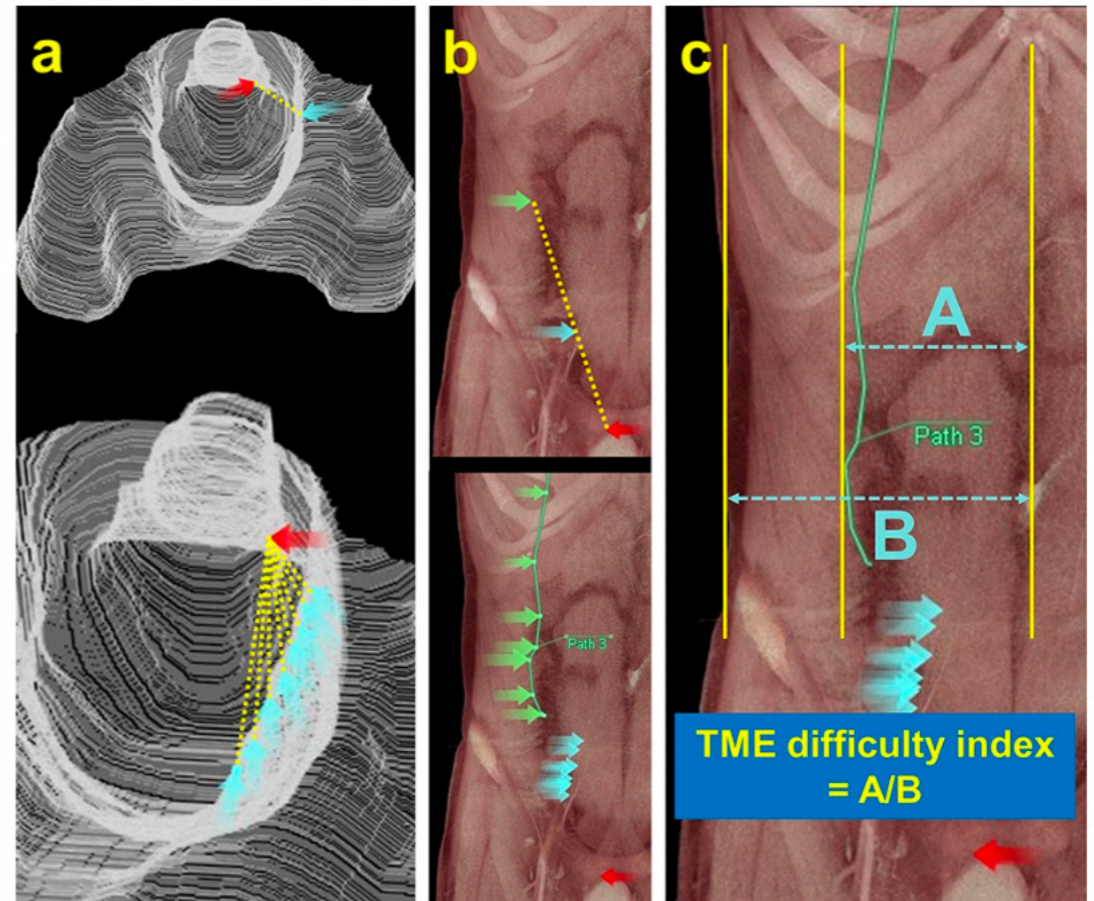
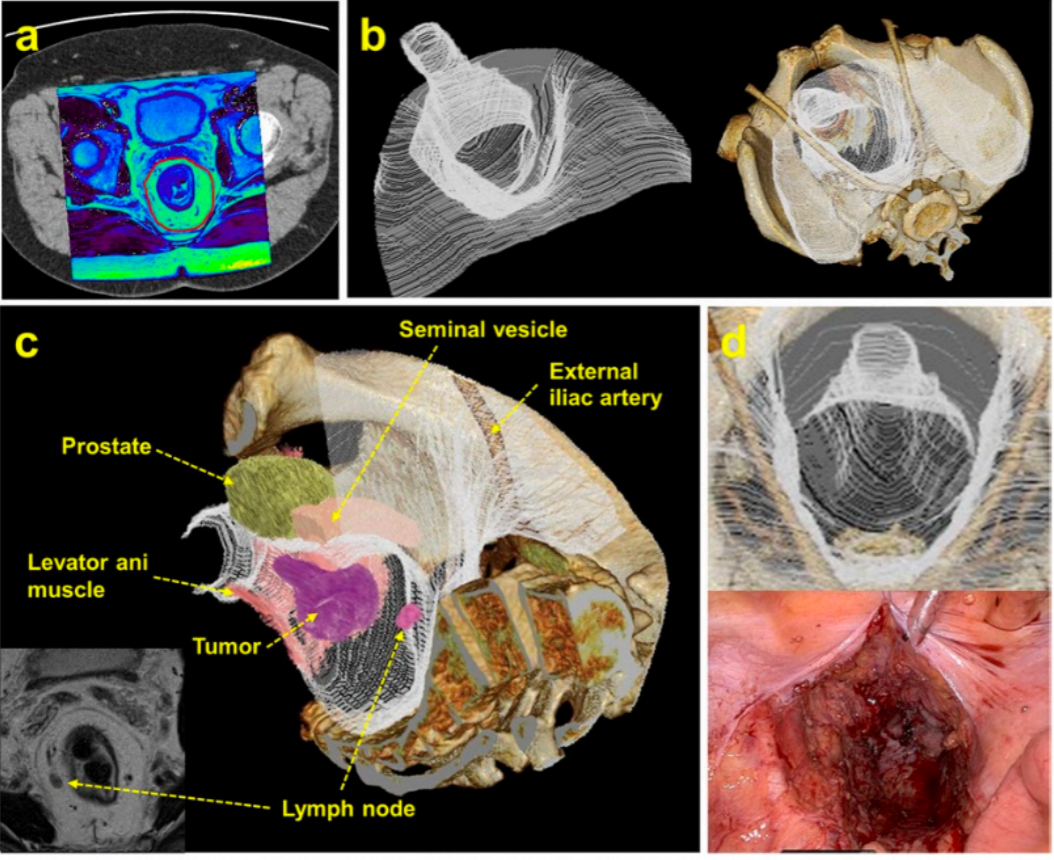
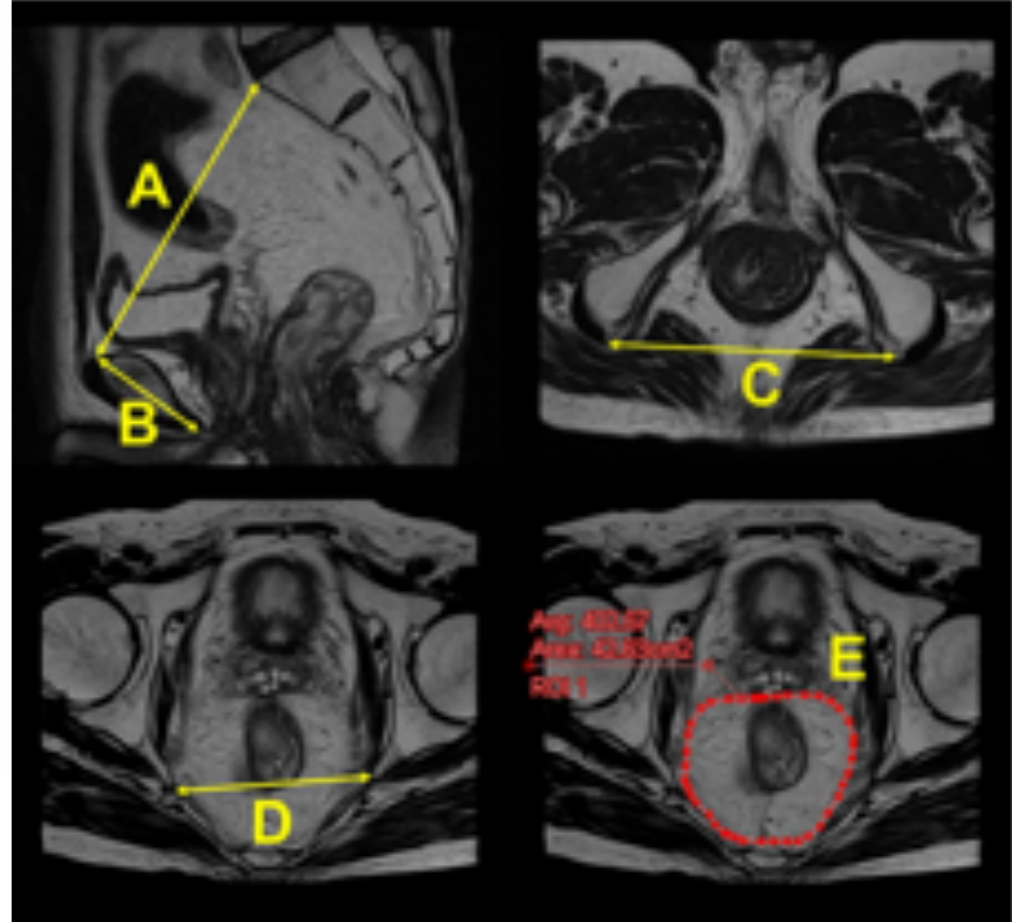
Deborah S. Keller*

Division of Digestive Surgery, University of Strasbourg, Strasbourg, France

*Correspondence to: Deborah S. Keller, Division of Digestive Surgery, University of Strasbourg, 1 Place de L'Hopital, Strasbourg 06700, France (e-mail: debby_keller@hotmail.com)

Three-dimensional visualization of the total mesorectal excision plane for dissection in rectal cancer surgery and its ability to predict surgical difficulty

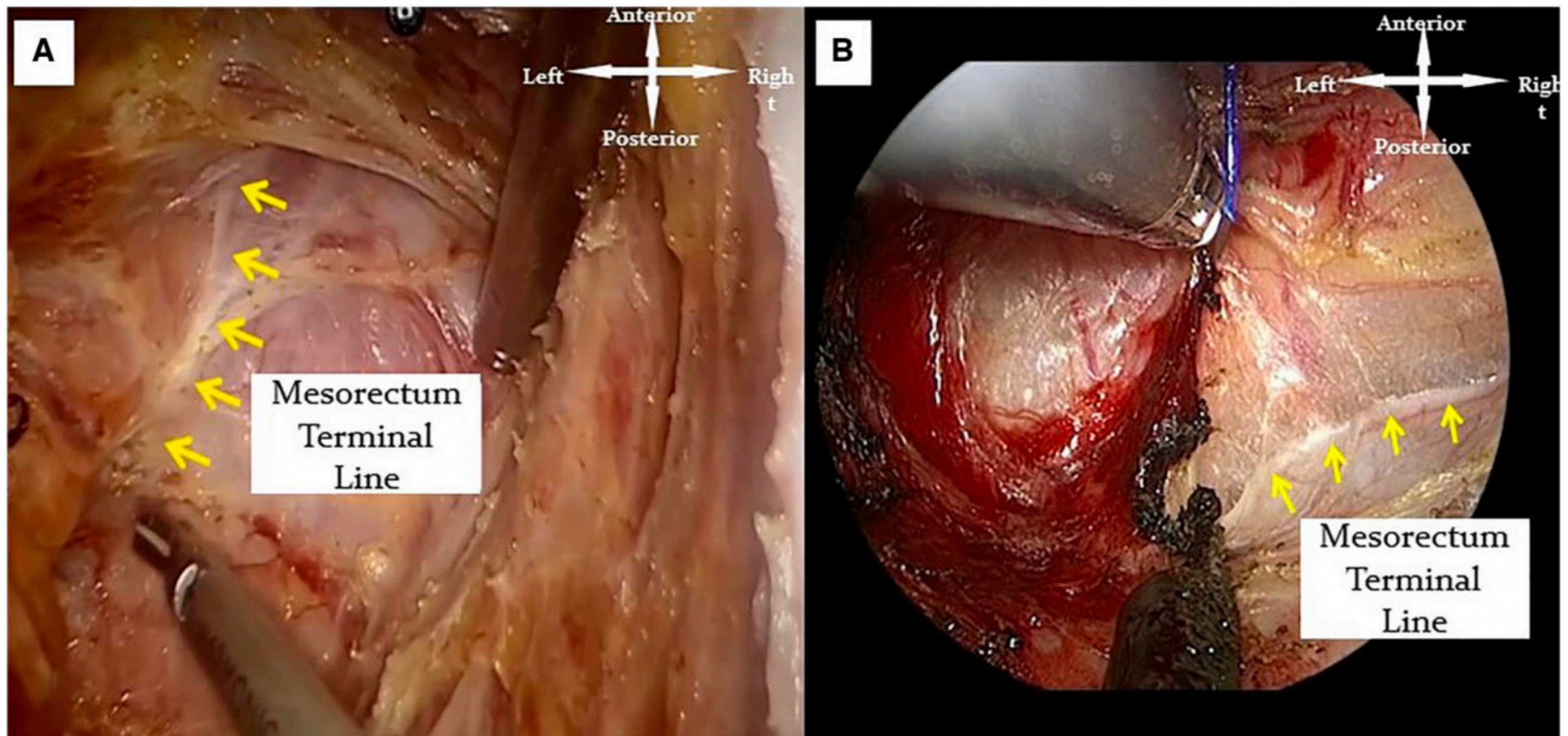
Yuzo Nagai, Kazushige Kawai, Hiroaki Nozawa, Kazuhito Sasaki, Koji Murono, Shigenobu Emoto, Yuichiro Yokoyama, Hiroyuki Matsuzaki, Shinya Abe, Hirofumi Sonoda, Yuichiro Yoshioka, Takahide Shinagawa & Soichiro Ishihara



ORIGINAL ARTICLE

The “terminal line”: a novel sign for the identification of distal mesorectum end during TME for rectal cancer

Waleed M. Ghareeb^{1,2,†}, Xiaojie Wang^{1,†}, Xiaozhen Zhao⁴, Meirong Xie⁵, Sameh H. Emile^{6,7}, Sherief Shawki^{3,*,‡} and Pan Chi ^{1,*,‡}



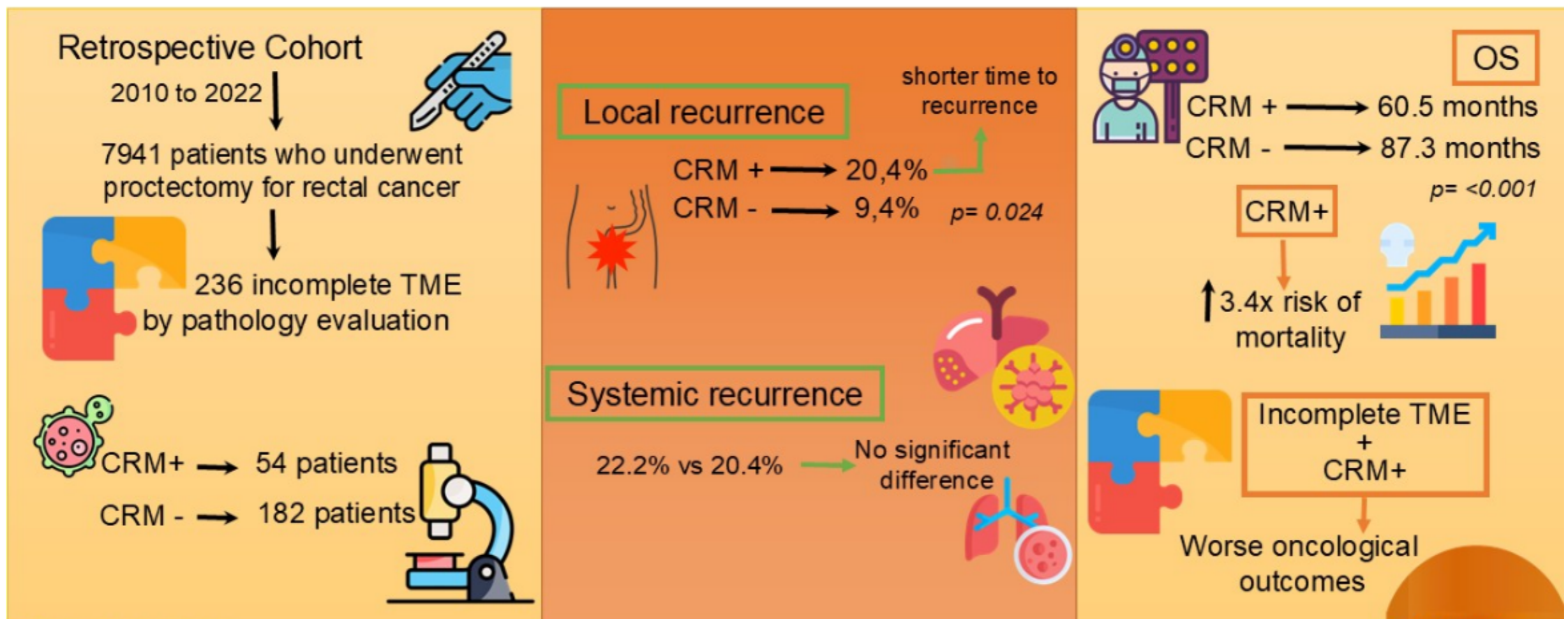


Margin matters: analyzing the impact of circumferential margin involvement on survival and recurrence after incomplete total mesorectal excision for rectal cancer




A. Alipouriani¹ · F. Almadi¹ · D. R. Rosen¹ · D. Liska¹ · A. E. Kanters¹ · K. Ban¹ · E. Gorgun¹ · S. R. Steele^{1,2}

Received: 12 July 2024 / Accepted: 22 December 2024
© The Author(s) 2025

Impact of CRM+ on survival and recurrence after incomplete TME for rectal cancer



Total mesorectal excision quality in rectal cancer surgery affects local recurrence rate but not distant recurrence and survival: population-based cohort study

Åsa Collin^{1,*} , Cecilia Dahlbäck^{2,3} , Joakim Folkesson¹ and Pamela Buchwald^{2,3} 

¹Department of Surgical Sciences, Uppsala University Hospital, Uppsala, Sweden

²Department of Clinical Sciences Malmö, Lund University, Malmö, Sweden

³Department of Surgery, Skåne University Hospital, Malmö, Sweden

*Correspondence to: Åsa Collin, Department of Surgical Sciences, Colorectal Surgery, Uppsala University, 751 85 Uppsala, Sweden (e-mail: asa.collin@uu.se)

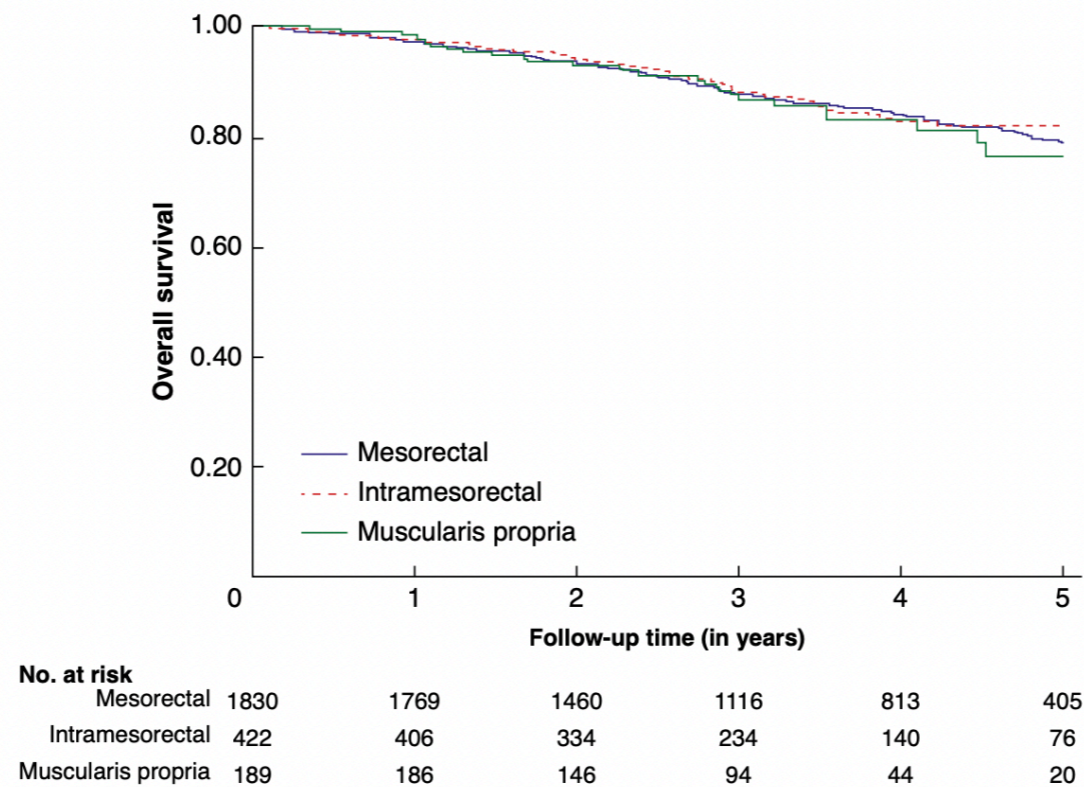


Fig. 2 Overall survival in patients with mesorectal, intramesorectal and muscularis propria resection

Suboptimal surgery and omission of neoadjuvant therapy for upper rectal cancer is associated with a high risk of local recurrence

P. Bondeven*†, S. Laurberg*, R. H. Hagemann-Madsen‡ and B. Ginnerup Pedersen†

*Department of Surgery P, Aarhus University Hospital, Aarhus, Denmark, †Department of Radiology, Aarhus University Hospital, Aarhus, Denmark and

‡Department of Pathology, Aarhus University Hospital, Aarhus, Denmark

Received 8 July 2014; accepted 9 October 2014; Accepted Article online 15 December

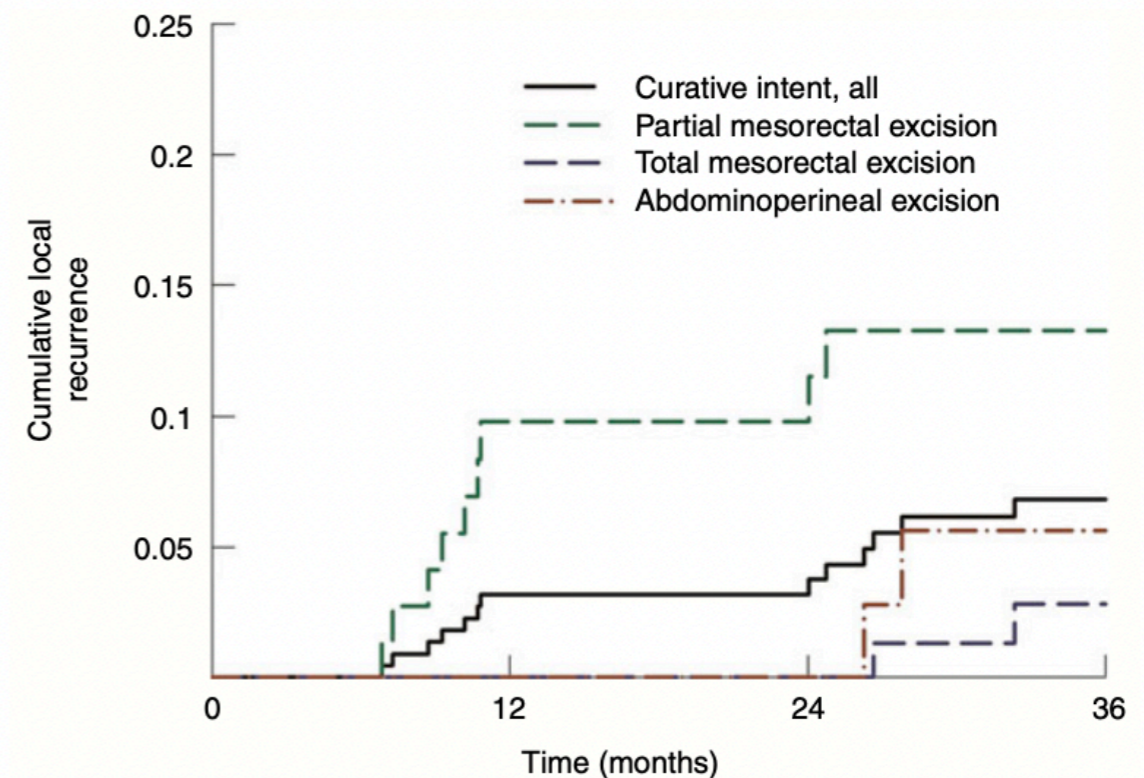
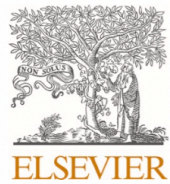


Figure 2 Actuarial local recurrence rates after surgery for primary rectal cancer with curative intent.

TAYLORING DISTAL MARGIN: PME vs TME

European Journal of Surgical Oncology 49 (2023) 107069



Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

European Journal of Surgical Oncology

journal homepage: www.ejso.com



Review Article

Tumour-specific mesorectal excision for rectal cancer: Systematic review and meta-analysis of oncological and functional outcomes

Fabio Carbone^{a,*}, Wanda Petz^a, Simona Borin^a, Emilio Bertani^a, Stefano de Pascale^a, Maria Giulia Zampino^b, Uberto Fumagalli Romario^a

^a Digestive Surgery, European Institute of Oncology IRCCS, Milan, Italy

^b Division of Gastrointestinal Medical Oncology and Neuroendocrine Tumors, European Institute of Oncology IRCCS, Milan, Italy

tumour-specific mesorectal excision (TSME) for rectal cancer has good oncological results and leads to the best fitted functional results possible for the patient's condition.

Table 3

Summary and quality of the evidence.

Outcome	Number of patients/ studies	Pooled effect estimates, %		Pooled relative effects (95%CI)	Heterogeneity, I ² %	P-value for the overall effect estimate	Quality of evidence (GRADE)
		PME	TME				
CRM positivity	550/3	5.1	4.5	OR 1.31 (0.43–3.95)	38	0.640	++++
Local recurrence	2032/8	–	–	HR 1.05 (0.52–2.10)	40	0.900	++++
Postoperative leakage	7061/10	6.9	10.9	OR 0.42 (0.27–0.67)	60	<0.001	+++
Major LARS	2672/7	27.4	54.1	OR 0.34 (0.28–0.40)	0	<0.001	++++
Faecal incontinence	460/3	28.6	58.9	OR 0.26 (0.10–0.66)	75	0.005	++
Urinary incontinence	72/1	8.6	12.2	OR 0.68 (0.13–3.67)	–	0.660	++
Urinary retention	189/1	5.3	2.7	OR 2.00 (0.24–16.51)	–	0.520	++
Chronic pain	893/1	23.9	31.7	OR 0.68 (0.50–0.92)	–	0.010	++

GRADE score, quality of evidence: + very low; ++++ high quality. Findings were graded as high (++++) as starting judgement point and downgraded according to the risk of bias, imprecision, inconsistency, and indirectness.

PME: partial mesorectal excision; TME: total mesorectal excision; OR: Odds ratio. HR: hazard ratio. 95%CI: 95% confidence interval.

TAYLORING DISTAL MARGIN PME vs TME

Techniques in Coloproctology (2023) 27:11–21
<https://doi.org/10.1007/s10151-022-02690-1>

REVIEW



Required distal mesorectal resection margin in partial mesorectal excision: a systematic review on distal mesorectal spread

A. A. J. Grüter¹  · A. S. van Lieshout¹  · S. E. van Oostendorp^{1,2}  · J. C. F. Ket³  · M. Tenhagen¹  ·
F. C. den Boer⁴  · R. Hompes⁵  · P. J. Tanis^{5,6}  · J. B. Tuynman¹ 

Received: 18 February 2022 / Accepted: 15 August 2022 / Published online: 29 August 2022
© The Author(s) 2022

This systematic review shows that PME is a safe procedure in those patients where a margin of 5 cm can be obtained. The data revealed an incidence of DMS in rectal cancer of 11% overall, which was 1% and 13% with and without long- course neoadjuvant CRT.

Prospective studies evaluating margins based on high-quality preoperative MRI and pathological assessment are required.

CONCLUSIONS

- High quality TME is crucial for prognosis of rectal cancer patients
- Optimal surgical procedure influences the outcome
- Dedicated Mastering and standardization of procedure is requested
- Adequate pathological examination is mandatory and irrespective of surgical approach the TME surgery has to be evaluated by properly trained pathologist