

Anorectal Surgery

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Where the sun never shines

History of anorectal surgery

- Parks local excision 1966
 - Low quality
 - Only lower rectum (<6cm)
- Buess et al., „Das System für die transanale endoskopische Rectumoperation.“ Chirurg 1983

Endoscopy 17 (1985) 31–35
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Endoscopic Surgery in the Rectum

G. Bueß, R. Theiß, M. Günther*, F. Hutterer, and H. Pichlmaier

Department of Surgery, University of Cologne (Director: Prof. Dr. Dr. H. Pichlmaier), Cologne, West Germany
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History of anorectal surgery

Surg Endosc. 2010 Sep;24(9):2200-5. doi: 10.1007/s00464-010-0927-z. Epub 2010 Feb 21.

Transanal minimally invasive surgery: a giant leap forward.

Atallah S¹, Albert M, Larach S.

Results

Six patients, aged 43–85 years old (mean = 59.8), underwent TAMIS resection of rectal lesions. The average distance from the anal verge was 9.3 cm and the mean tumor diameter confirmed by pathology measured 2.93 cm. There were no conversions from TAMIS to conventional transanal excision. While the average operating time was 86 min, four of the six TAMIS resections (67%) were completed in less than 1 h. The mean set-up time was only 1.9 min and this may be one reason that the mean operative time was considerably less than the average operative time for TEM surgery (120–140 min). In short-term follow-up, there was no morbidity or mortality observed.

Conclusions

TAMIS is a feasible alternative to TEM, providing its benefits at a fraction of the cost.

Status quo

NOTES transanal rectal cancer resection using transanal endoscopic microsurgery and laparoscopic assistance

Patricia Sylla, David W. Rattner, Salvadora Delgado, Antonio M. Lacy

- taTME 2010
 - „bottom up TME“, „TAMIS TME“...
 - Hybrid-OP
 - Better excision of the mesorectum !?

Br J Surg. 2013 Sep;100(10):1357-67. doi: 10.1002/bjs.9225.

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

Bondeven P¹, Hagemann-Madsen RH, Laurberg S, Pedersen BG.



36% of lap. TME leave mesorectum behind

Transanal Total Mesorectal Excision in Rectal Cancer *Short-term Outcomes in Comparison With Laparoscopic Surgery*

María Fernández-Hevia, MD, Salvadora Delgado, MD, PhD,* Antoni Castells, MD, PhD,† Marta Tasende, MD,* Dulce Momblan, MD,* Gabriel Díaz del Gobbo, MD,* Borja DeLacy, MD,* Jaume Balust, MD, PhD,* and Antonio M. Lacy, MD, PhD**

- „big“ cohort with 37 patients
- Shorter operation length via taTME
- Equal morbidity

Status quo

TaTME
International



As of the 9th of November 2016

1700

Registered cases

181

Registered centres

34

Countries

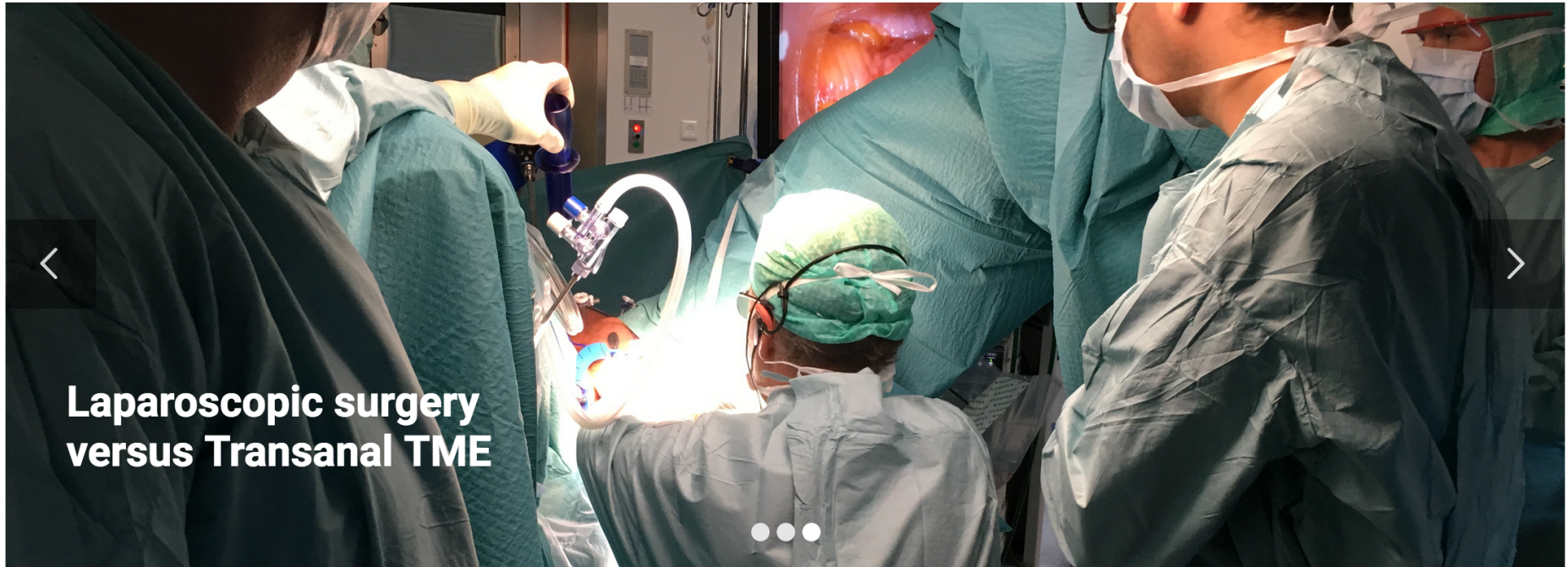
Transanal total mesorectal excision (taTME) for rectal cancer: a systematic review and meta-analysis of oncological and perioperative outcomes compared with laparoscopic total mesorectal excision

[Bin Ma](#),[#] [Peng Gao](#),[#] [Yongxi Song](#), [Cong Zhang](#), [Changwang Zhang](#), [Longyi Wang](#), [Hongpeng Liu](#), and [Zhenning Wang](#)

Conclusions

In comparison with laTME, taTME seems to achieve comparable technical success with acceptable oncologic and perioperative outcomes. However, multicenter randomized controlled trials are required to further evaluate the efficacy and safety of taTME.

- 7 studies with 573 patients enrolled



- COLOR III Trial:
 - „A randomized clinical trial comparing transanal and traditional laparoscopic TME for rectal cancer.“

Mechanical aspects

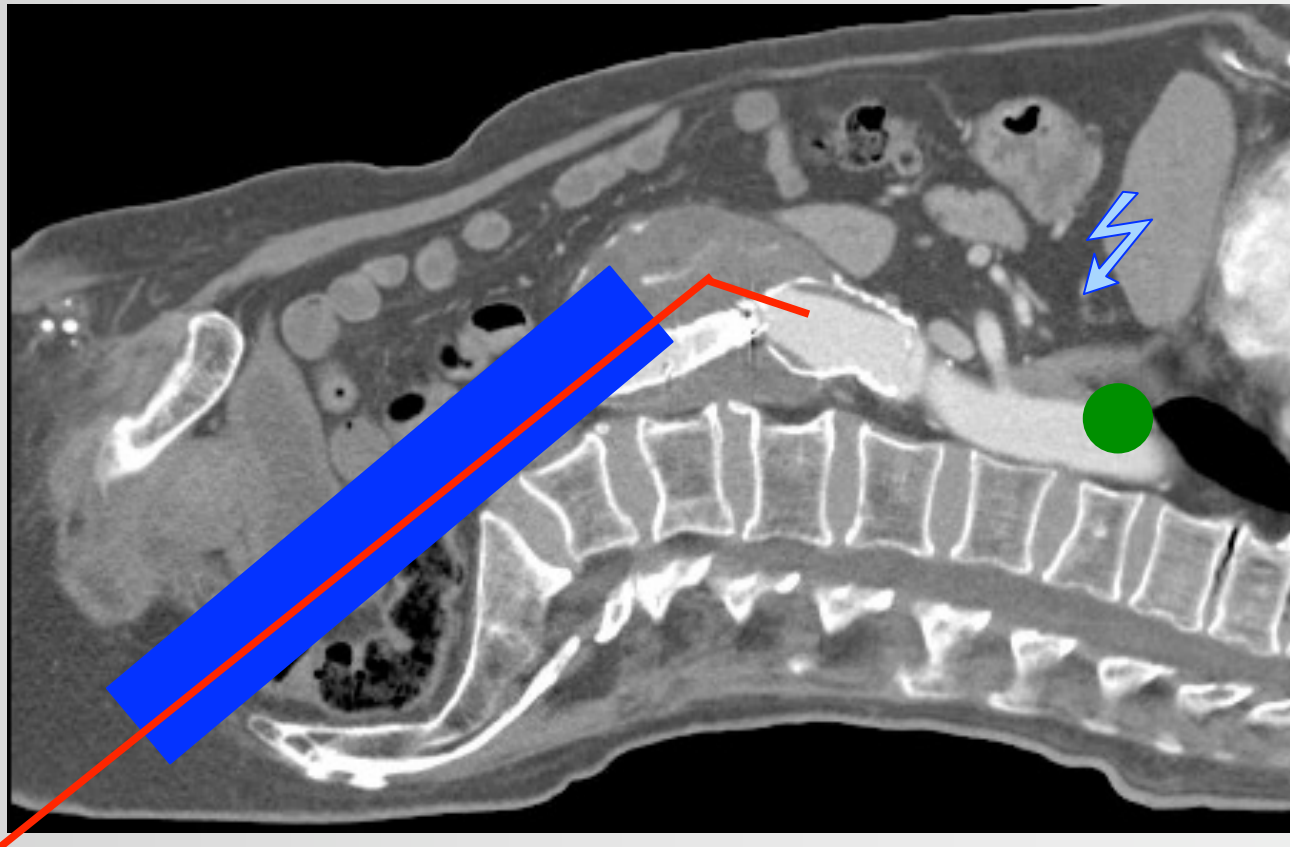
- Different curvatures
 - Single/double bent
- Soft docks for more mobility
 - GelPOINT, D-Port, B-Port
- High flow Ventilation
- AirSeal

Mechanical aspects

- [illegible]

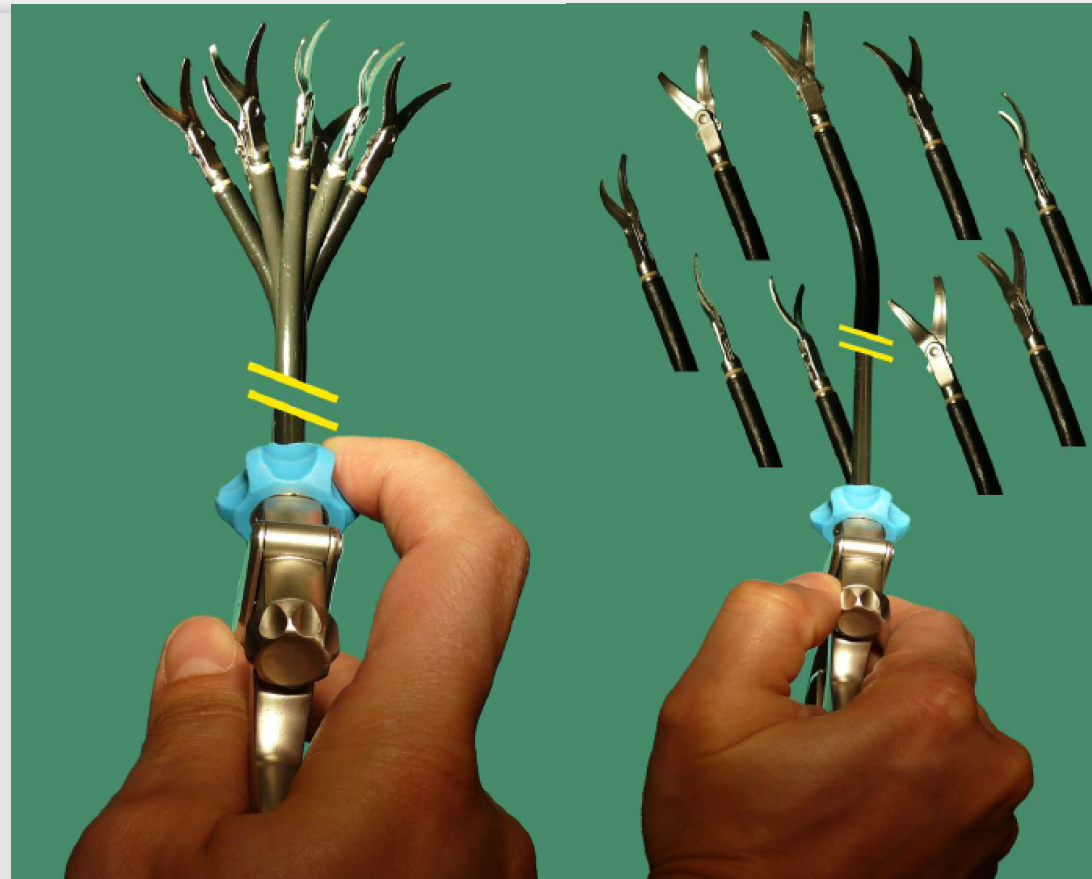
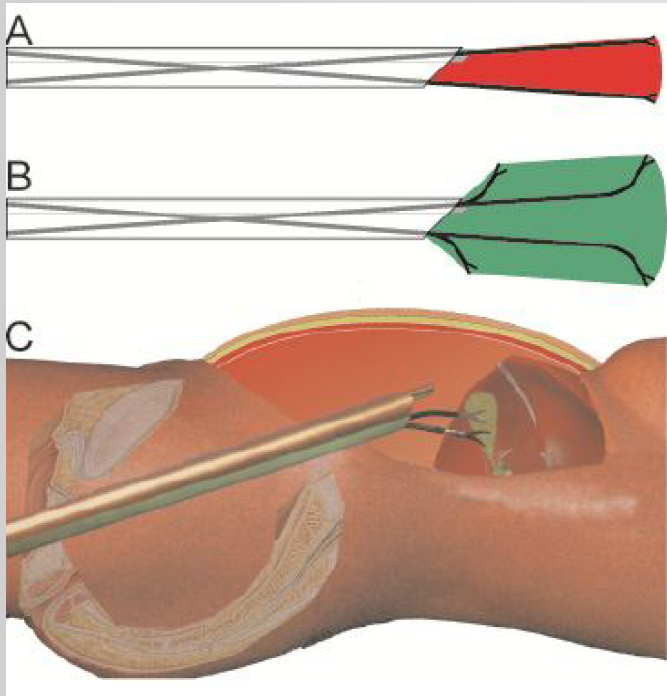
Mechanical aspects

- Transanal only?
 - Left flexure not reachable



Mechanical aspects

- Transanal only?
 - Dissertation Hemanga 2011



A novel single-port technique for transanal rectosigmoid resection and colorectal anastomosis on an ex vivo experimental model

Hemanga K. Bhattacharjee • Gerhard F. Buess •
Francisco Cesar Becerra Garcia • Pirmin Storz •
Mousumi Sharma • Sidonia Susana • Andreas Kirschniak •
Mahesh C. Misra

Surg Endosc
DOI 10.1007/s00464-010-1476-1

Mechanical aspects



[Techniques in Coloproctology](#)

May 2016, Volume 20, [Issue 5](#), pp 273–278

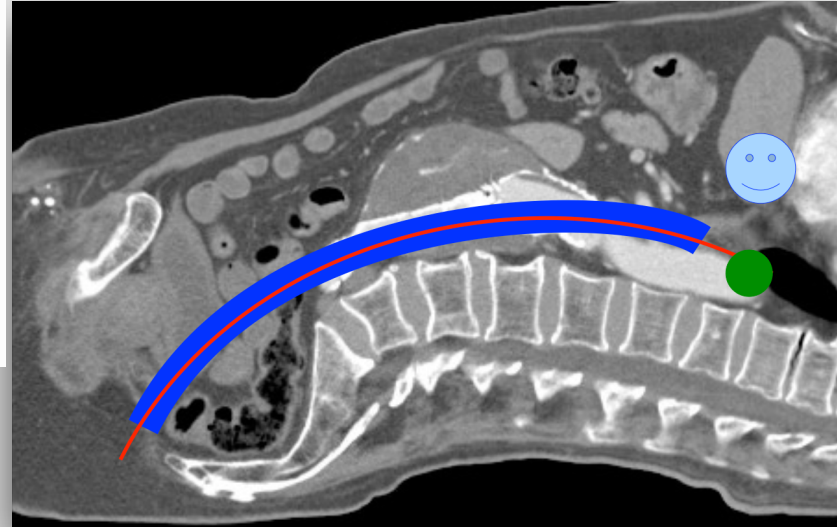
Pure Natural Orifice Transluminal Endoscopic Surgery (NOTES) with a new elongated, curved Transanal Endoscopic Operation (TEO) device for rectosigmoid resection: a survival study in a porcine model

Authors

[Authors and affiliations](#)

P. Wilhelm, S. Axt, P. Storz, S. Wenz, S. Müller, A. Kirschniak 

- Transanal only?
 - Dissertation Wilhelm 2017
 - Curved TEO in cooperation with Karl Storz Tuttlingen



Mechanical aspects - FLEXMIN

- DFG-Projekt with TU Darmstadt
- haptic feedback
- curved-FLEXMIN

