



# Complete Mesocolic Excision What is the Evidence

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# CME

- What is the rationale?
- What is it?
- WHAT IS THE EVIDENCE FOR ITS' IMPLEMENTATION?

# Hypothesis

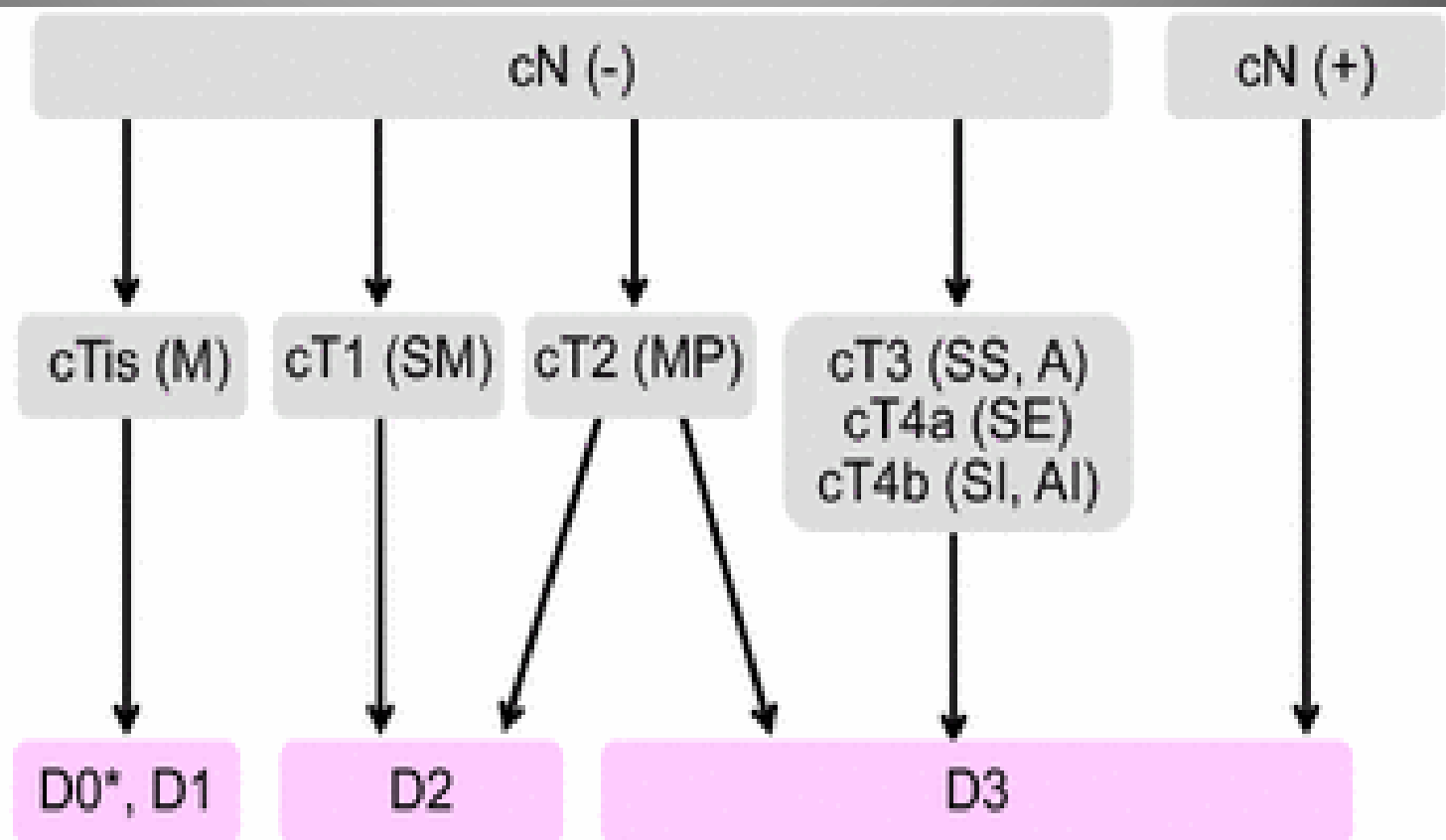
## TME

- Improvement in local recurrence and overall survival in patients with rectal cancer.
- Despite this local recurrence dependent on CRM even if performed by TME.
- Dependent on preoperative planning as well as technique of surgery.

# Method of CME as a Concept

- If TME has improved rates of recurrence and overall survival :
- Can't the same be done for colonic disease?
- The Japanese have been doing similar surgery since the late 1980s
- Japanese Society for Cancer of the Colon and Rectum (JSCCR) Guidelines 2014 for treatment of colorectal cancer, Toshiaki Watanabe, Michio Itabashi, Yasuhiro Shimada, Shinji Tanaka, Yoshinori Ito, Yoichi Ajioka: International Journal of Clinical Oncology April 2015, Volume 20, Issue 2, pp 207–239.

# JSCCR Guidelines for the Resection: CRC



\*Includes local rectal resection for rectal cancer.

# Major European Protagonists

W. Hohenberger, K. Weber, K. Matzel, T.  
Papadopoulos, S. Merkel,

Standardized surgery for colonic cancer: complete  
mesocolic excision and central ligation – technical  
notes and outcome.

Colorectal Dis 11: 354– 364, 2009

# Histo Evidence in Favor of CME

- Better yield of lymph nodes and margins of resection achieved.
- Particularly in the peri-colonic group of nodes
- Complete mesocolic excision with central vascular ligation produces an oncologically superior specimen compared with standard surgery for carcinoma of the colon. West NP, Hohenberger W, Weber K, Perrakis A, Finan PJ, Quirke P: [J Clin Oncol.](#) 2010 Jan 10;28(2):272-8. 2009 Nov 30.

# Comparison of Surgery in Leeds/Erlingen

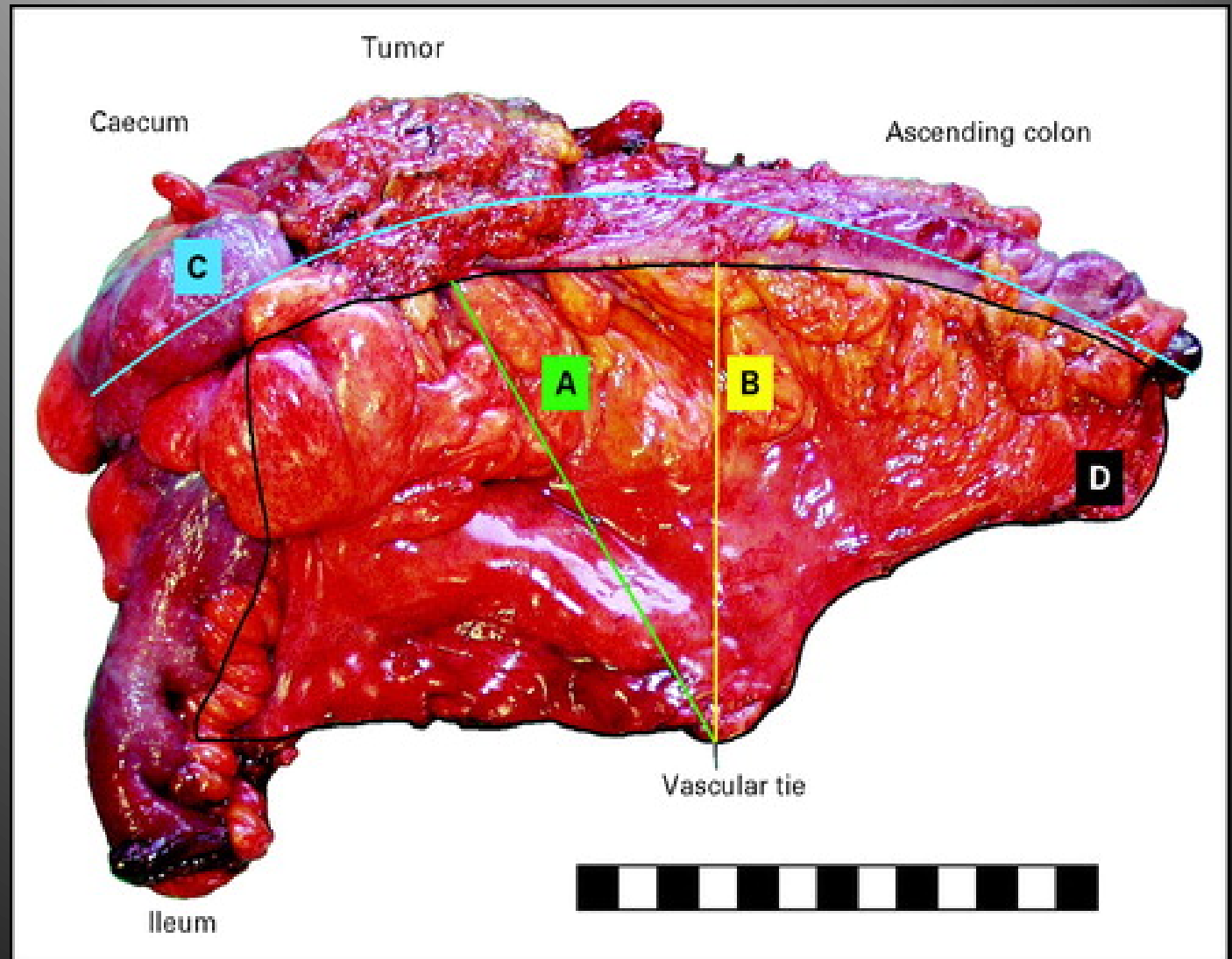
## Length of colon

Distance from  
colon to  
pedicle along  
vessel

Distance  
direct

## Surface area of mesentery

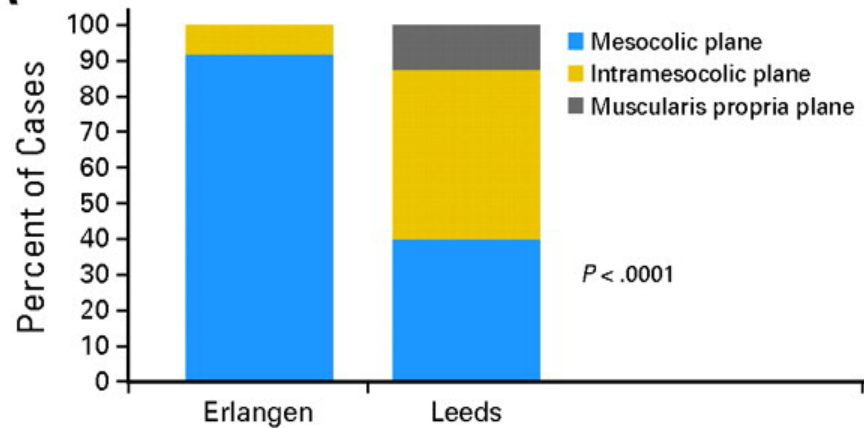
## Plain of dessection



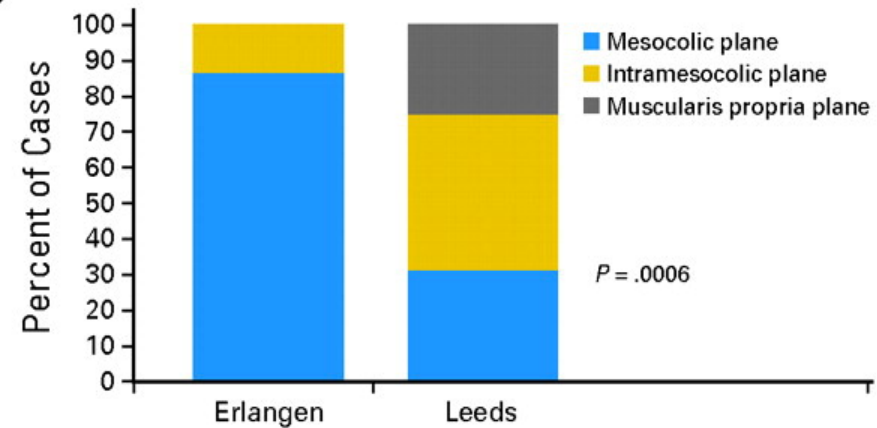


# Histological Supperiority: German Desection

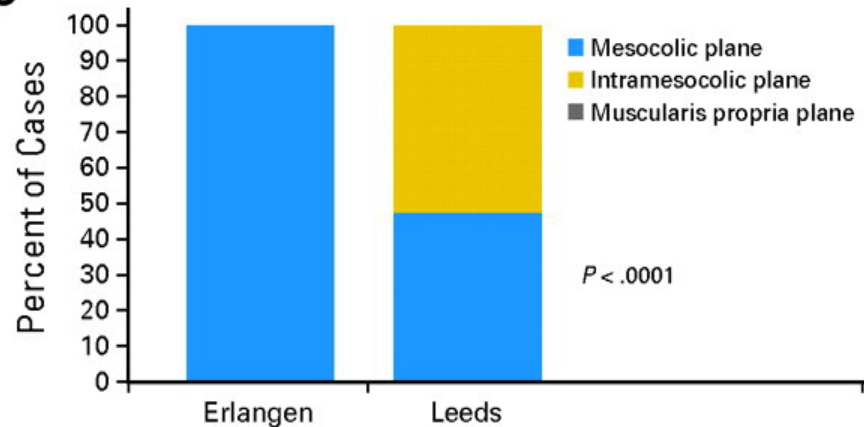
**A**



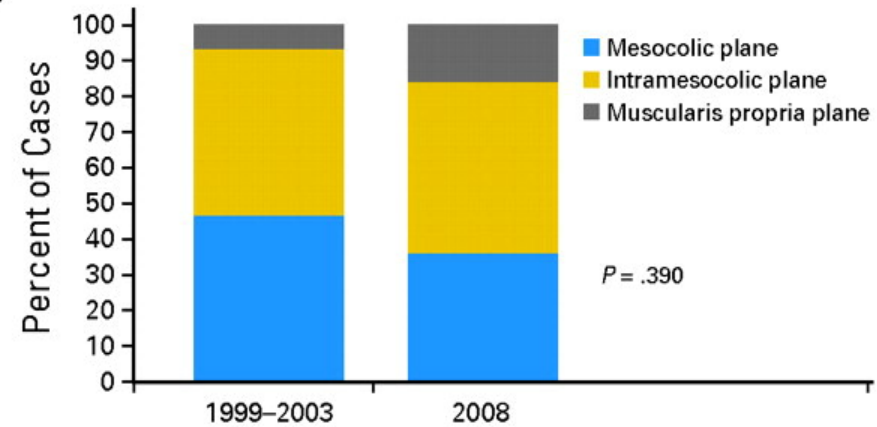
**B**



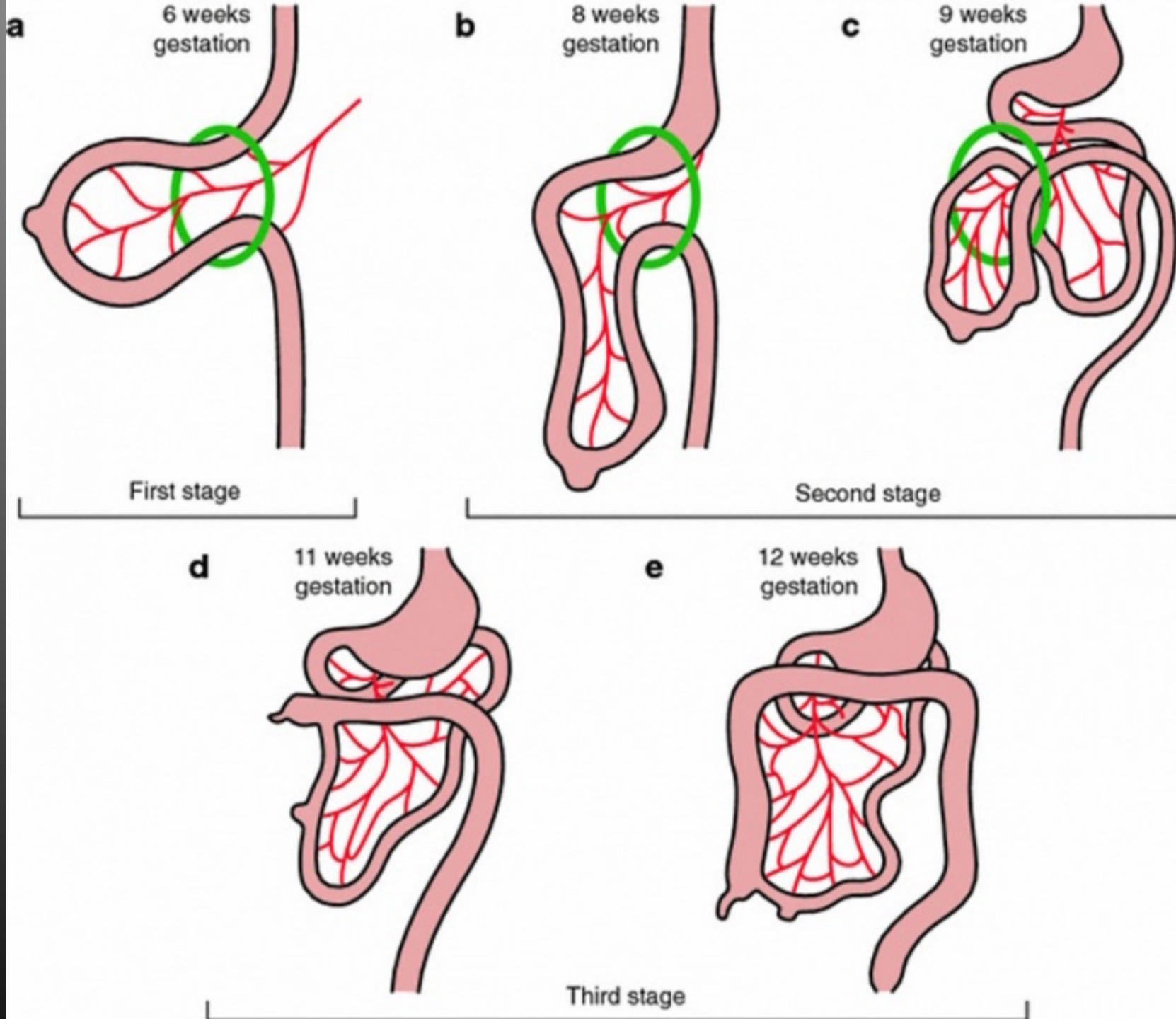
**C**



**D**



Embryo-logical  
Folding  
Of  
The  
Gut



## Correct Plain: Embryologically Defined

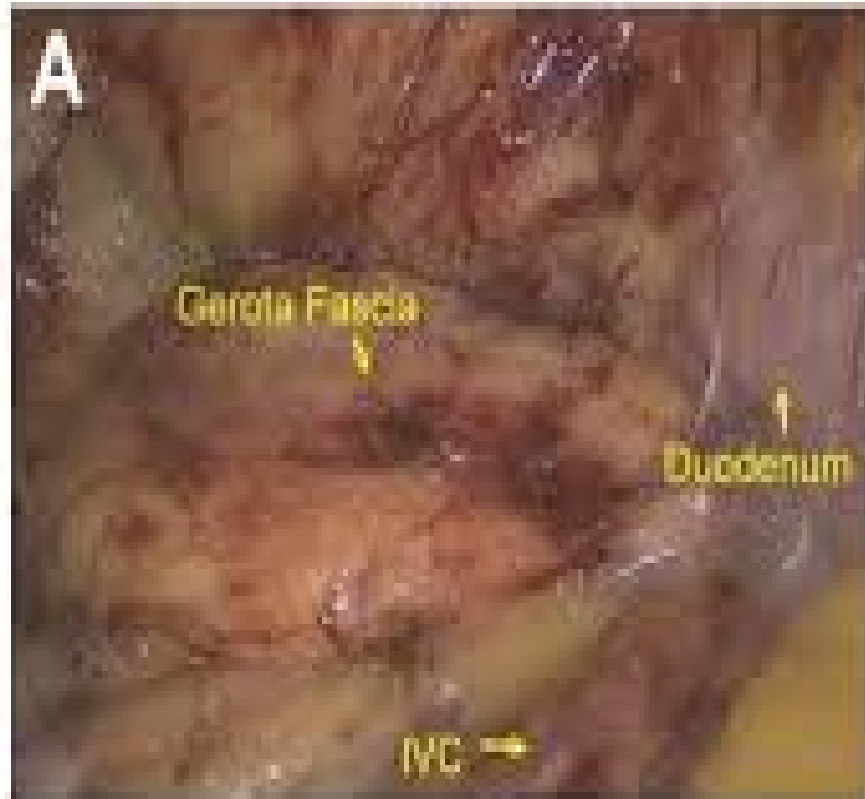
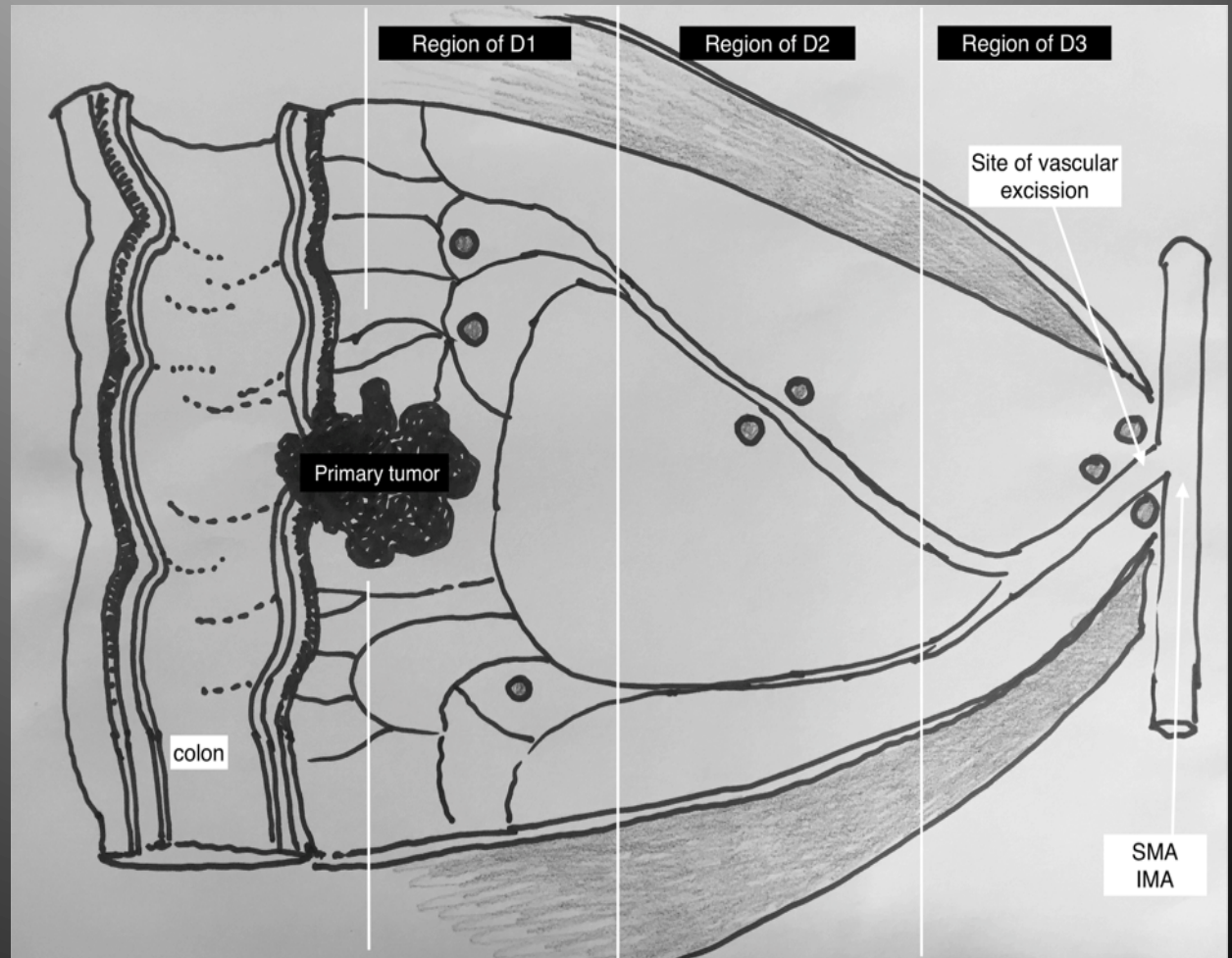


Figure 2

# How is a Complete Mesocolic Excision Done

The bowel is excised 10 cms away from the main feeding vessel and 22 cms toward the main feeding vessel

The artery is ligated at the take off from the feeding arteries base



# Delphi Method: Expert Opinion

- The rationale behind complete mesocolic excision (CME) and a central vascular ligation for colon cancer in open and laparoscopic surgery: Proceedings of a consensus conference.
- K. Sondenaa & P. Quirke & W. Hohenberger & K. Sugihara & H. Kobayashi & H. Kessler & G. Brown & V. Tudyka & A. D'Hoore & R.H.Kennedy & N.P.West & S.H.Kim & R.Heald & K.E.Storli & A. Nesbakken & B. Moran.
- **Int J Colorectal Dis. April 2014, Volume 29, Issue 4, pp 419–428.**



# Problem Areas

- **Transverse Colon:**

Embryological connectivity of transverse colon and the mesenteries of the foregut

- **Recto-sigmoid:**

Drainage of lymphatics into the ileac tributaries

# What is the Evidence

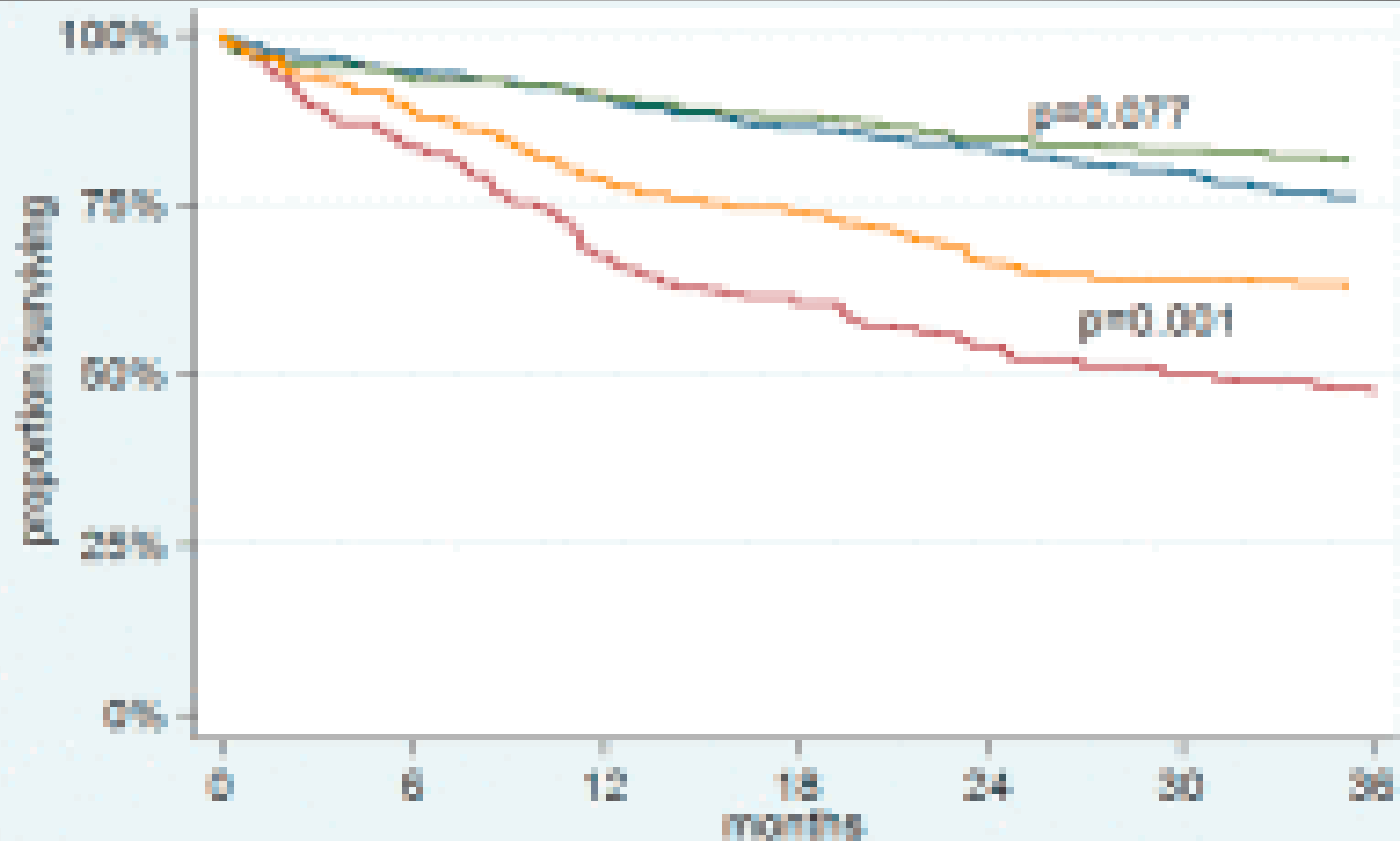
- Populational studies
- As Heald did Hohenberger has turned to the Scandinavians for proof of confidence
- Accuracy of data capture
- Large samples
- Multicentered
- Best Predictive Power

# Swedish Study

- Multicentered
- Variable: Before and after training in CME
- +/- Non-Variable: Surgeons doing the surgery.
- Inclusion: only R sided disease
- Standardized technique in CME group



# After an Educational Project in Stockholm



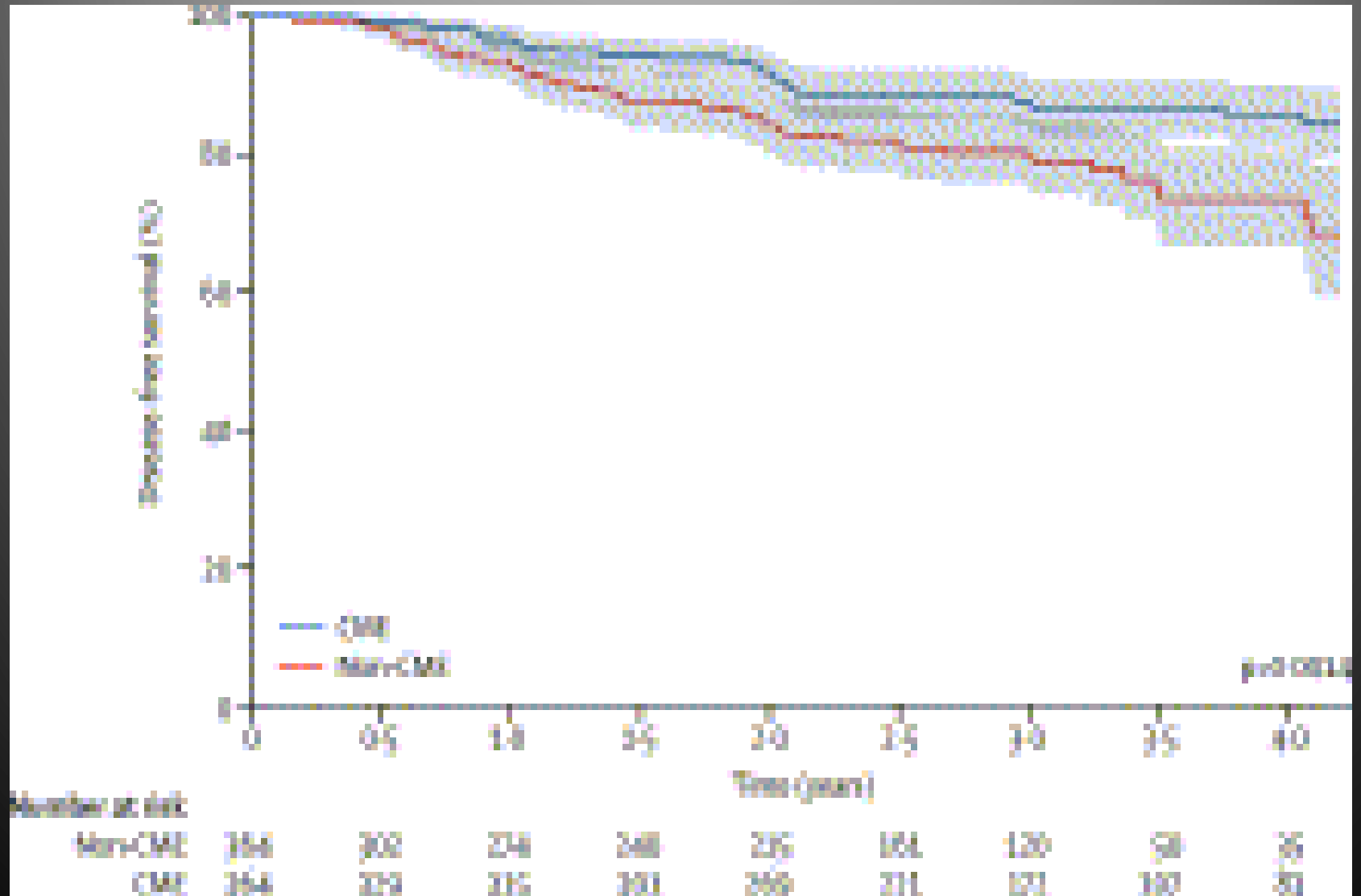
## Number at risk

Group 1, stage I-II	406	383	368	350	338	323	308
Group 1, stage III	200	169	136	122	110	101	96
Group 2, stage I-II	422	393	383	371	357	350	343
Group 2, stage III	233	206	183	172	164	149	146

# Danish Study

- Retrospective study.
- Comparison of an accredited “CME” center.
- Against 3 non-accredited centers.
- Stage IV disease and R2 resections excluded.
- Between June 1 2008 and Dec 31 2011,

# Retrospective Danish Study



# What is the Evidence?

- Still dependent on enthusiasts driving the process
- Mounting reasonable evidence in favor of the technique.
- So?

# A South African Perspective

- Probably will be practice changing for the surgeon.
- Will it impact on our outcomes?
- Delays in presentation, delays in investigations, poor transport...

**BARRIERS TO CARE!**



