COLON EN RECTUMCARCINOOM: Curatieve aanpak

Alumni, 02/10/2019

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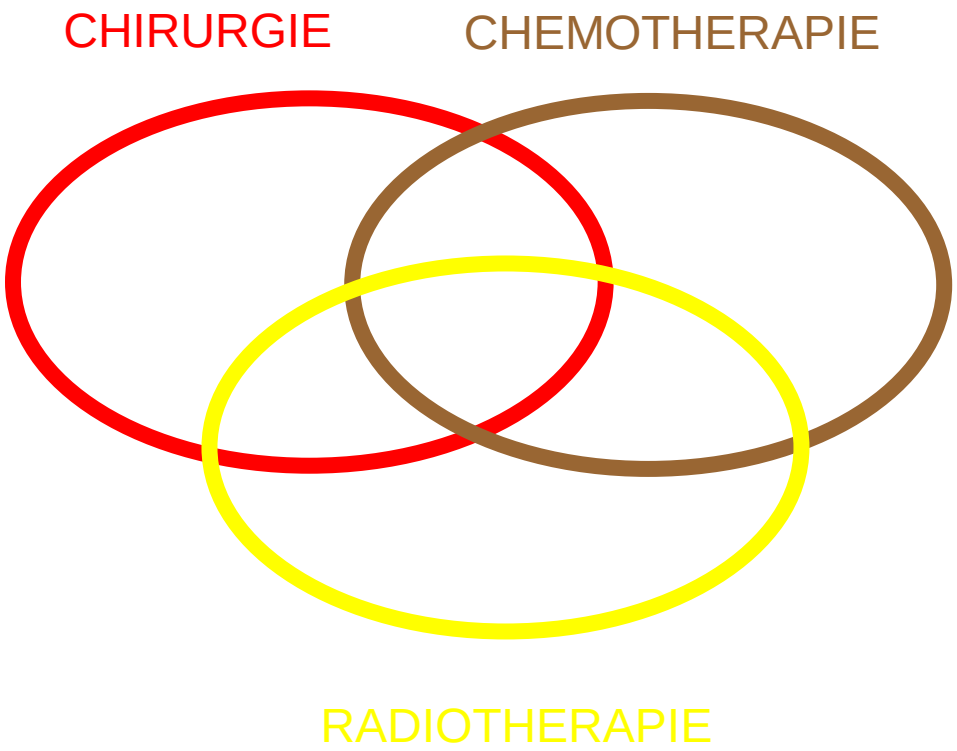
Dienst Gastro-intestinale en pediatrische heelkunde

UZ GENT

UNIVERSITEIT GENT

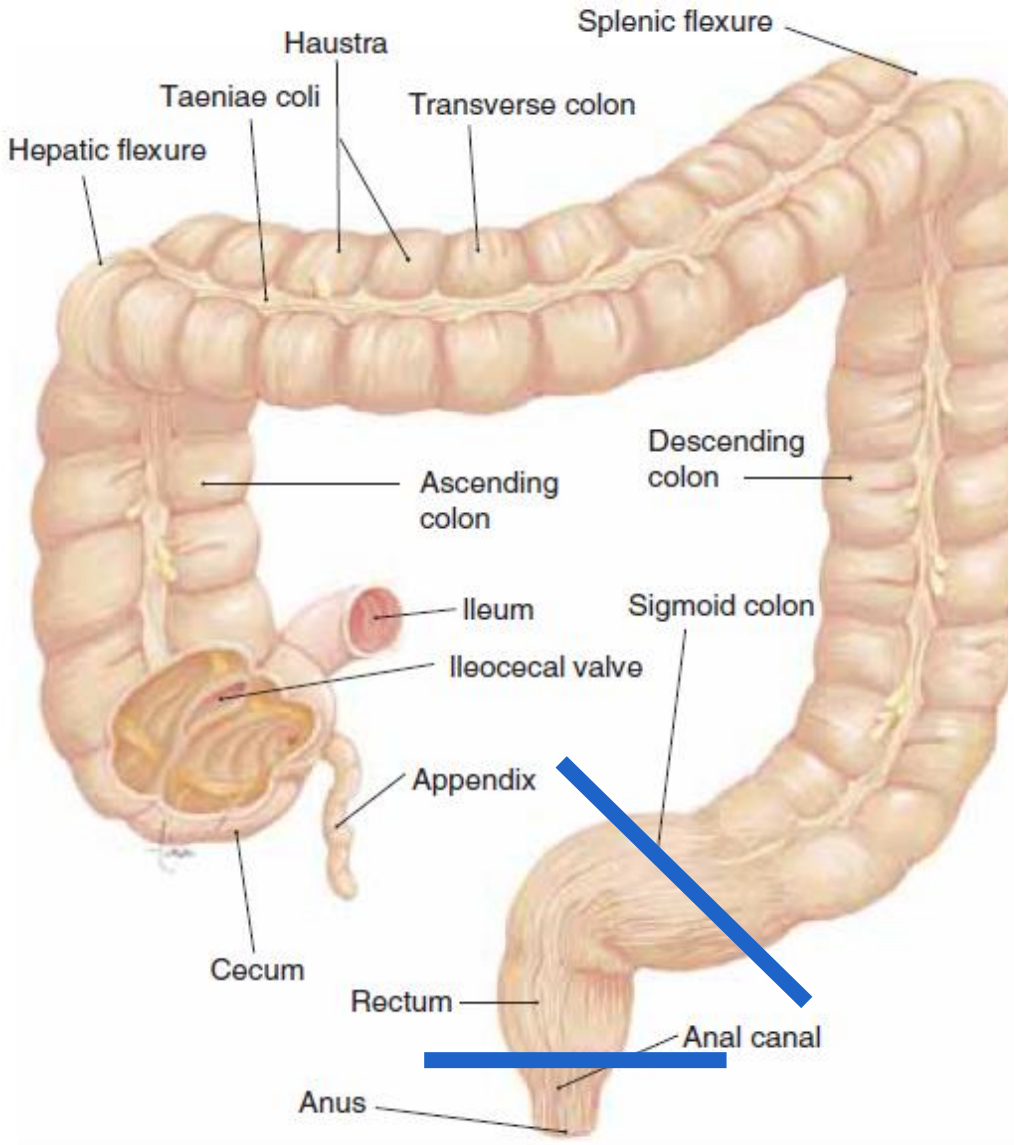
CURATIEVE AANPAK COLORECTAAL

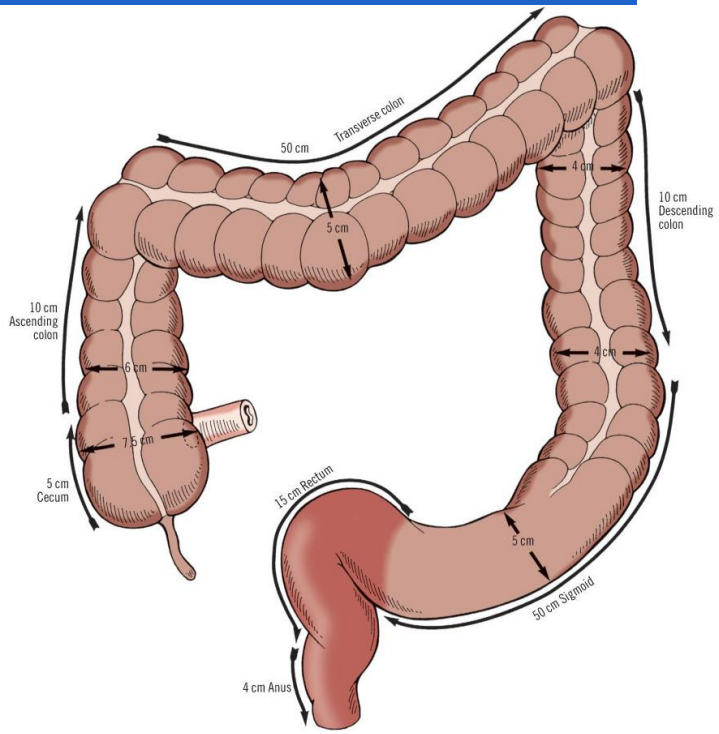


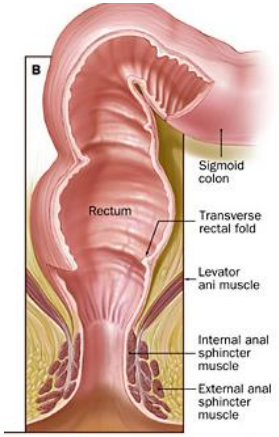
COLON ↔ RECTUM

- Anatomisch
- Epidemiologisch
- Behandeling
- Functionele gevolgen na behandeling

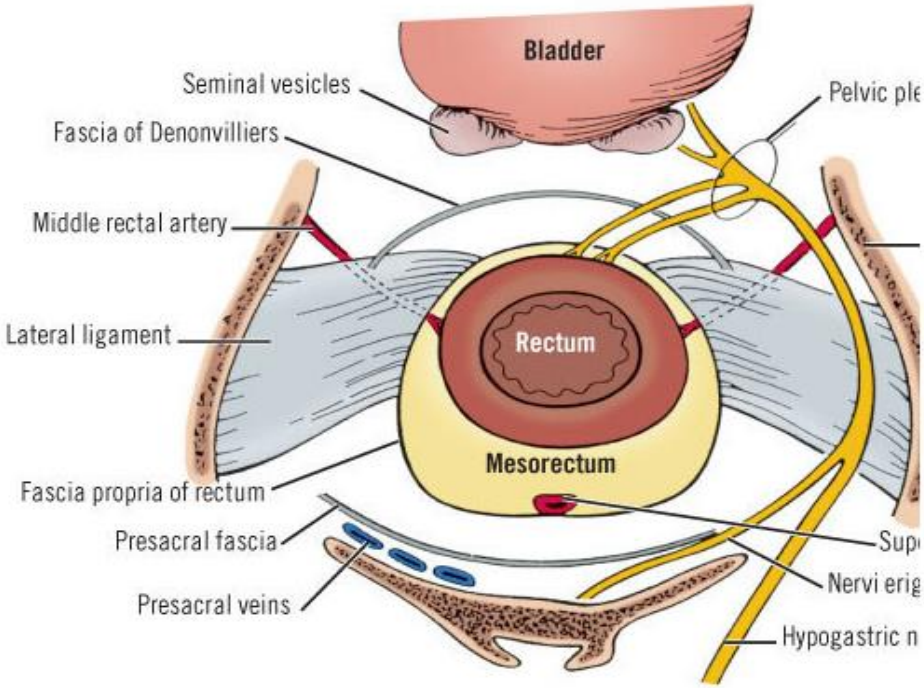
ANATOMIE: COLON VS RECTUM

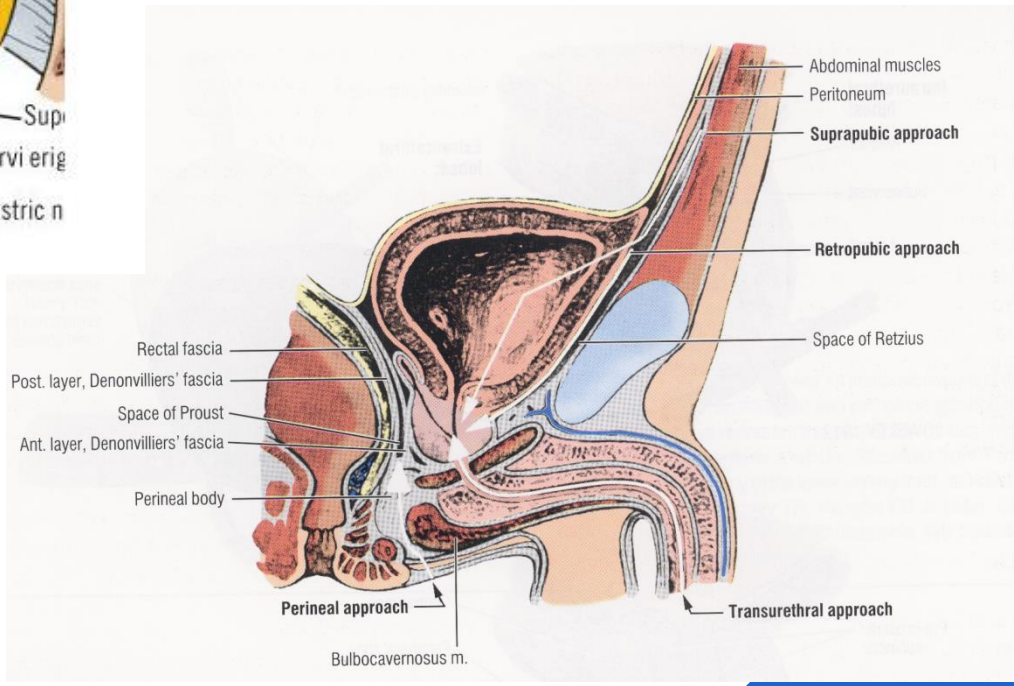




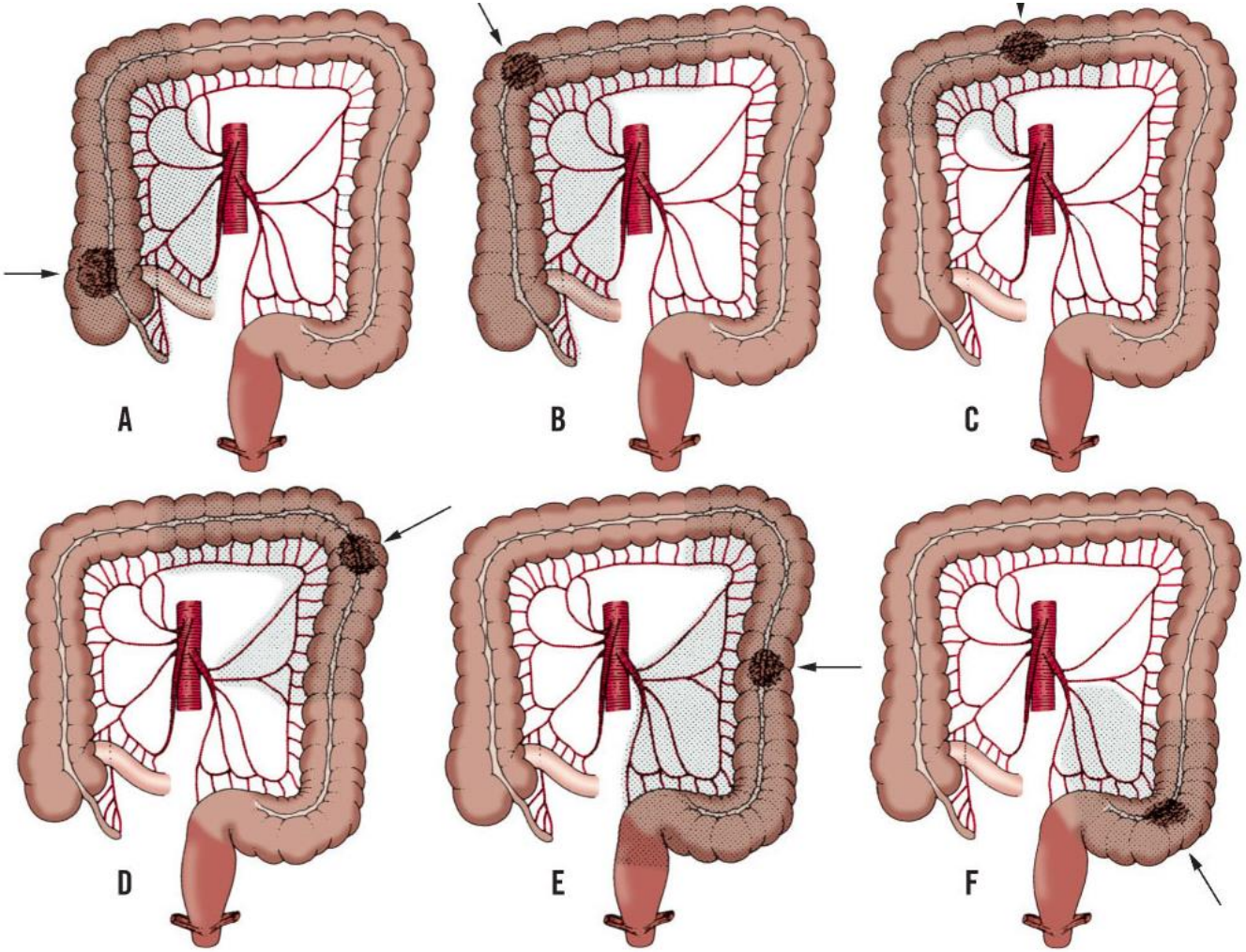


ANATOMIE: RECTUM

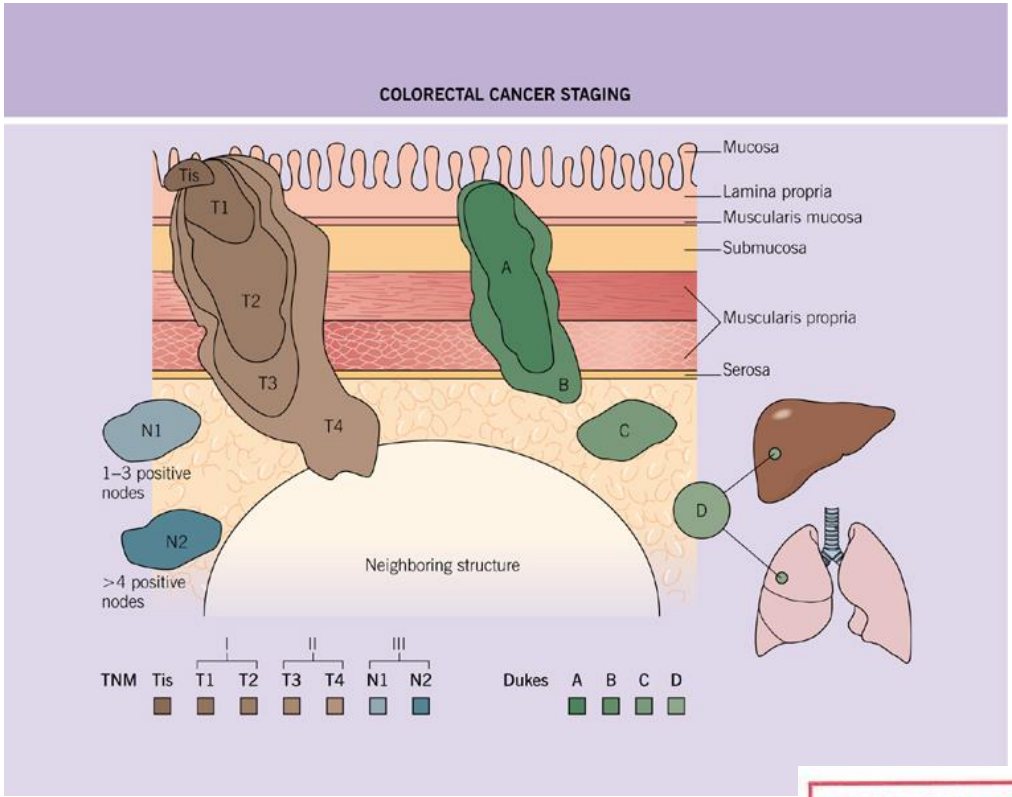


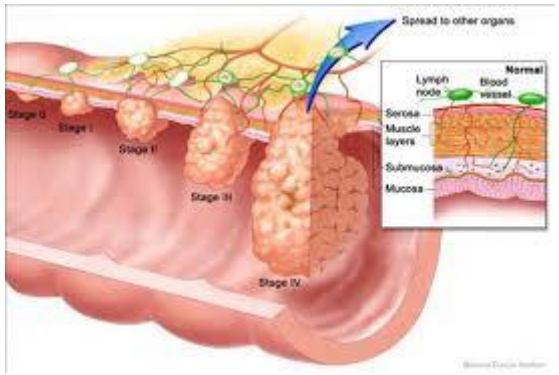


EPIDEMIOLOGIE



STADIUM: c → p



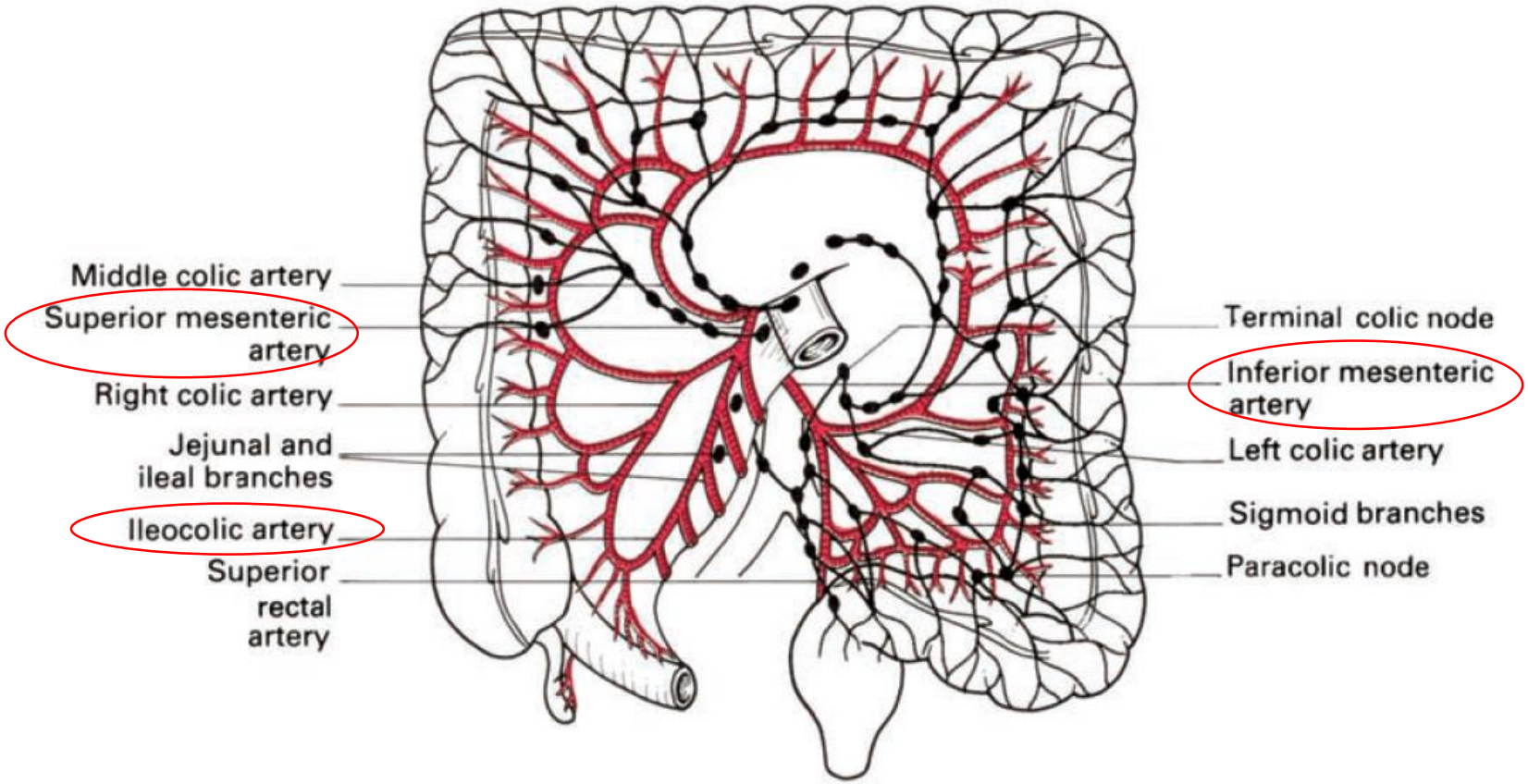


Minstens 12 lymfeklieren reseceren/onderzoeken

- Prognose
- Adjuvante therapie

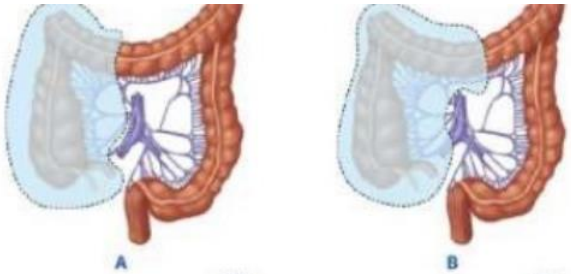
STAGE GROUPING

Stage	T	N	M	Dukes*	MAC*
0	Tis	N0	M0	-	-
I	T1	N0	M0	A	A
	T2	N0	M0	A	B1
IIA	T3	N0	M0	B	B2
IIB	T4	N0	M0	B	B3
IIIA	T1-T2	N1	M0	C	C1
IIIB	T3-T4	N1	M0	C	C2/C3
IIIC	Any T	N2	M0	C	C1/C2/C3
IV	Any T	Any N	M1	-	D


Middle colic artery
Superior mesenteric artery
Right colic artery
Jejunal and ileal branches
Ileocolic artery
Superior rectal artery
Terminal colic node
Inferior mesenteric artery
Left colic artery
Sigmoid branches
Paracolic node

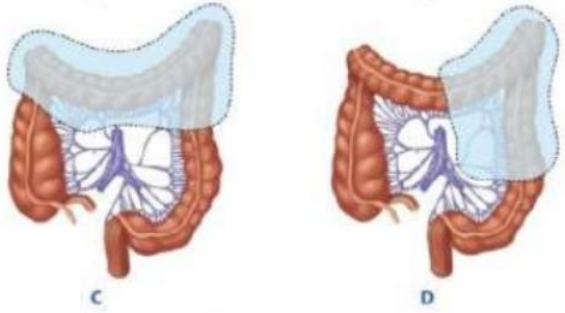
TYPES COLONCHIRURGIE

Cecal CCA



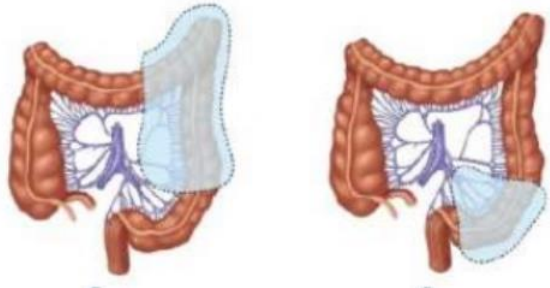
Hepatic flexure CCA

Transverse CCA



Splenic flexure CCA

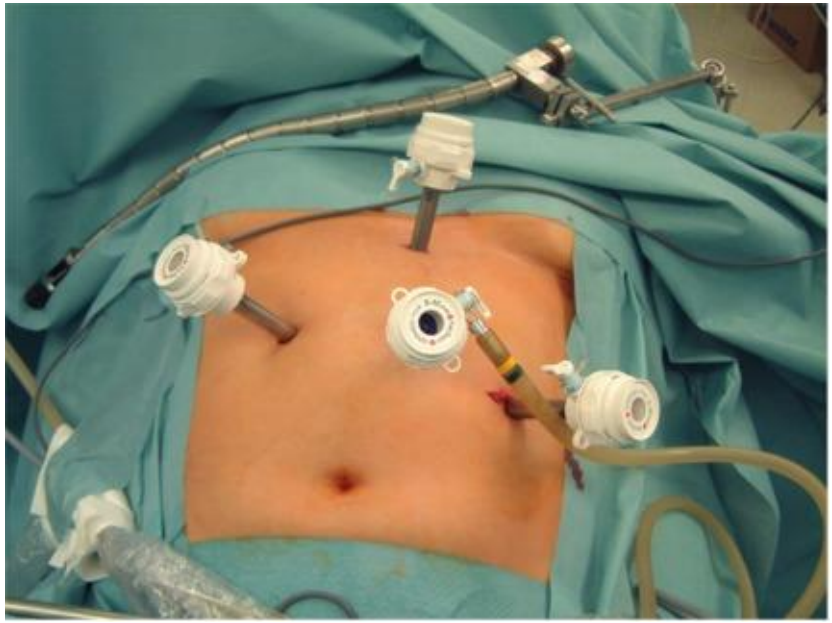
Descending CCA

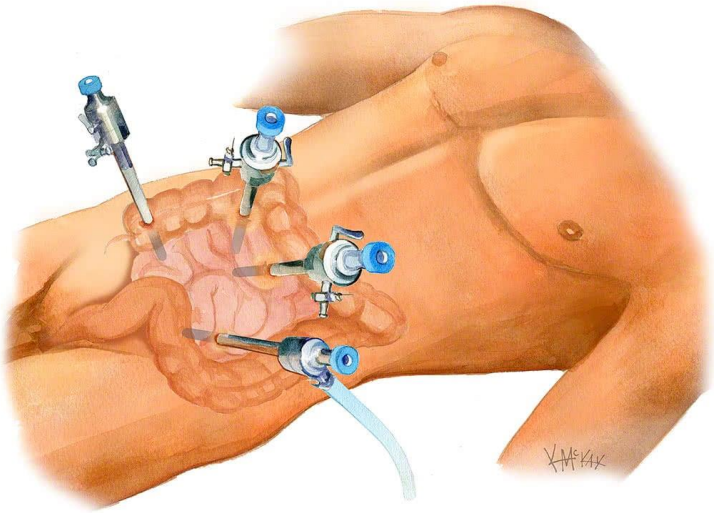


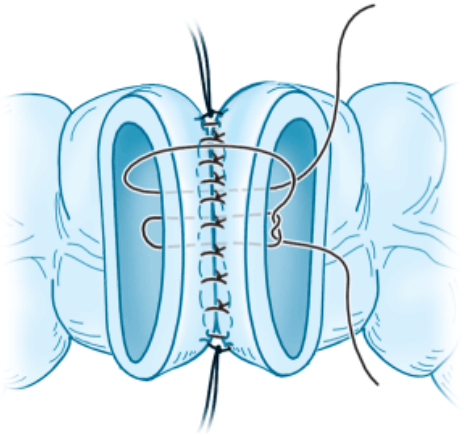
Sigmoid CCA

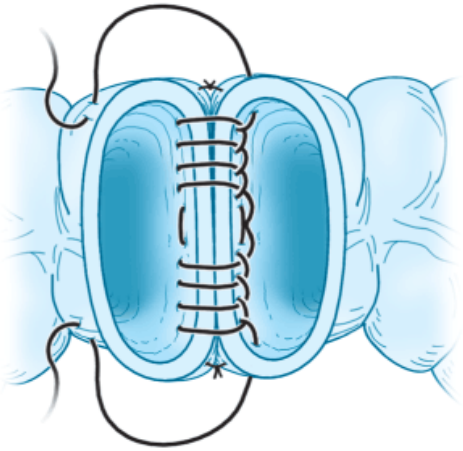
COLONCARCINOOM: Chirurgie

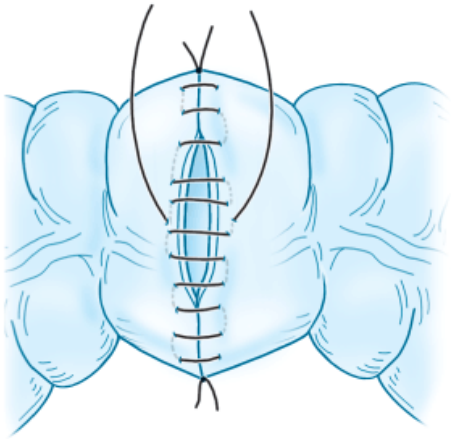
- Endoscopische poliepresectie (EMR – ESD): indien suspect markeren
- Multidisciplinair overleg
- Niet gemetastaseerd **colon**carcinoom (TxNxM0) → **primaire heelkunde**
- Geen stents preoperatief
- Laparoscopie
- **Oncologische principes**: Brede resectie **aangetast segment** (minstens 5 cm prox en distaal gezond weefsel) + **lymfeklieren** + **meso**colon + eventueel betrokken organen/structuren
- Evaluatie op metastasen
- Continuïteit herstellen
- Complicaties vermijden: anastomose-lek !



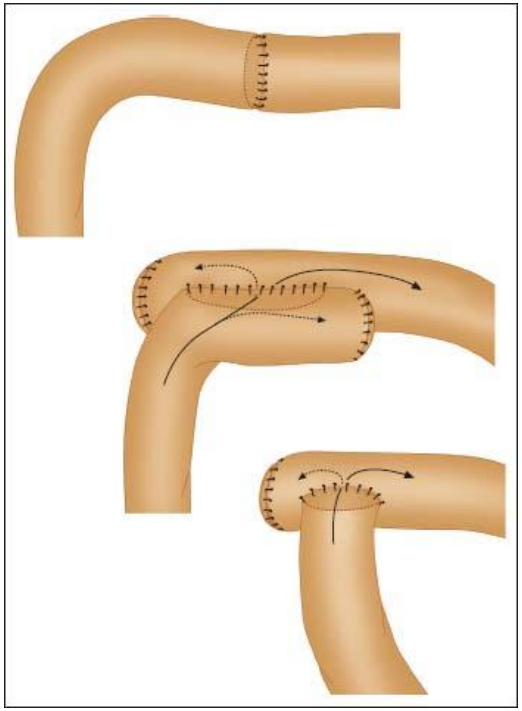


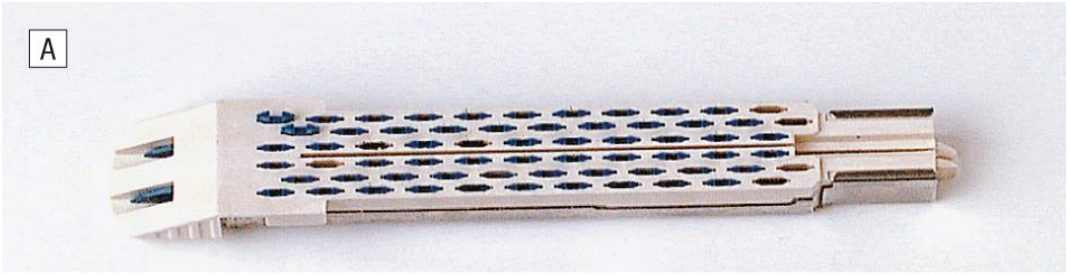






Source: Minter RM, Doherty GM: *Current Procedures: Surgery:* http://www.accesssurgery.com

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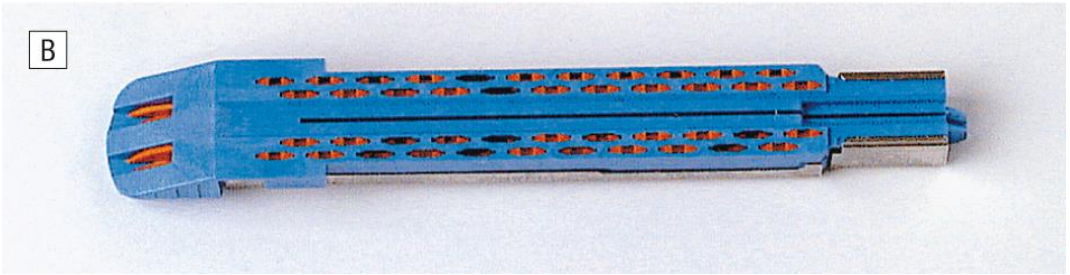
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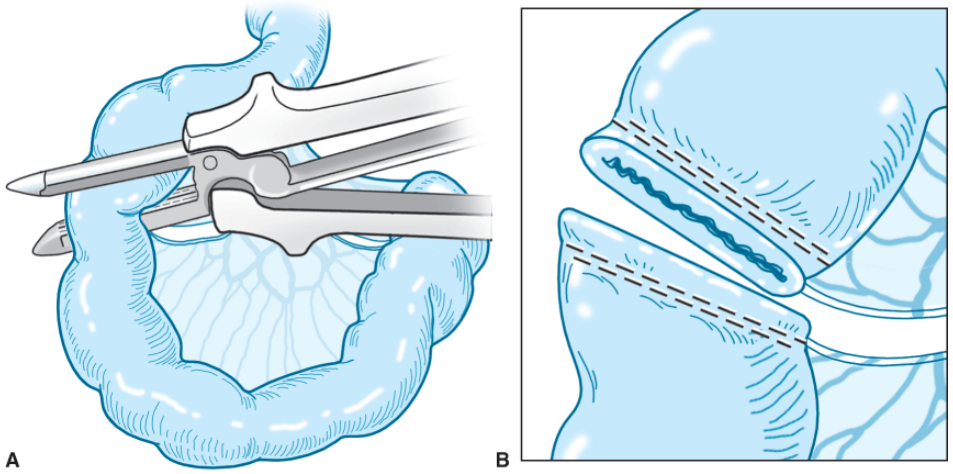

Source: Minter RM, Doherty GM: *Current Procedures: Surgery:*
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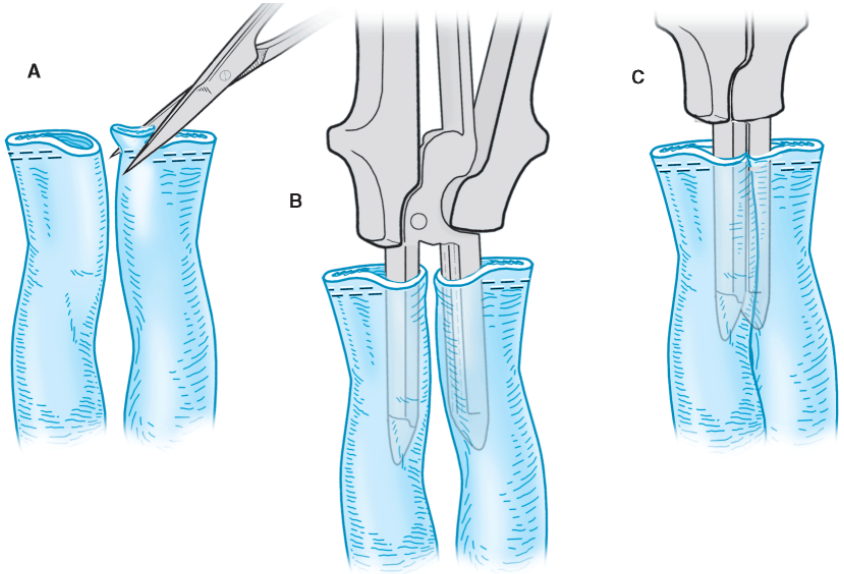

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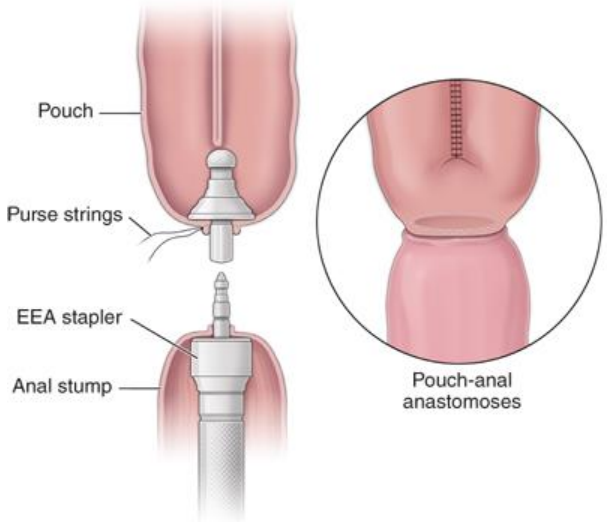
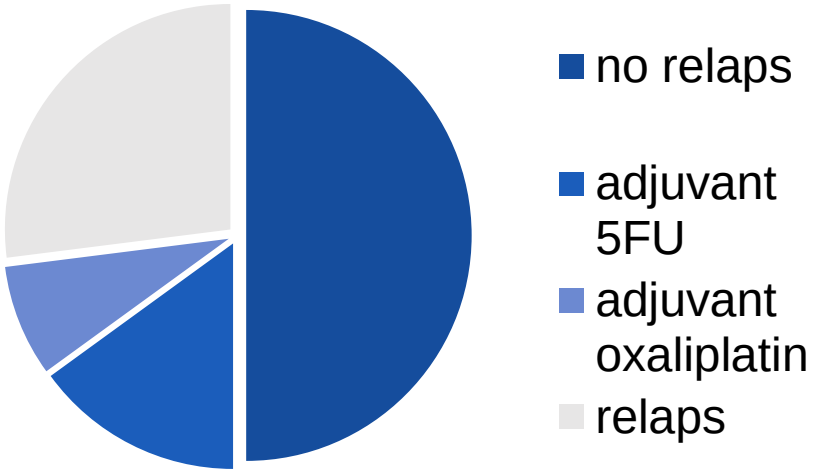


Source: Robert E. Bristow, Dennis S. Chi: Radical and Reconstructive Gynecologic Cancer Surgery
www.obgyn.mhmedical.com

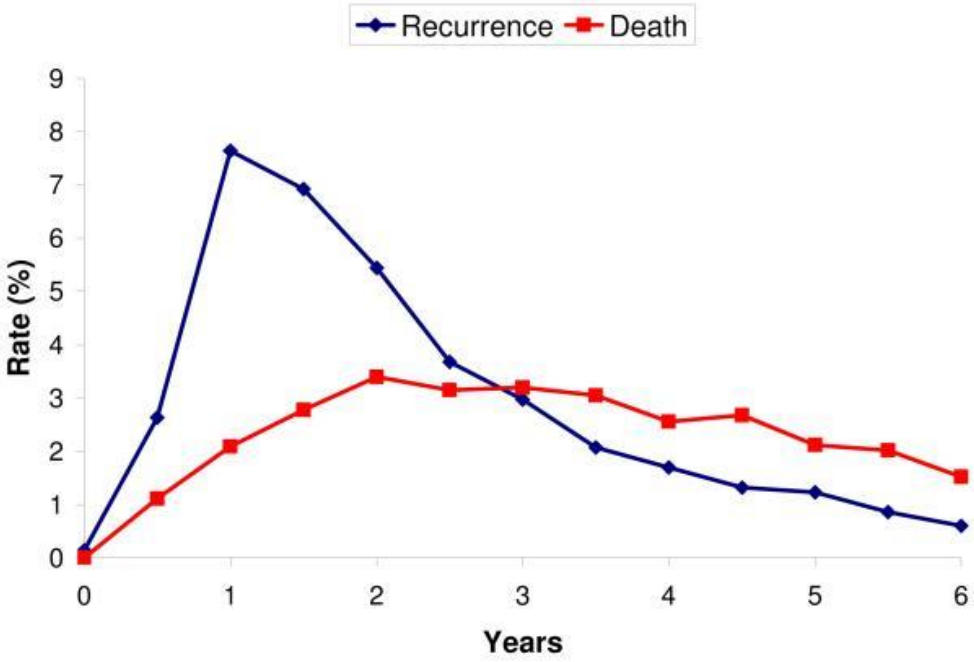
COLONCARCINOOM: Adjuvante chemotherapie

stage III tumors

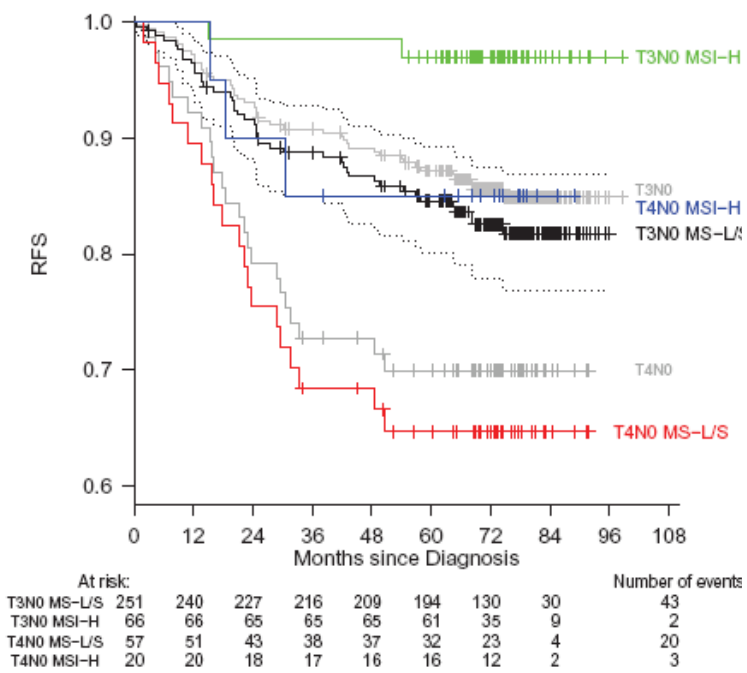


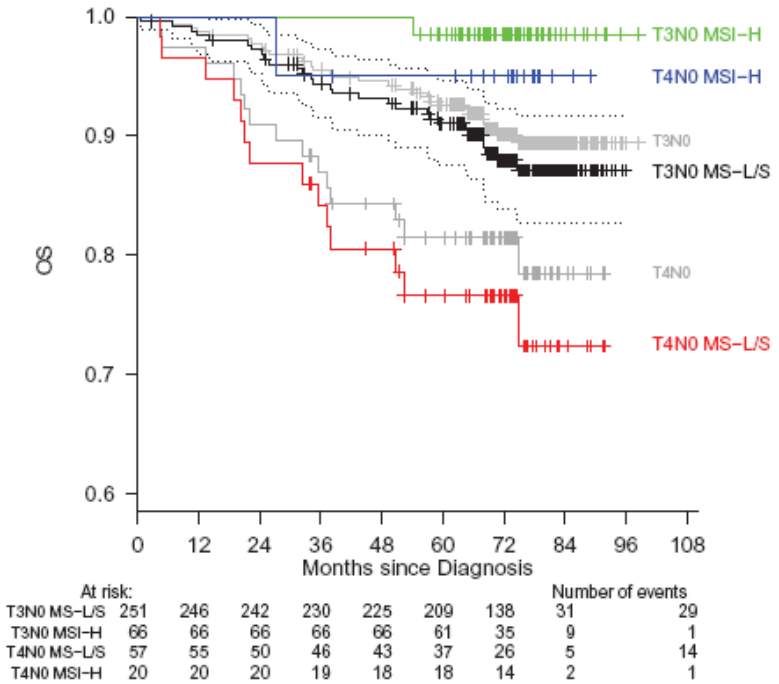
- Stadium III, pTx**N+**M0 → indicatie adjuvante chemotherapie (FOLFOX)
  - ‘grootste aandeel’ is 5FU, dus oxaliplatin tijdig aanpassen/stoppen ~ nevenwerkingen
  - 5FU: infusioneel (De Gramont) of Xeloda

Stadium II (T3T4N0): ongeveer 15% risico op herval
Stadium III (N+): ongeveer 25-30% risico op herval na adjuvante chemo



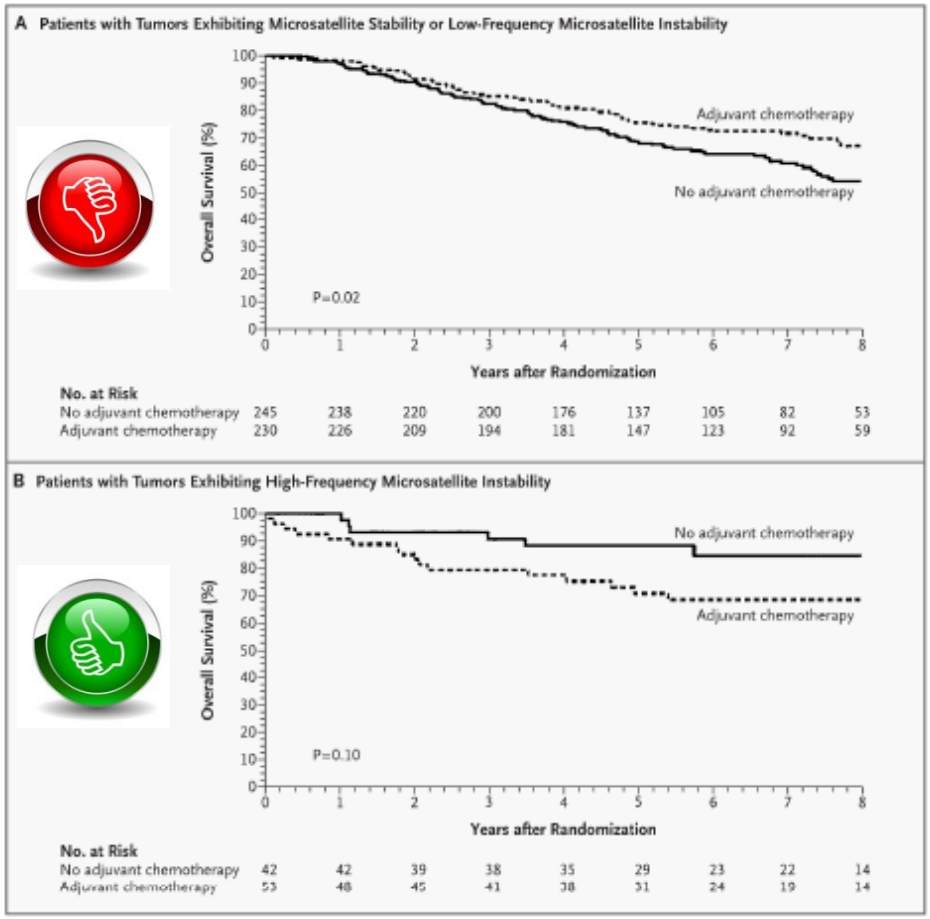
Stadium II tumoren: MSI-H (MMRd) vs MSI-L/S (MMRp): expressie van eiwitten (mismatch repair)





Microsatellite instable patients have a good prognosis - Stage-adjusted

Roth, J Natl Cancer Inst 2012



Geen adjuvante 5FU in MSI-H stadium II

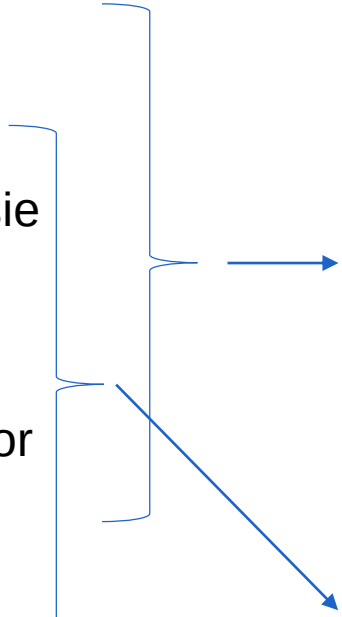
COLONCARCINOOM: Adjuvante chemotherapie

- Stadium II, pT3-4**N0**M0 → geen absolute indicatie voor adjuvante (80-85 % genezing) chemotherapie tenzij:

MSI-H EN

- Jonge leeftijd
- Perineurale en/of lymfatische invasie
- T4
- Colloïd/mucineus type tumor
- Hoog preoperatief CEA
- Obstructieve of geperforeerde tumor
- < 12 lymfeklieren teruggevonden

MSI-S EN



FOLFOX (nooit alleen 5FU)

5FU of FOLFOX

COLONCARCINOOM: Adjuvante chemotherapie

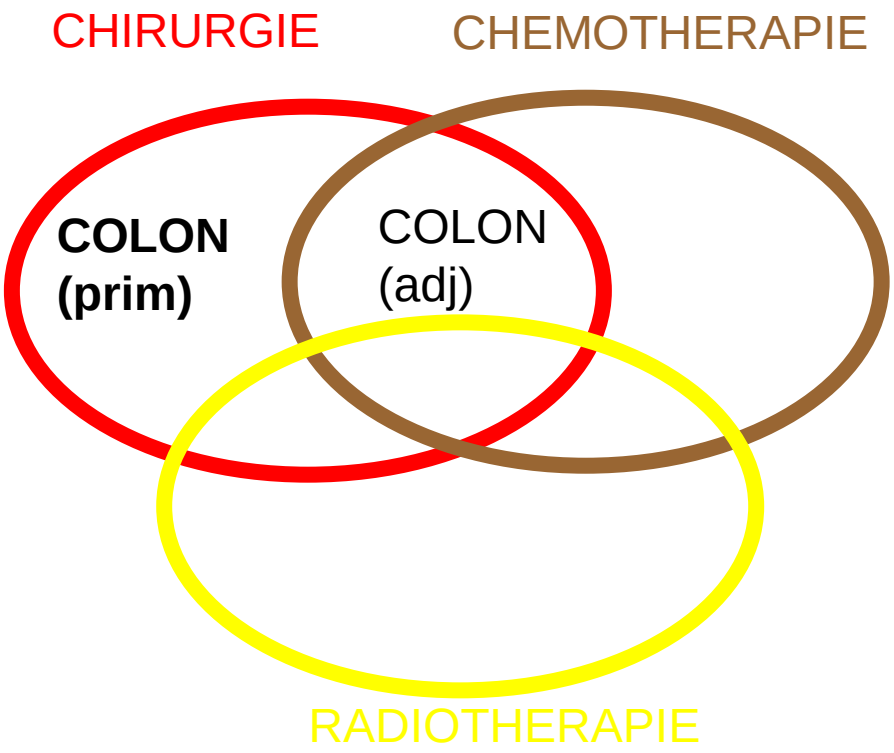
- Start **4 -8 weken** postoperatief → max tot 12 weken
- 12 cycli of **6 maand** (3 maand?)
- 5 fluorouracil (Fluracedyl®), levofolinezuur/foliumzuur/leucovorin (Elvorine®) en oxaliplatin (Eloxatin®) = FOLFOX
- Minder goede algemene conditie: capecitabine (Xeloda®) PO of enkel 5FU IV (modified de Gramont)
- MMR deficient (verlies van eiwitexpressie MSH2-MLH1- MSH6)– MSI high: betere prognose - niet 5FU gevoelig

COLONCARCINOOM: Adjuvante chemotherapie

- Modified de Gramont:
  - dag 1:levofolinezuur over 2 h, 5FU (bolus/10 min),
  - 46 u via pomp
  - dag 3: afkoppelen pomp

- Folfox:
  - Dag 1: levofolinezuur+ oxaliplatin over 2h, 5FU (bolus/10 min), 22h pomp
  - Dag 2: levofolinezuur over 2h, 5FU (bolus/10min), 22h pomp
  - Dag 3: afkoppelen pomp

CURATIEVE BEHANDELING COLONCARCINOOM



RECTUMCARCINOOM

Joannes Baptista Morgagni 1682-1771

Eerste beschrijving van rectumcarcinoom

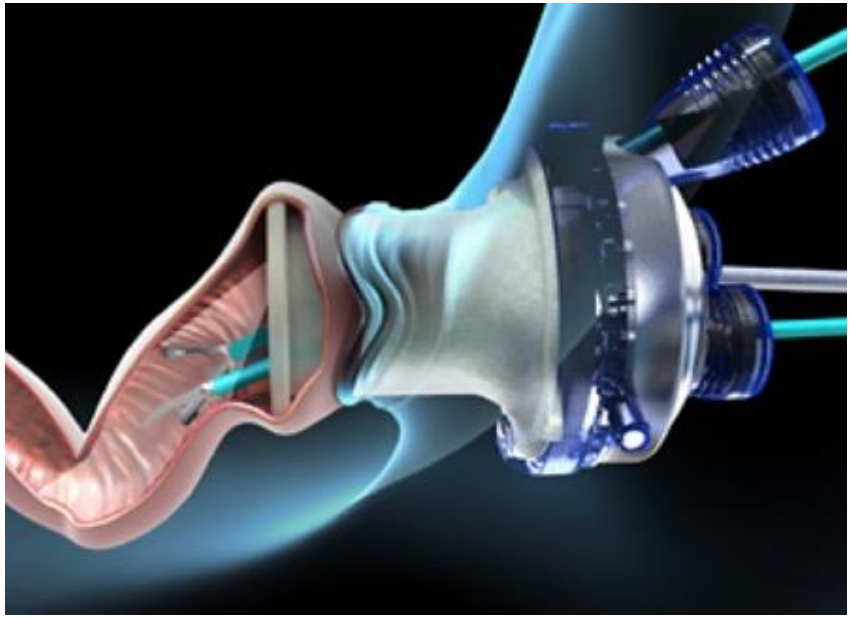
→ Geen heelkunde:

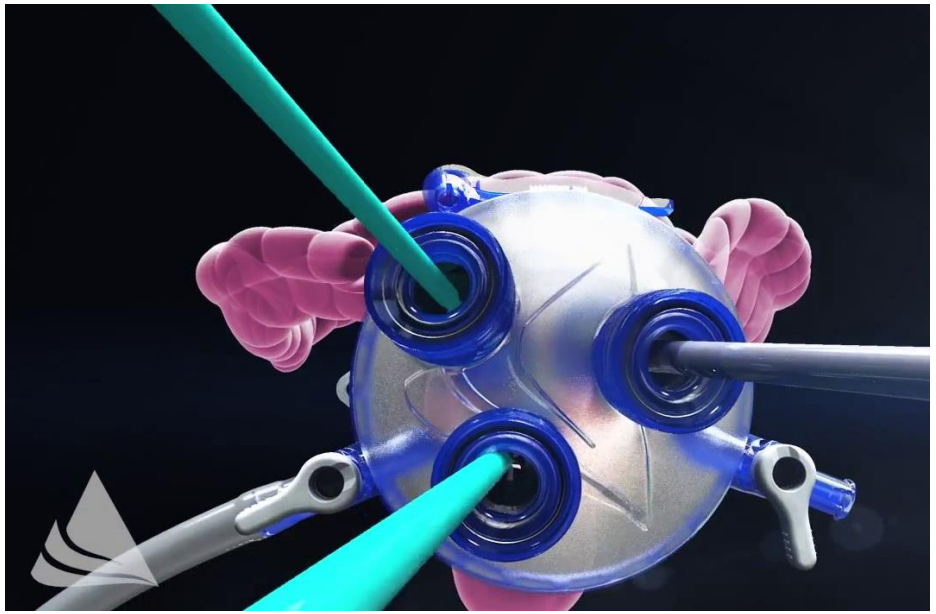
- Schade aan sfincter
- Bloedingsrisico
- Risico van faeces spill intraperitoneaal

Morgagni GD. De sedibus et causis morborum per anatomen indigatis.
Lib.III, Epist. 32, Art. 6-9. Venetiis 1761

RECTUMCARCINOOM: Lokale excisie

- Lokale excisie (LE) of Transanale Endoscopische Microchirurgie of TAMIS (transanal minimal invasive surgery) of ESD





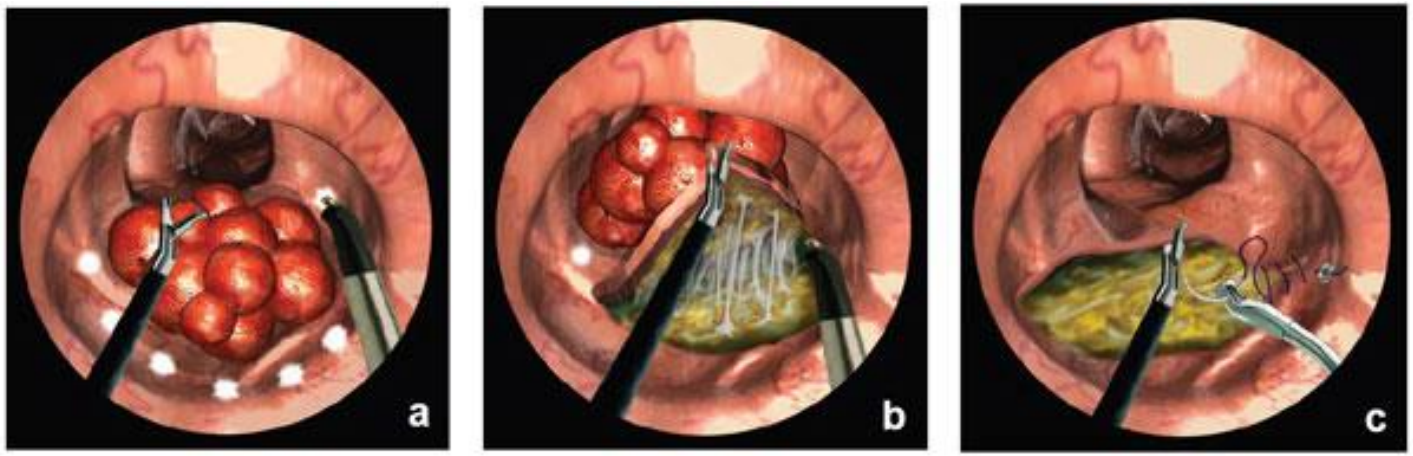
RECTUMCARCINOOM: Lokale excisie

- benigne villeus adenoma
- T in situ (stadium 0)
- geen ulcererende tumor
- cN0 (echo endo)
- goed gedifferentieerd
- maximaal 3 cm diameter
- < 1/3 circulaire marge

Snel herstel, geen anastomose, weinig functionele last

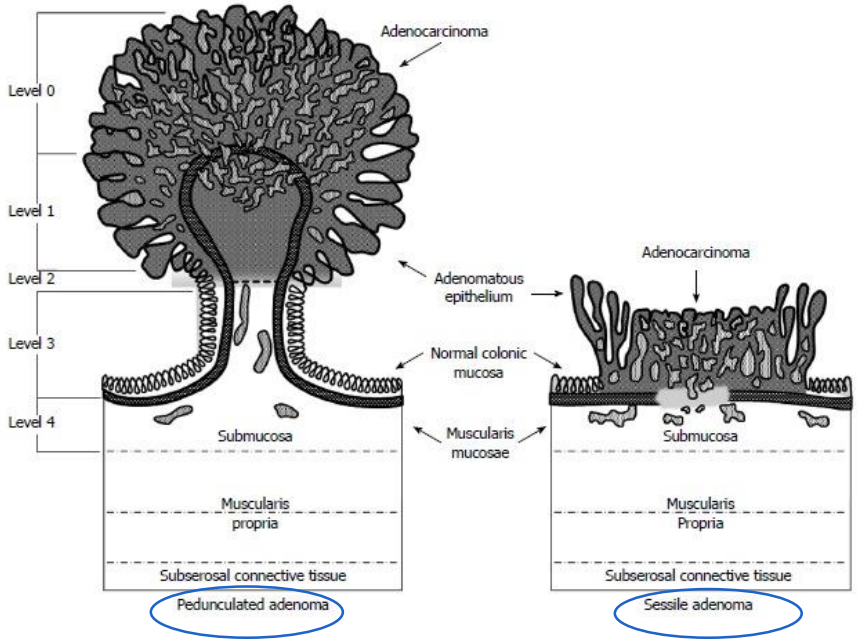
- max T1sm1
- geen lymfovasculaire of perineurale invasie
- tumorvrije snijranden

patholoog

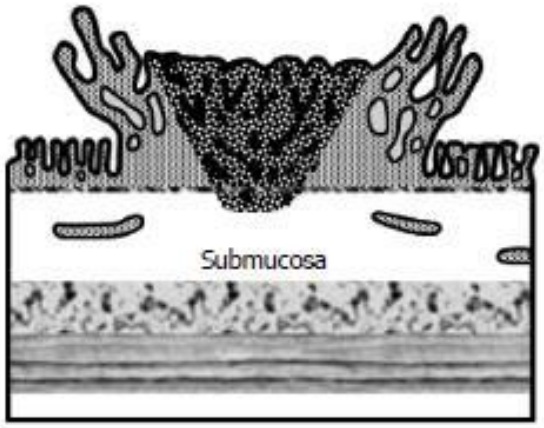


RECTUMCARCINOOM: Lokale excisie

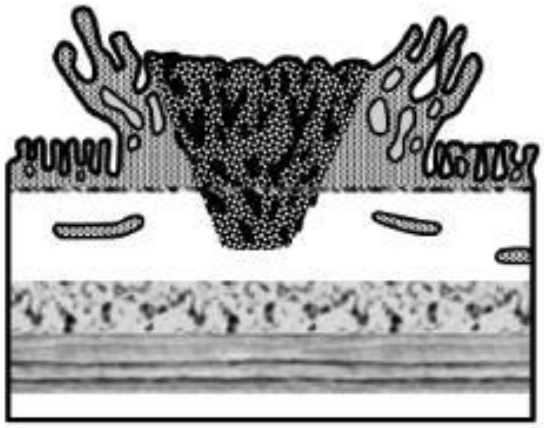
Haggitt



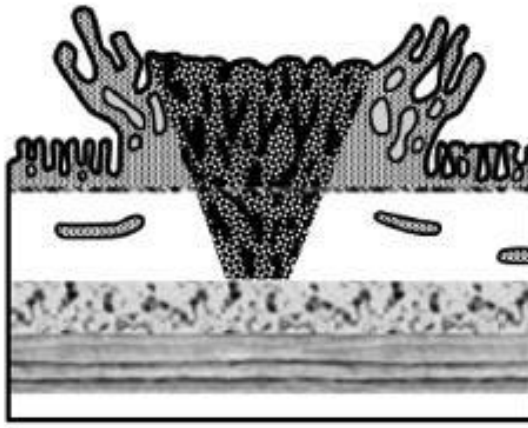
Kikushi



Sm1 3%N+



Sm2 8%N+



Sm3 20%N+

RECTUMCARCINOOM: Curatieve behandeling

- Stadium I: cT**1-2N0**2M0 → **primaire chirurgie**: PME –TME – APRA
  cT2N0M0→ onderste 1/3: RCT bespreken

- Stadium II: cT3N0M0 (>7 cm boven margo met ruime CRM >2 mm)
  → RT neoadjuvant (13*3 Gy) en HK na 2 weken

- Stadium II: cT3N0M0 (<7 cm of >7 cm maar CRM <2 mm)
- Stadium II: cT4N0M0
- Stadium III: cTxN+M0

RCT→ HK

- RCT: 25*1,8 Gy met 5 FU in bolus gedurende week 1 en week 5

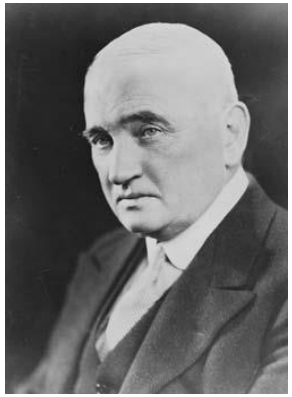
(alternatief: 5FU continu iv + capecitabine?)

RECTUMCARCINOOM: rectumresectie

- Mid en lage rectumtumoren → **TME** = totale mesorectale excisie = lage anteriorresectie

- Hoge rectale tumoren → **PME** = partiële mesorectale excisie

- Lage tumoren met ingroei → rectumamputatie
  = abdominoperineale resectie (apra) = **Miles Pauchet**



RECTUMCARCINOOM: rectumresectie

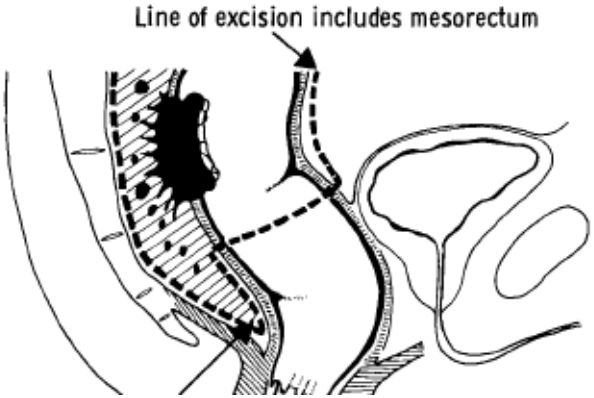
Br. J. Surg. Vol. 69 (1982) 613-616 Printed in Great Britain

The mesorectum in rectal cancer surgery—the clue to pelvic recurrence?

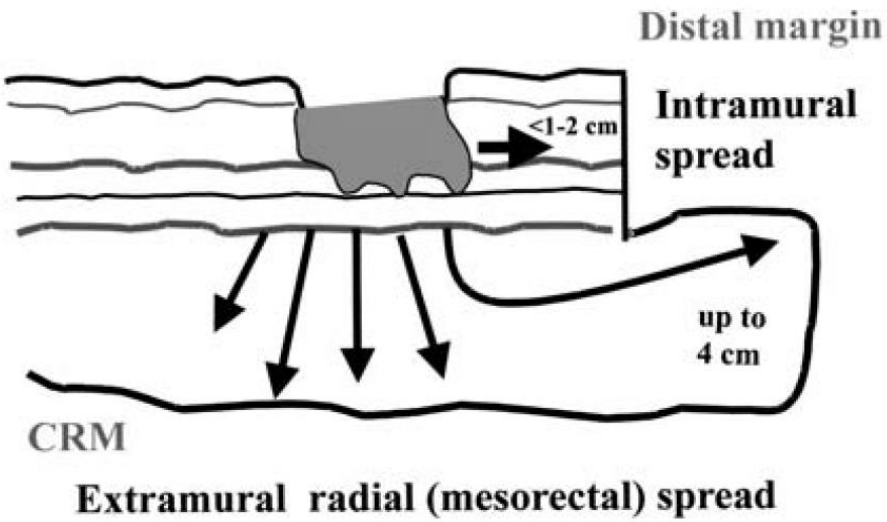
R. J. HEALD, E. M. HUSBAND AND R. D. H. RYALL
Basingstoke Bowel Cancer Clinic, Basingstoke District Hospital, Basingstoke, Hampshire.

Five cases are described where minute foci of adenocarcinoma have been demonstrated in the mesorectum several centimetres distal to the apparent lower edge of a rectal cancer. In 2 of these there was no other evidence of lymphatic spread of the tumour. In orthodox anterior resection much of this tissue remains in the pelvis, and it is suggested that these foci might lead to suture-line or pelvic recurrence. Total excision of the mesorectum has, therefore, been carried out as a part of over 100 consecutive anterior resections. Fifty of these, which were classified as 'curative' or 'conceivably curative' operations, have now been followed for over 2 years with no pelvic or staple-line recurrence.

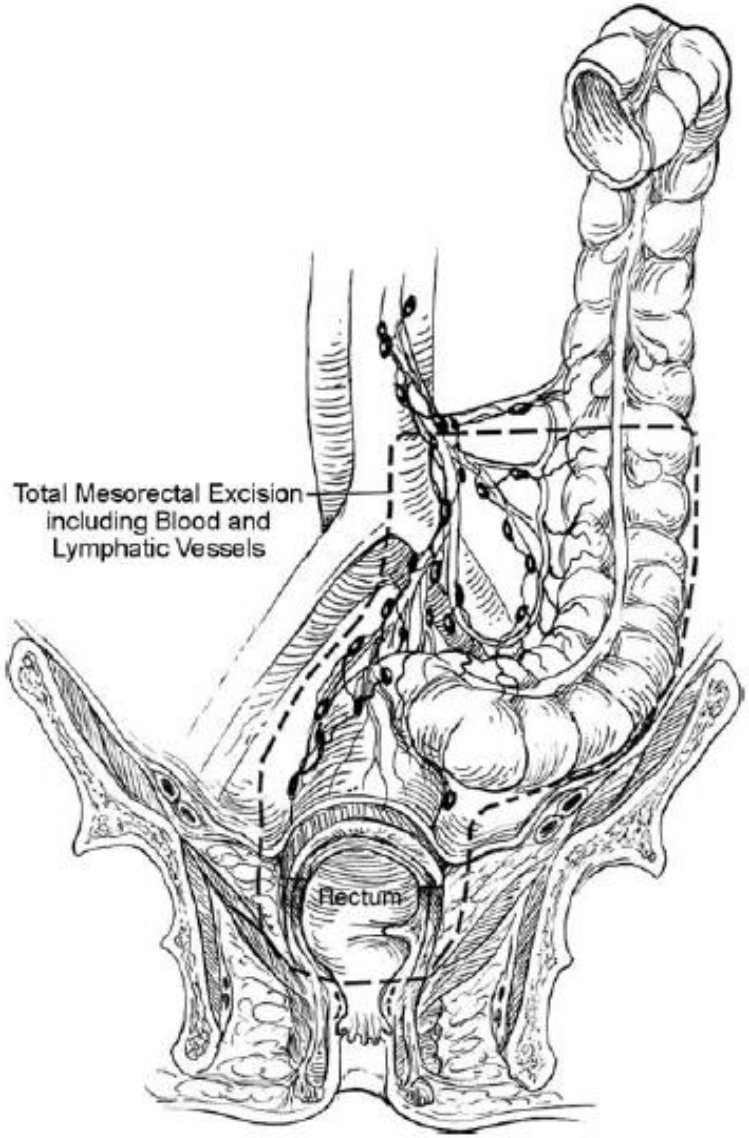
The incidence of locally recurrent disease is the most important measure of the success of any new operation for rectal cancer. Thus there has been anxiety (1) that the increase in sphincter-conserving surgery due to staplers might lead to more local recurrences. Four years ago, therefore, we combined the decrease in permanent colostomies in our unit with a change in the technique for pelvic dissection. In particular we determined that all cancers of the midrectum should be excised with the mesorectum intact. Thus the phase of dividing this during anterior resection, which is described in standard textbooks (2), was completely omitted and the whole mesorectum was encompassed by the plane of excision. In this way none of the usual 'block' of fatty lymphovascular tissue remains in the posterior half of the pelvis even though the anus, the levators, a small rectal reservoir and as much as possible of the nerve plexuses have been preserved.



RECTUMCARCINOOM: rectumresectie



Rectumresectie: TME



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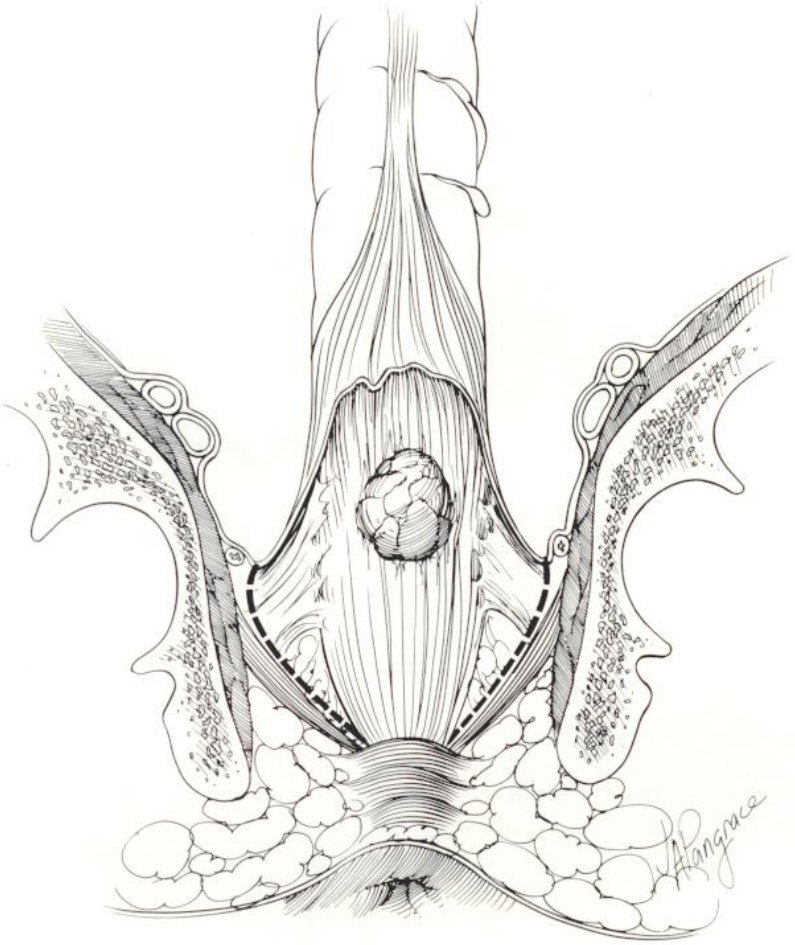
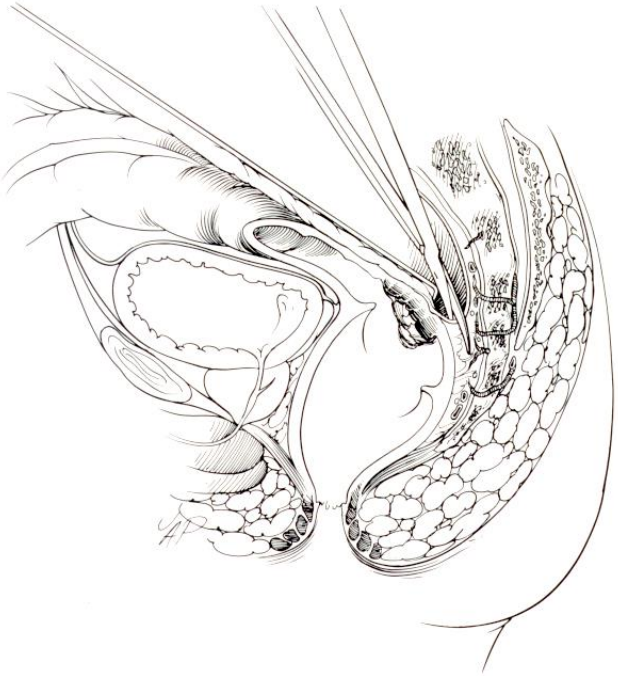
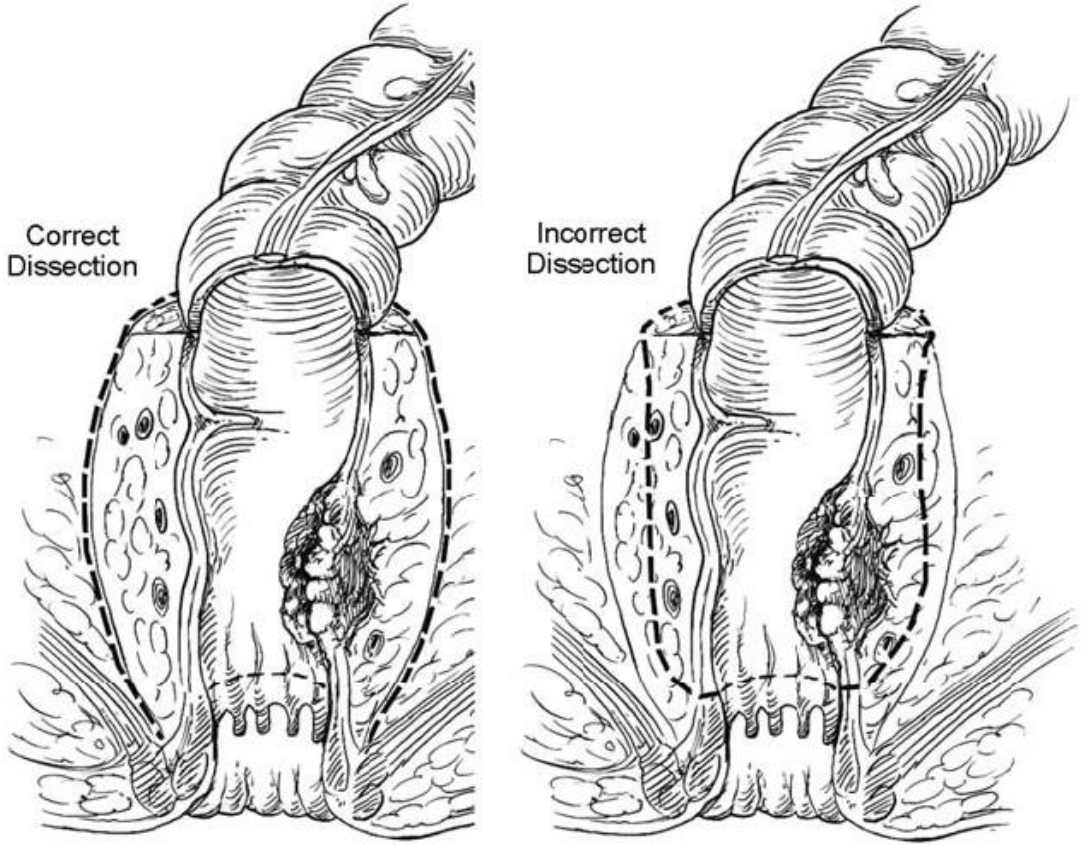
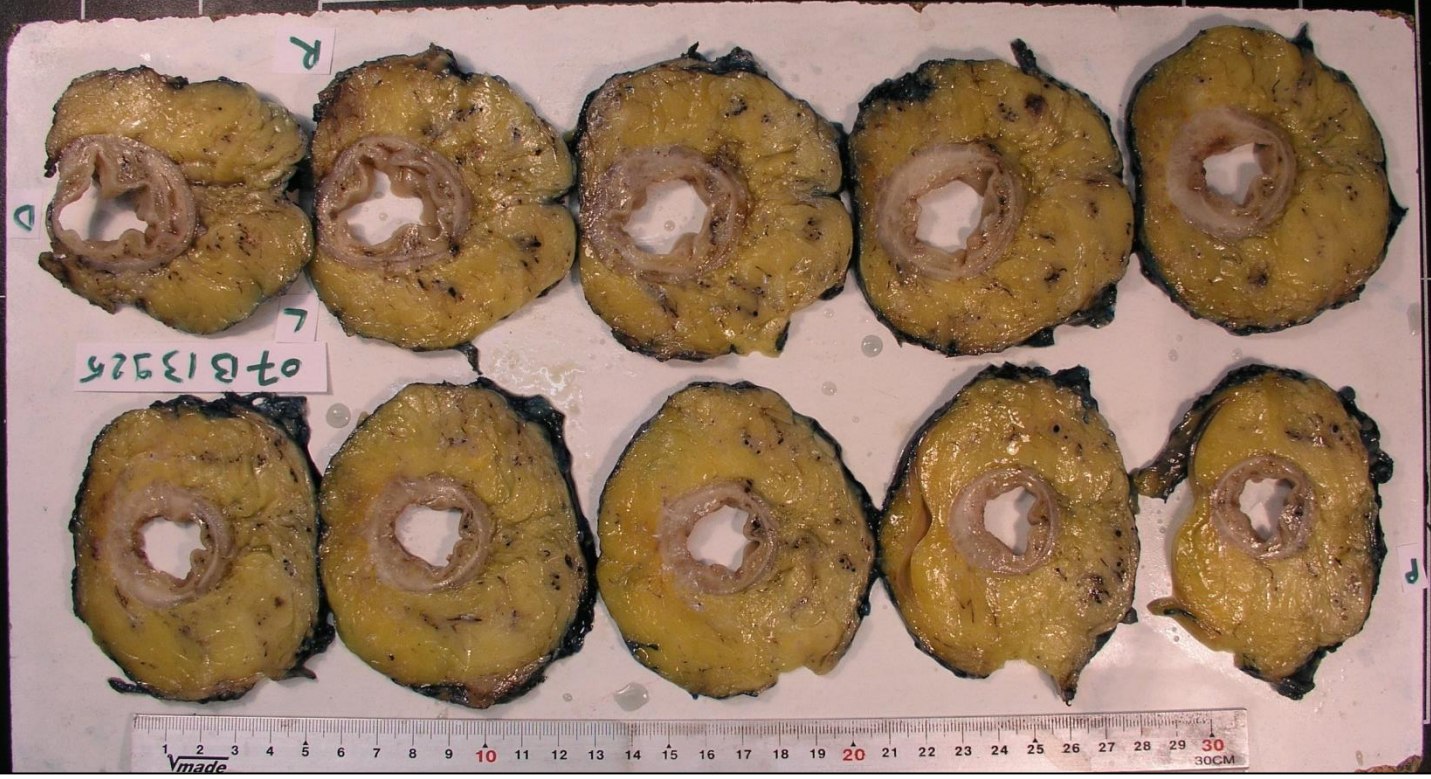


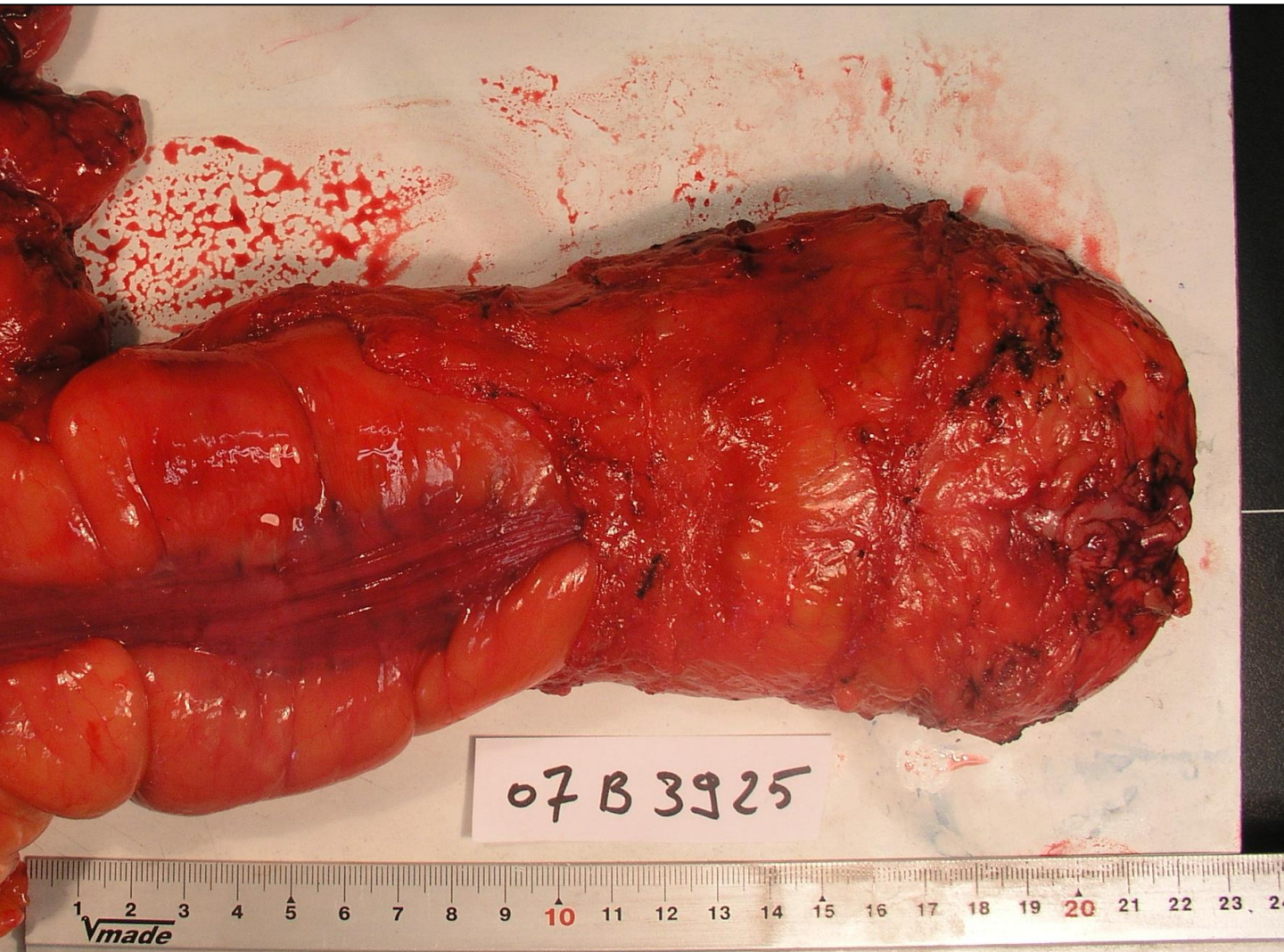


Rectumresectie: TME

Rectumresectie: TME




R
L
07B3925
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
made
30CM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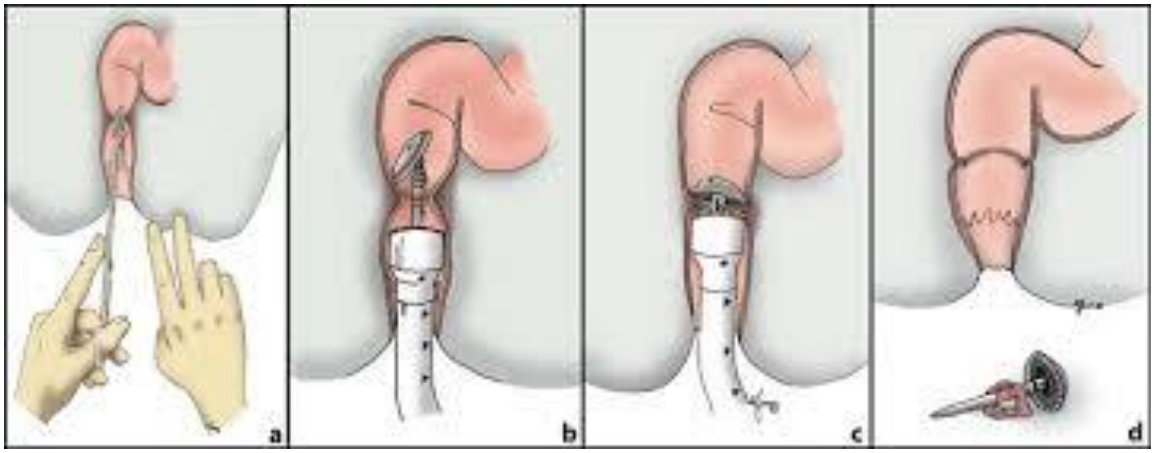
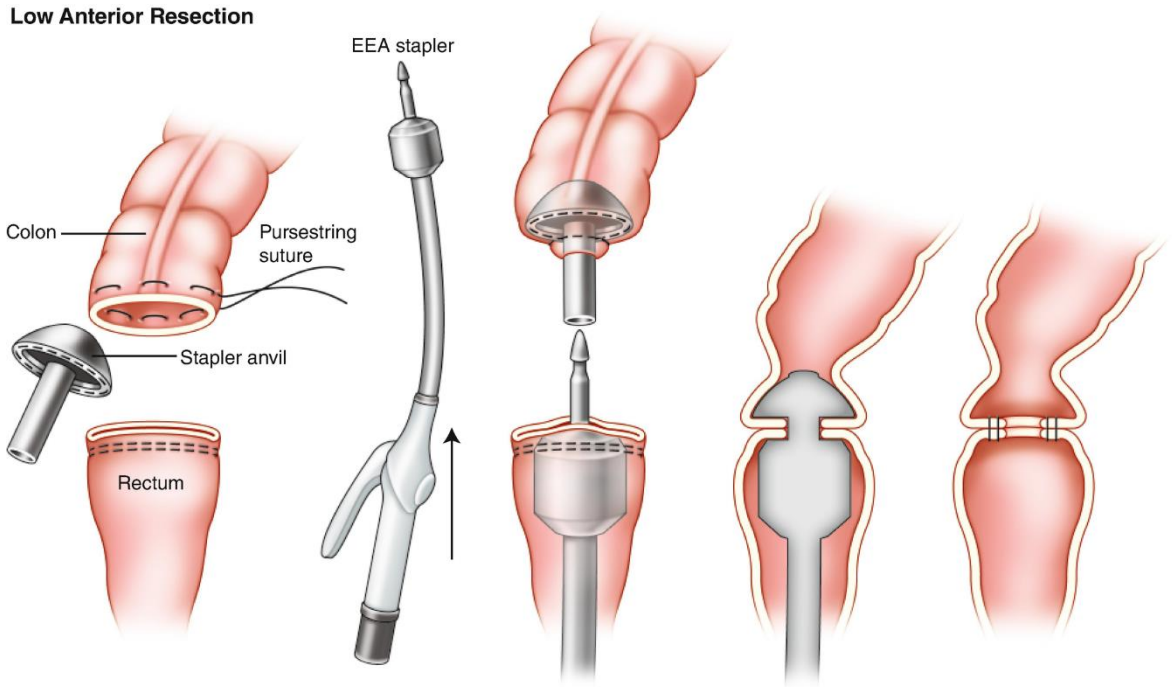
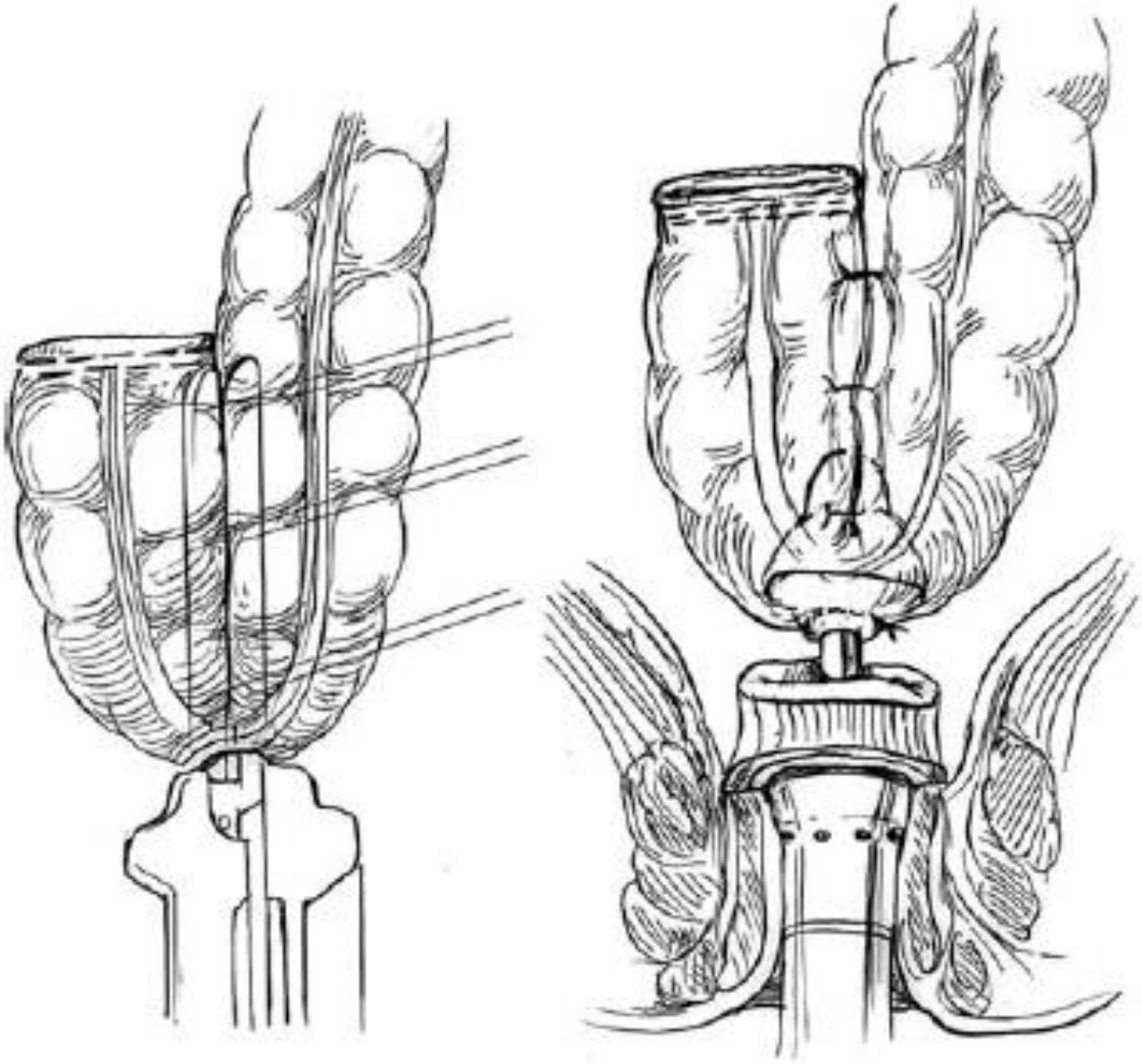
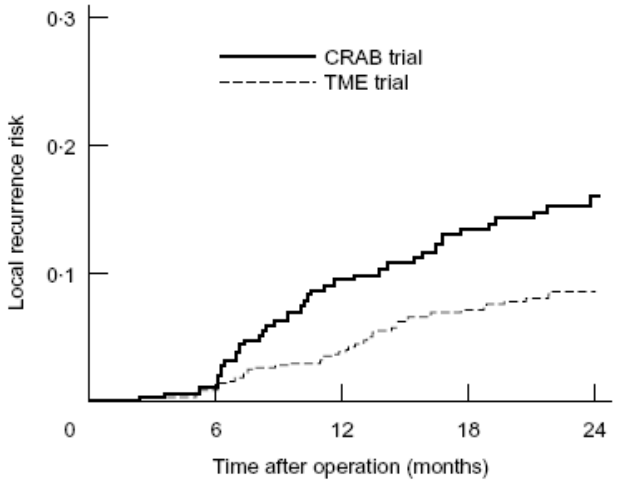

a
b
c
d

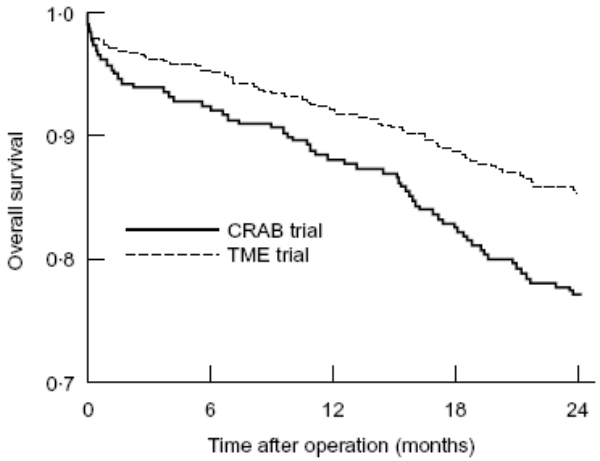

Low Anterior Resection
EEA stapler
Colon
Pursestring suture
Stapler anvil
Rectum



Impact of the introduction and training of total mesorectal excision on recurrence and survival in rectal cancer in The Netherlands

E. Kapiteijn, H. Putter*, C. J. H. van de Velde and cooperative investigators of the Dutch ColoRectal Cancer Group





Br J Surg 2002

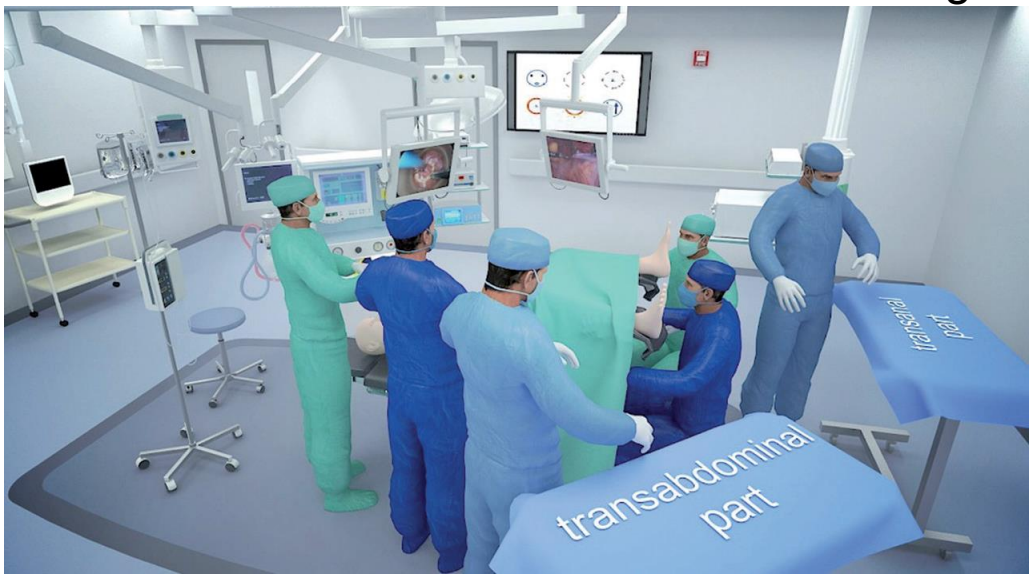
Effect of a surgical training programme on outcome of rectal cancer in the County of Stockholm. Martling et al. Lancet 2000

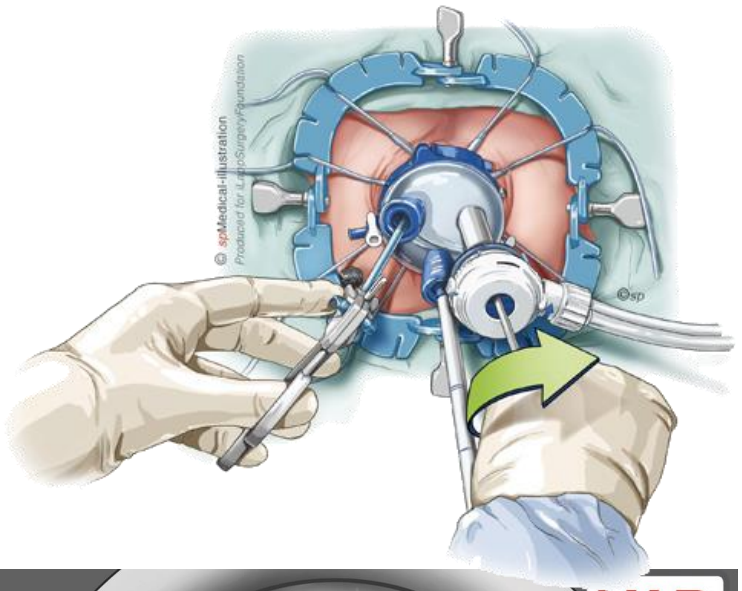
	Stockholm I (n=686)	Stockholm II (n=481)	TME project (n=381)	p*
Local recurrence	103 (15%)	66 (14%)	21 (6%)	<0·0001
Distant metastases	107 (16%)	87 (18%)	54 (14%)	0·26
Death from rectal cancer	104 (15%)	77 (16%)	35 (9%)	0·002
Death from intercurrent disease	74 (11%)	26 (5%)	45 (12%)	0·06

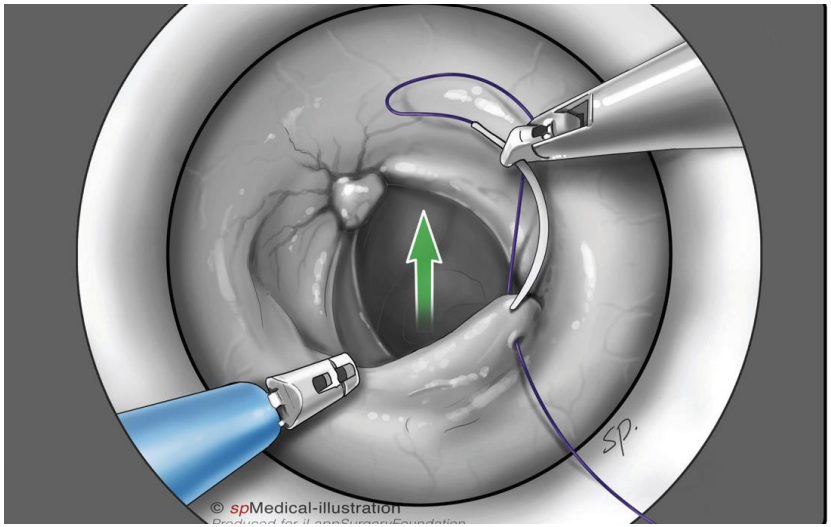
*For Stockholm I and II *vs* TME project.

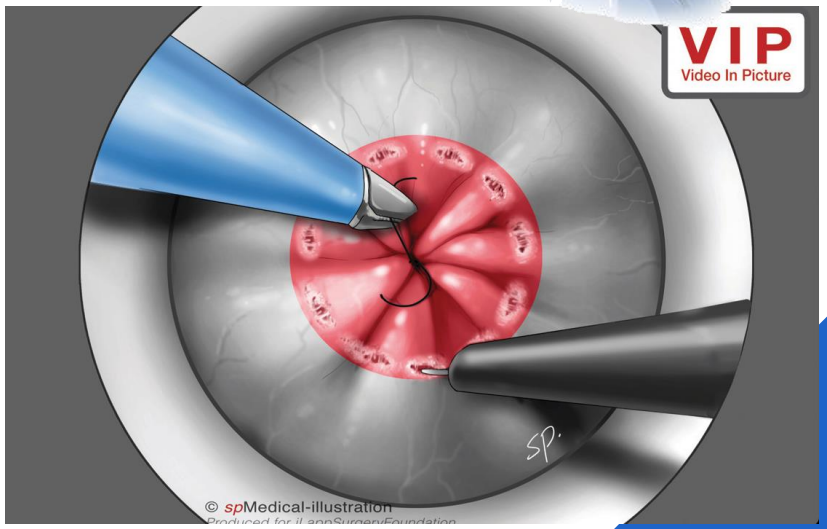
Rectumresectie: TaTME

Transanale totale mesorectale excisie → lage rectumtumoren

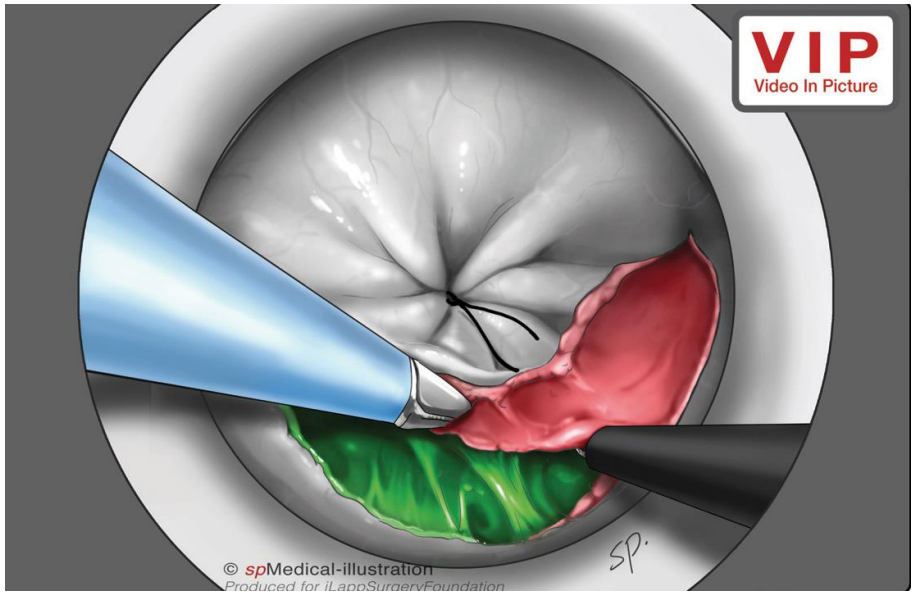


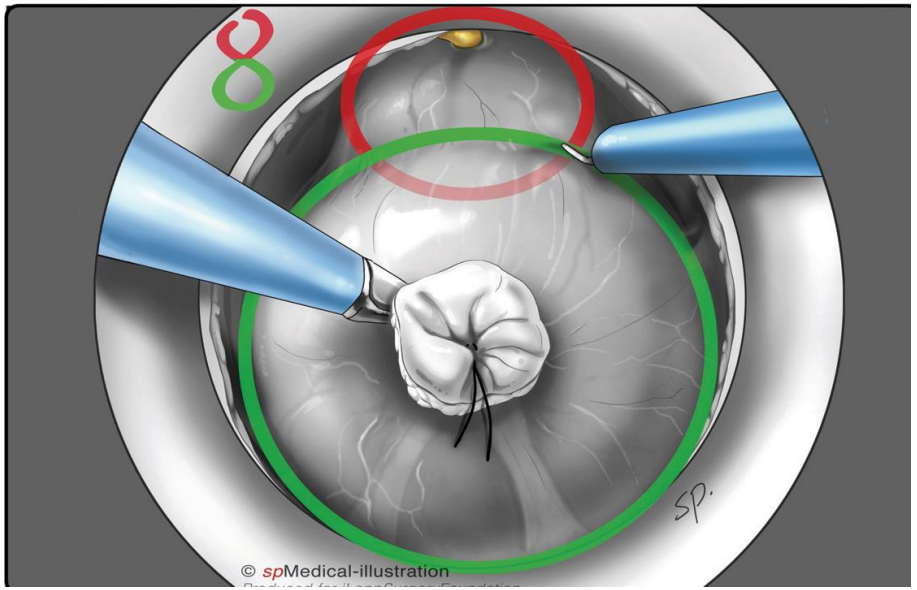


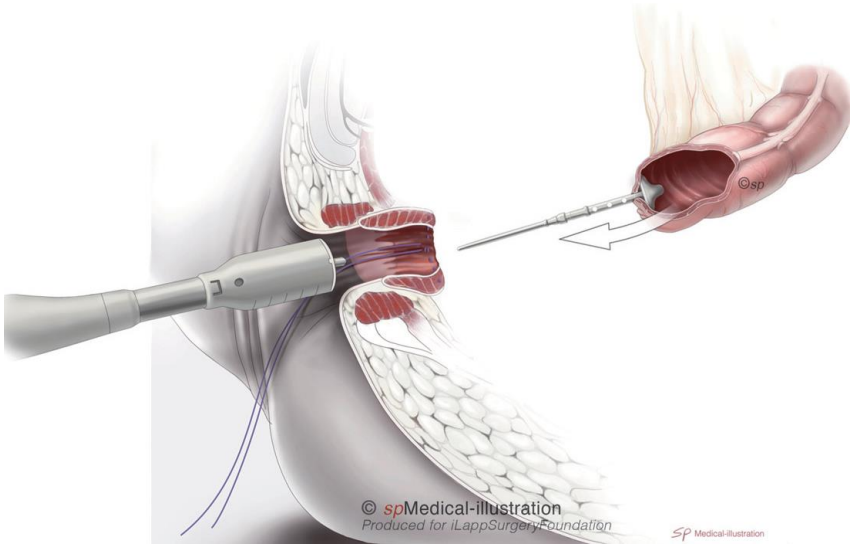


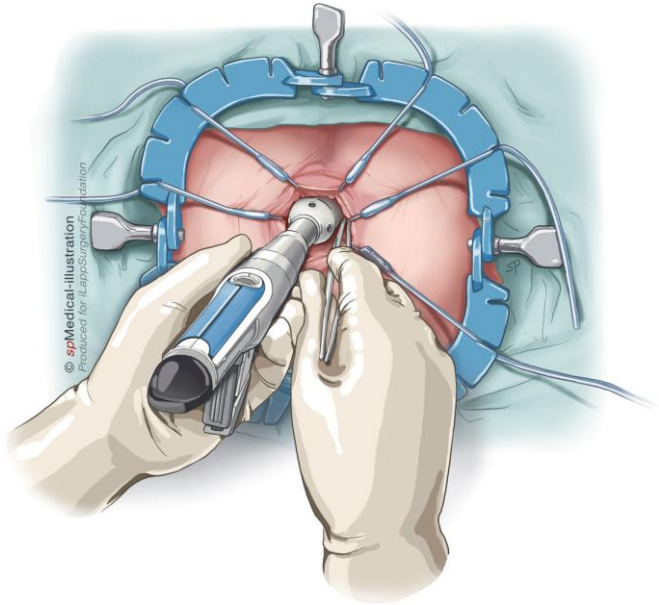


Rectumresectie: TaTME

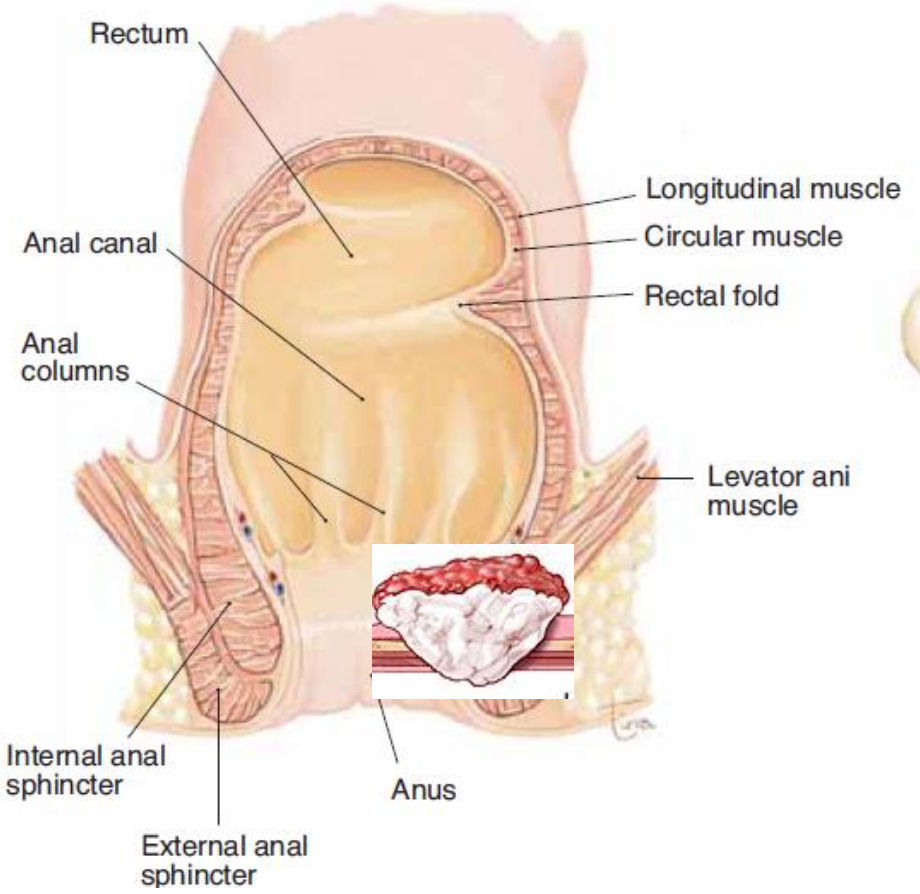


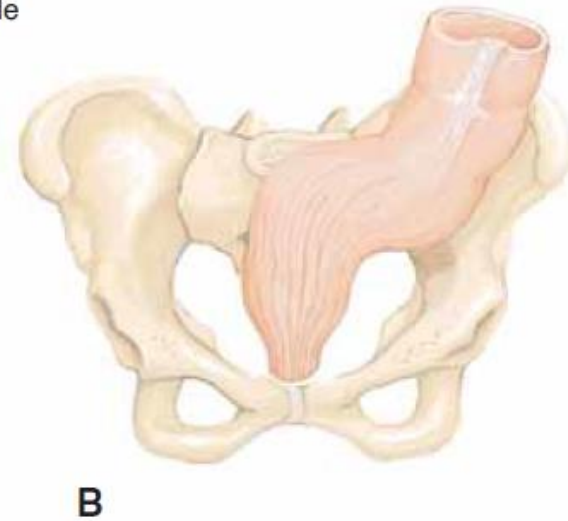






Rectumresectie: rectumamputatie





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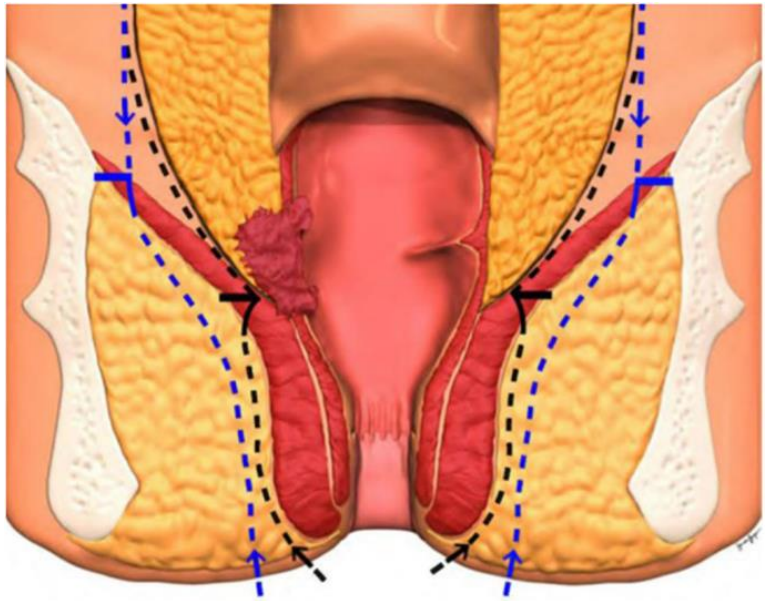
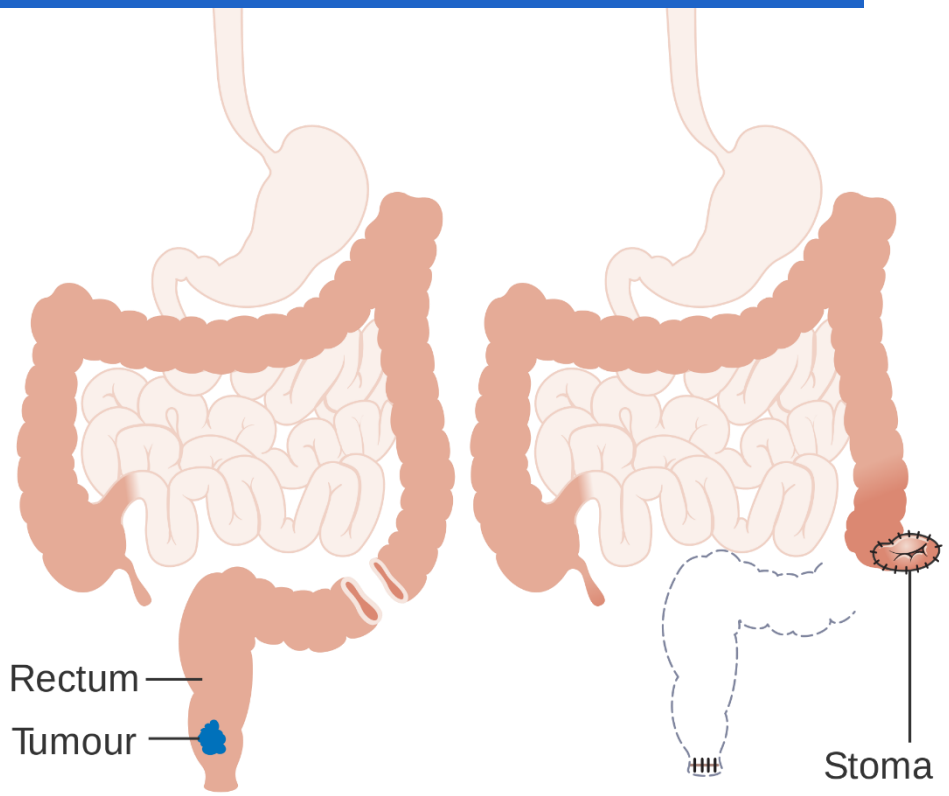
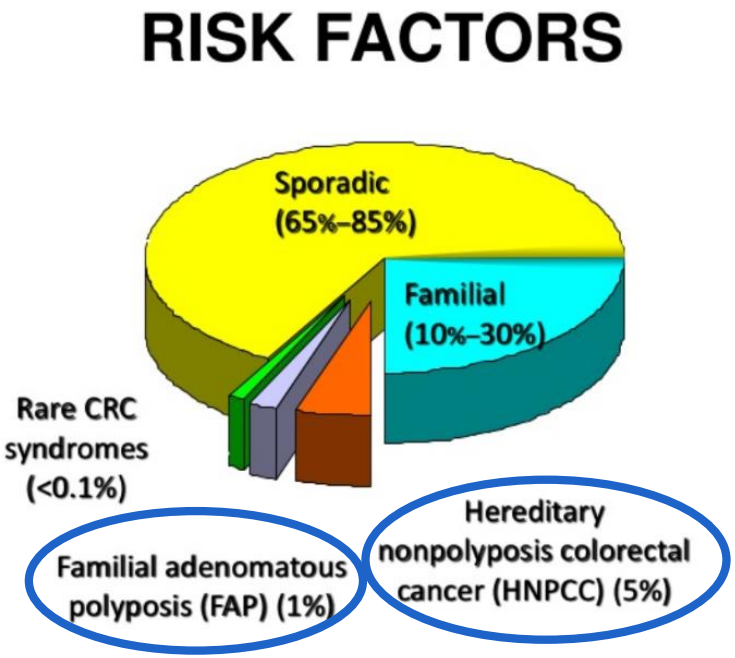
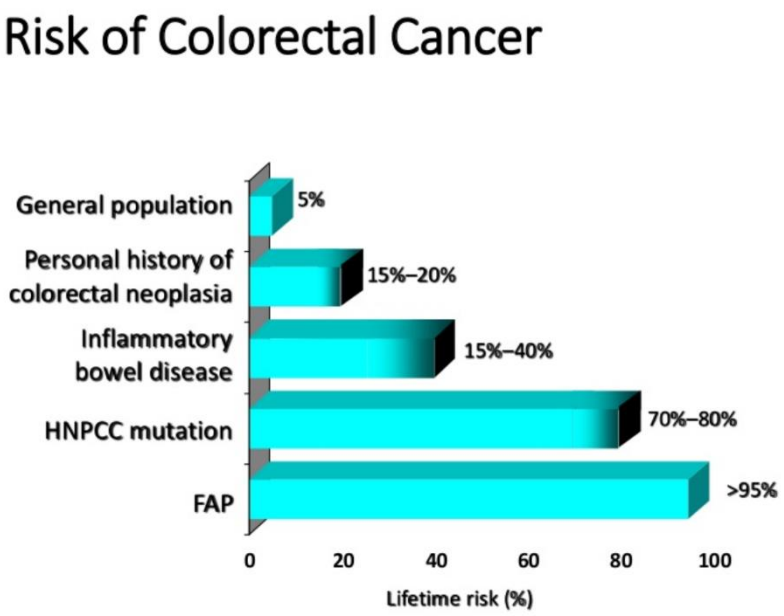


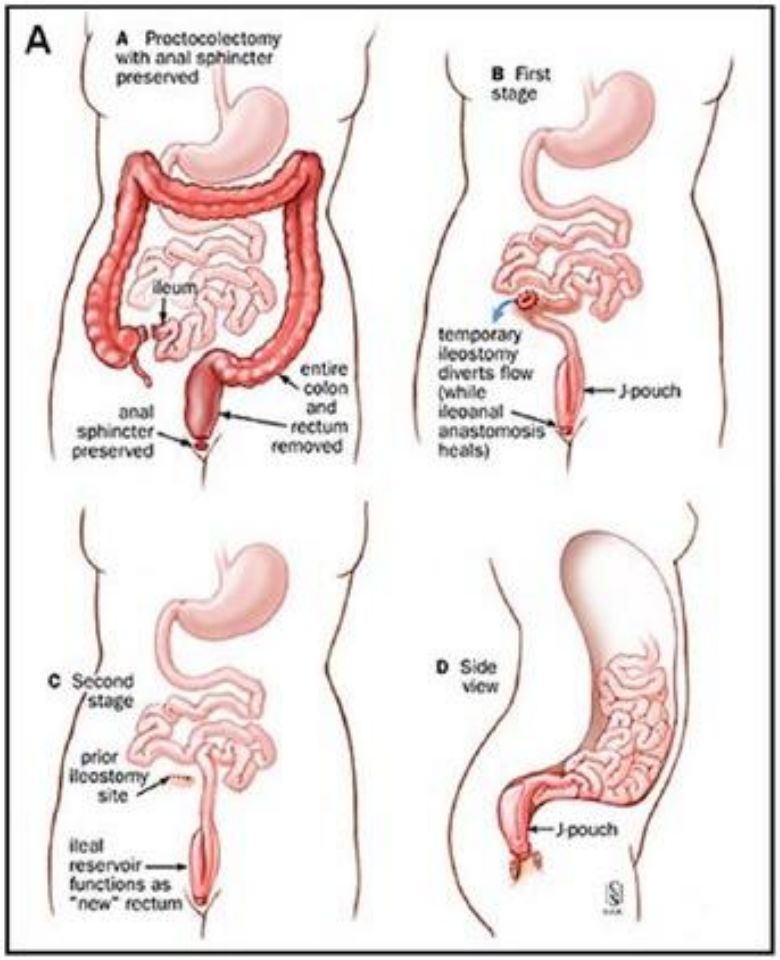


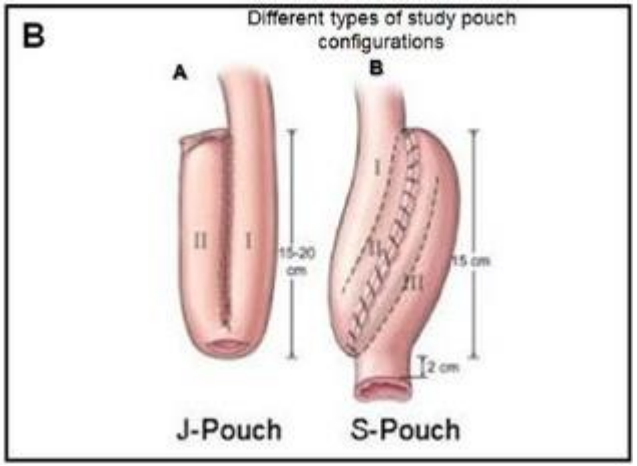
Totale colectomie met ileale pouch anale anastomose



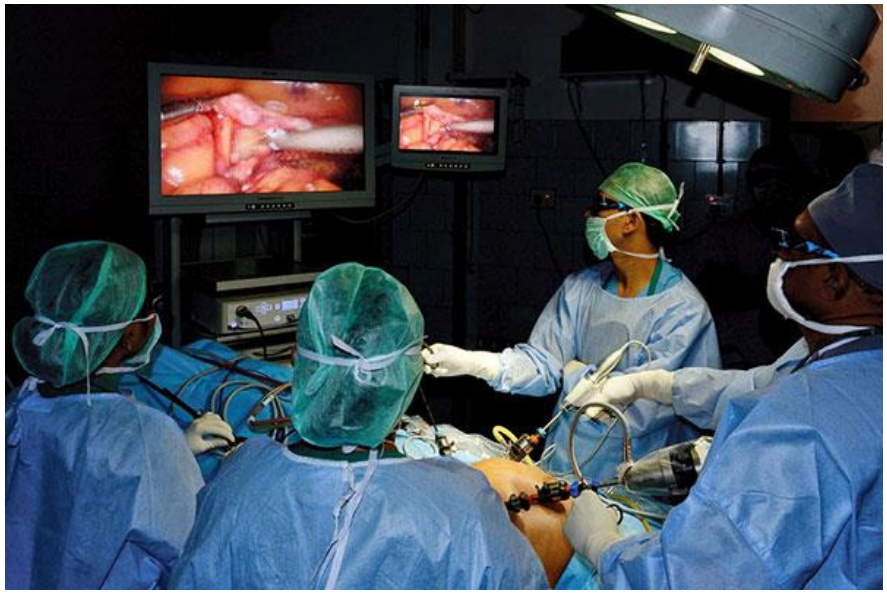


Totale colectomie met ileale pouch anale anastomose





Adapted: *M'Koma et al., Int J Colorect Dis 2007;22:1143-63 (ref 28)*




da Vinci S

Postoperatieve complicaties

Vroegtijdig

Systematic review of preoperative, intraoperative and postoperative risk factors for colorectal anastomotic leaks
McDermott et al. 2015 BJS

1. **Lekkage** (multifactorieel: cardiaal, vasculair belast, nierdialyse, immunosuppressie, radiotherapie)
2. Bloeding
3. Wondinfectie – UWI - Pneumonie
4. Blaasfunctie
5. DVT

Laattijdig

6. Lars= lage anterior resectie syndroom: urgency – frequency- incontinence
7. Buikwandhernia: preventieve prothese bij definitief stoma ?
8. Sexuele dysfunctie

Anastomotisch lek

Systematic review of preoperative, intraoperative and postoperative risk factors for colorectal anastomotic leaks
McDermott et al. 2015 BJS

Stoma

- **Tijdelijk** dubbelloop ileo/colo -stoma als bescherming van lage rectale naad na **radiotherapie** of bij precaire anastomose in zwak weefsel
  → 6 weken

- Tijdelijk dubbelloop ileo/colostomie igv **lekkage**

- **Definitief colostoma** indien ingroei tumor in sfincter/bekkenbodem (APRA)

- Definitief colostoma indien slechte kwaliteit **sluitspier**

- Definitief ileostoma indien FAP/HNPCC en tumor ingroei in sfincter/bekkenbodem

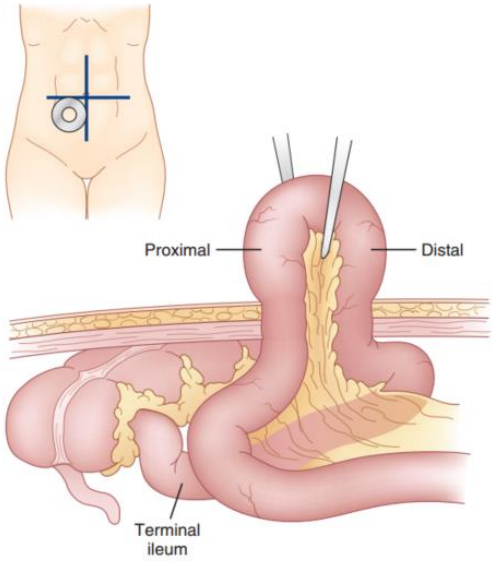
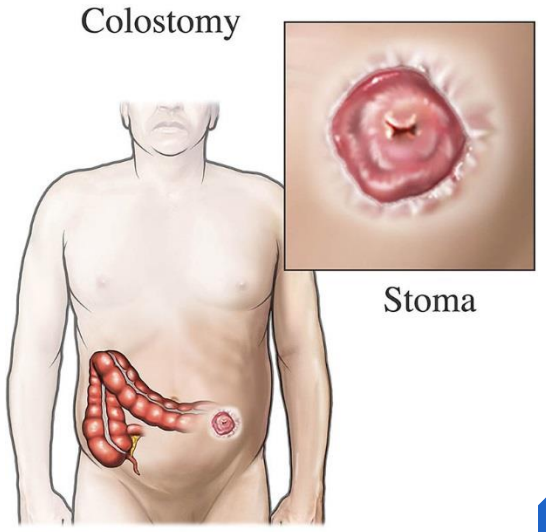


FIGURE 51-24 Loop ileostomy in continuity.



Perioperatief verloop

- Afhankelijk van type chirurgie
- **Fast track**: MS geen of snel weg, snel per os, snel mobiliseren, BS geen of snel weg, geen pijnpomp bij laparoscopie (Protocol in uitwerking)

- Lokale resectie: weinig pijn – **1 overnachting**
- Rechter hemicolectomie: **2-4 dagen**
- Linker hemicolectomie/ sigmoidresectie/ rectumresectie: **4-7dd**

Darmvoorbereiding: Discussiepunt: indien ja met AB

- Rectum: ja
- Linker hemicolectomie/ sigmoidresectie: ?, fleet ja
- Rechter hemicolectomie: ?

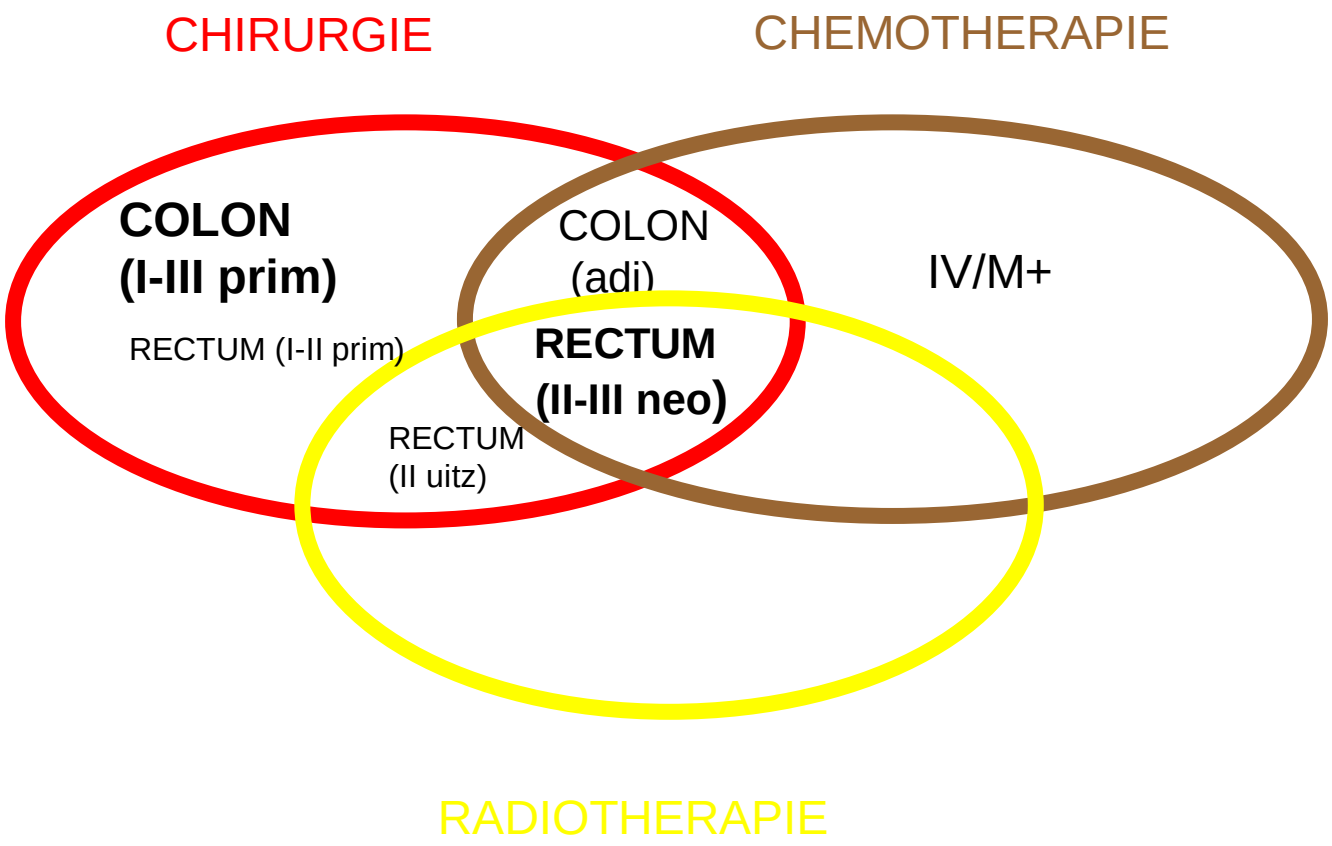
Drains

- Rectum: ja
- Andere: afhankelijk van chirurgisch verloop

RECTUMCARCINOOM: adjuvante therapie

- Indien neoadjuvante RCT → 4 maand adjuvente chemo (uitz. cp response, ypT0N0)
- Indien enkel neo RT en toch N+ → 6 maand adjuvante chemo
- Indien geen neoRCT en toch N+ → adjuvante RCT
- Chemo: De Gramont (5FU) of Folfox

CURATIEVE BEHANDELING COLORECTAAL



TAKE HOME MESSAGES