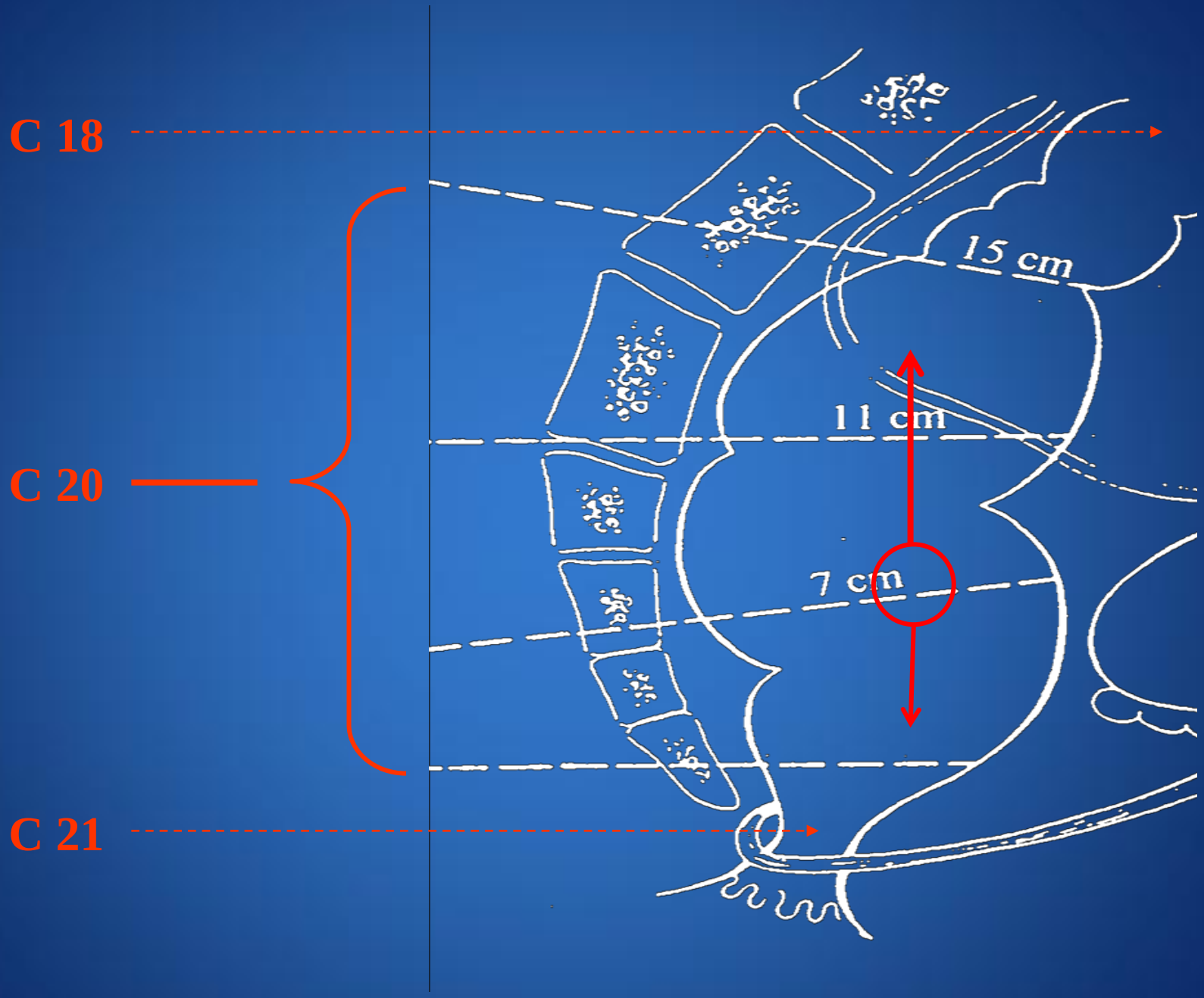
Karcinom rekta pohledem klinika

Jiří Hoch

Chirurgická klinika UK 2.LF a FN Motol, Praha


C 18
C 20
C 21
15 cm
11 cm
7 cm

1812 THE LANCET,] MR. MILES: ABDOMINO-PERINEAL EXCISION FOR CARCINOMA OF RECTUM. [DEC. 19, 1908.

solution was employed throughout the operation, some two to three pints being utilised.

On the following day the patient's condition was much improved; the drainage-tube w replaced by a gauze plug on the third day and the latter was emoved on the fourth day. On the second day after the operation pain in the right side of the chest was complained of and examination led to a diagnosis of "dry pleurisy" at the right base and "pneumonia" involving the left lower lobe; the chest was strapped. The temperature on the third day was 98° and the pulse-rate was 84 per minute. From this date the temperature became irregular, varying from 97° to 102·8°. The bowels were well opened on the third day and the patient enjoyed a fish diet on the eighth day. An increasing area of dulness hest and on the eight scapula posteriorly; a" was made. The ared up. On the tv inserted through the posterior axillary li ive pus mixed with ng day a portion general

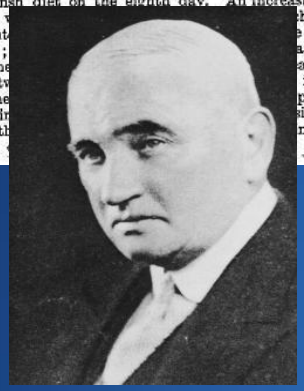
Thirdly, the beneficial effect of the anti-coli serum and bacillus coli vaccine which showed itself in an attempt to stop the spread of the septic process to a great extent, and in the rapid recovery of the patient and rapid healing of the sinuses after evacuation of the pus.

In conclusion, I must express my thanks to Mr. Ballance for his kindness in allowing me to conduct the treatment of the case and for permission to publish these notes.

St. Thomas's Hospital.

A METHOD OF PERFORMING ABDON PERINEAL EXCISION FOR CARCINO OF THE RECTUM AND OF THE TERMINAL PORTION OF THE PELVIC COLON.

BY W. ERNEST MILES, F.R.C.S. ENG., L.R.C.P.
SURGEON TO THE CANCER HOSPITAL, BROMPTON, S.W., TO THE GORDON HOSPITAL FOR DISEASES OF THE RECTUM, VAUXHALL BRIDGE-ROAD, S.W.



1909

THE LANCET,] MR. MILES: ABDOMINO-PERINEAL EXCISION FOR CARCINOMA OF RECTUM. [DEC. 19, 1908. 1813

hysterectomy known as the Wertheim and the Krönig-Wertheim.

The study of the spread of cancer from the rectum has led me to formulate certain essentials in the technique of the operati must be strictly adhered to if satisfactory results anus is with th made,

in the zone of upward spread; (3) that the whole of the pelvic mesocolon below the point where it crosses the common iliac artery, together with a strip of peritoneum at least an inch wide on either side of it, must be cleared away; (4) that the group of lymph nodes situated over the bifurcation of the common iliac artery are in all instances to be removed; and lastly (5), that the perineal portion of the operation should be carried out as widely as possible so that the lateral and downward zones of spread may be effectively extirpated.

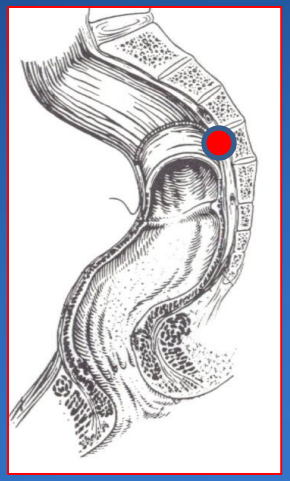
the spread of cancer from the rectum

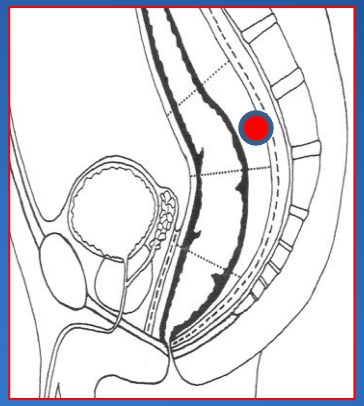
together with the left ovary and tube. This having been done, the pelvic mesocolon together with the adjacent strip of peritoneum on either side of it is detached from the hollow of the sacrum. By keeping close to the anterior sacral ligaments the cellular tissue containing the lymph ed with the pelvic meso- n is continued downwards cro-coccygeal articulation. ection is then carried out anteriorly, by which means the bladder is detached as far as the prostate gland. Attention is now paid to the separation of the lateral aspects of the rectum and it is here that great care must be exercised to avoid injuring the left ureter, which adheres closely to the peritoneum as it skirts the wall of the pelvis. When the ureter has been defined it should be carefully freed as far as the base of the bladder. On the right side the ureter need not be seen. The dissection is then carried downwards on either side and the lateral ligaments of the rectum are divided with scissors. In these

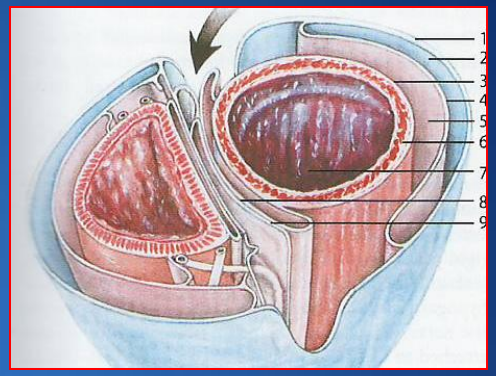
Gabriel WB, **Dukes CE**, Bussy HJR:
Lymphatic spread in cancer of the rectum.
Br. J. Surg. 1935; 23 ; 395-413

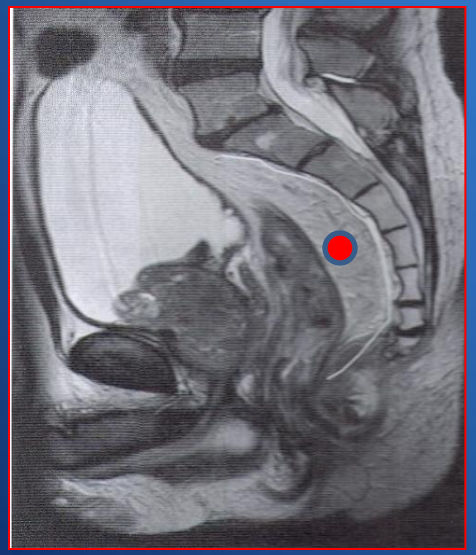
Mezorektum

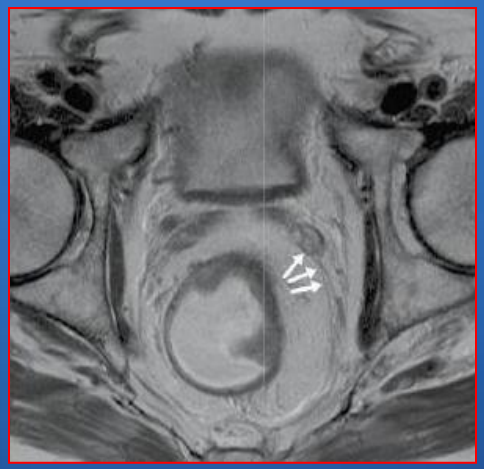
Waldeyer
Stelzner
Heald

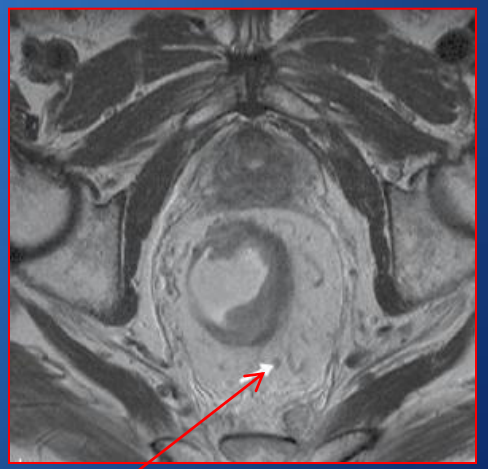






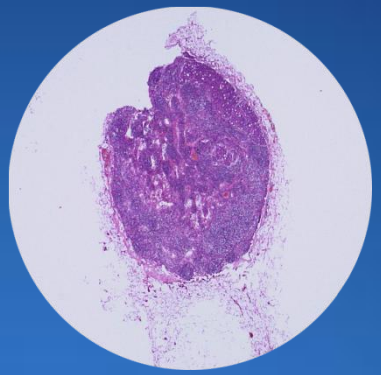






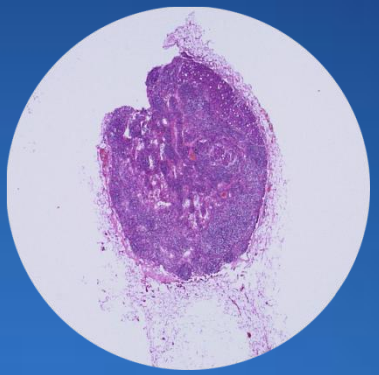
Met.LU

Nádorové postižení v mezorektu

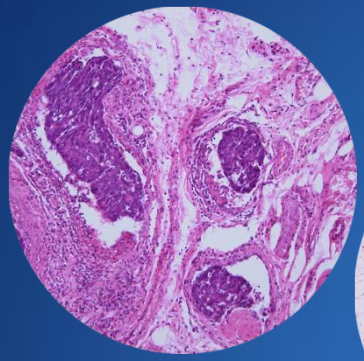


Infiltrovaná lymfatická uzlina

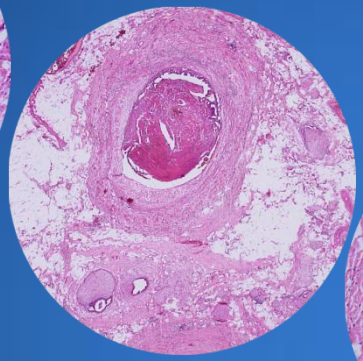
Nádorové postižení v mezorektu



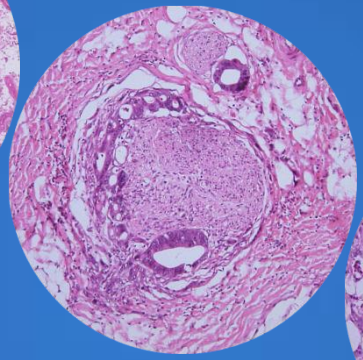
Infiltrovaná lymfatická uzlina



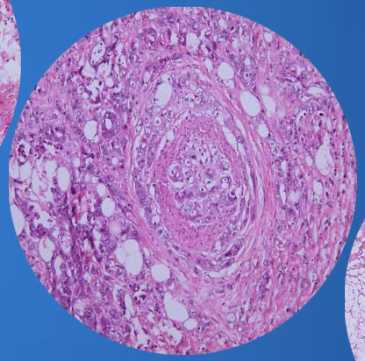
Lymfangioinvaze



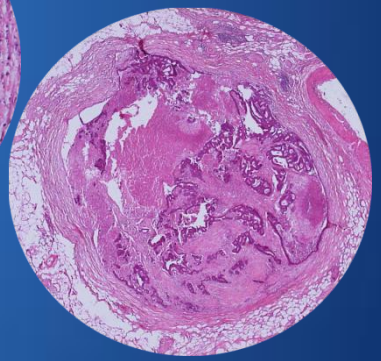
Angioinvaze



Perineurální invaze

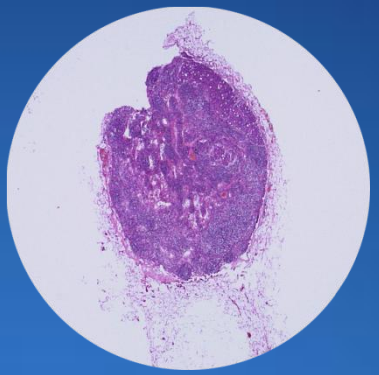


Peri- et
intraneurální invaze

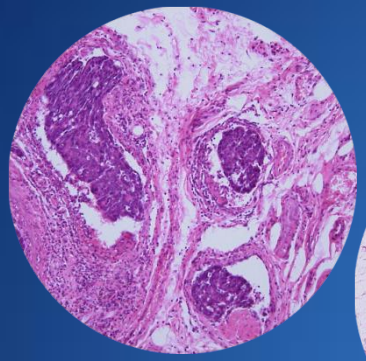


Extranodální nádorové
depositum s fibrózním
pouzdrem, bez
lymfatické tkáně

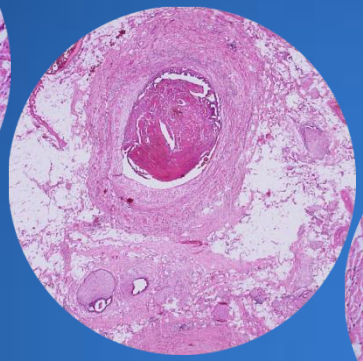
Nádorové postižení v mezorektu



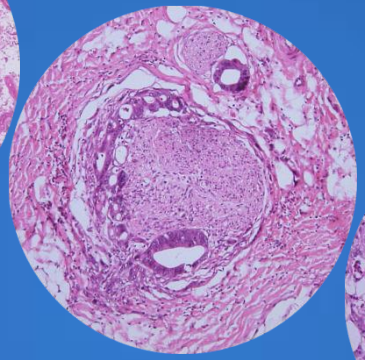
Infiltrovaná lymfatická uzlina



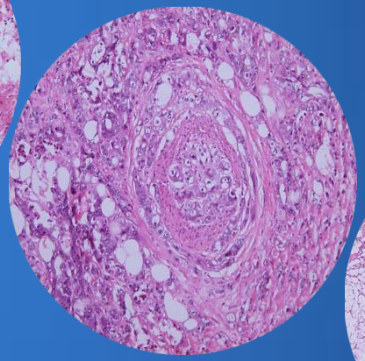
Lymfangioinvaze



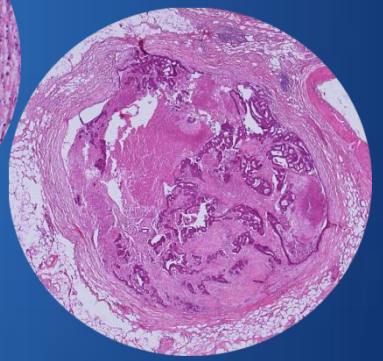
Angioinvaze



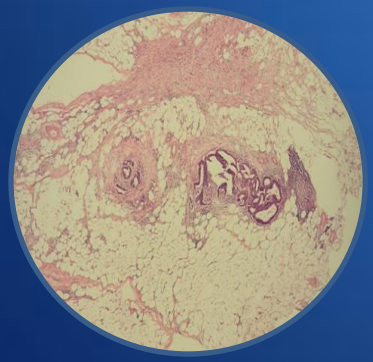
Perineurální invaze



Peri- et
intraneurální invaze



Extranodální nádorové
depositum s fibrózním
pouzdrem, bez
lymfatické tkáně



Nádorové reziduum v tukové tkáni

TME

Heald RJ, Husband EM, Ryall RD.

The mesorectum in rectal cancer surgery.
The clue to pelvic recurrence ?

Br J Surg 1982; 69, 613 – 616

Tab. 1 Onkologische Ergebnisse der randomisiert kontrollierten Studien mit und ohne TME

Studie, Jahr	Studiendesign	Radiotherapie (Gy)	Lokalrezidivrate (%)	p-Wert	Überlebensrate (%)	p-Wert
Mit TME						
Holländische Studie 2007 [21]	Prä-RT vs. TME	25 (5×5)	5,6 vs. 10,9	<0,001[a]	64,2 vs. 63,5	n.s.[a]
Sauer (CAO/ARO/AIO-94) 2004 [24]	Prä-RCT vs. Post-RCT	45 vs. 50,4	6 vs. 13	0,006[a]	76 vs. 74	n.s.[a]
Polnische Studie 2006 [9]	Prä-RT vs. Prä-RCHT	25 (5×5) vs. 50,4	9 vs. 14,2	n.s.[b]	67,2 vs. 66,2	n.s.[b]
Ohne TME						
Uppsala 1990 [19]	Prä-RT vs. Post-RT	25 (5×5) vs. 60	13 vs. 22	0,02	k.A.	n.s.
Stockholm I 1990 [1]	Prä RT vs. OP	25 (5×5)	14 vs. 28	<0,01	k.A.	0,05[c]
Stockholm II 1996 [3]	Prä-RT vs. OP	25 (5×5)	10 vs. 21	<0,01	69,6 vs. 60,6	0,02[c]
SRCT 1997 [4, 10]	Prä-RT vs. OP	25 (5×5)	11 vs. 27	<0,001	58 vs. 48	0,004

TME totale mesorektale Exzision, **OP** Operation, **RT** Radiotherapie, **RCHT** Radiochemotherapie, **k.A.** keine Angaben, **n.s.** nicht signifikant.
[a]Nach 5 Jahren, [b]nach 4 Jahren, [c]in kurativer Absicht operiert.

Ulrich A, Weltz J, Büchler W. Chirurg 2009: 266-273

TME „Total mesorectal excision“*

Heald RJ a spol. Br J Surg 1982 69

- Ostrá disekce

  separace viscerální fascie mezorekta (f. propria) od parietální fascie
  („fascia endopelvina, Waldeyerův prostor, Denonvilliersova fascie)
  tzn. chirurgicky a onkologicky „čistá

- **disekce v „ebryonální“ vrstvě**

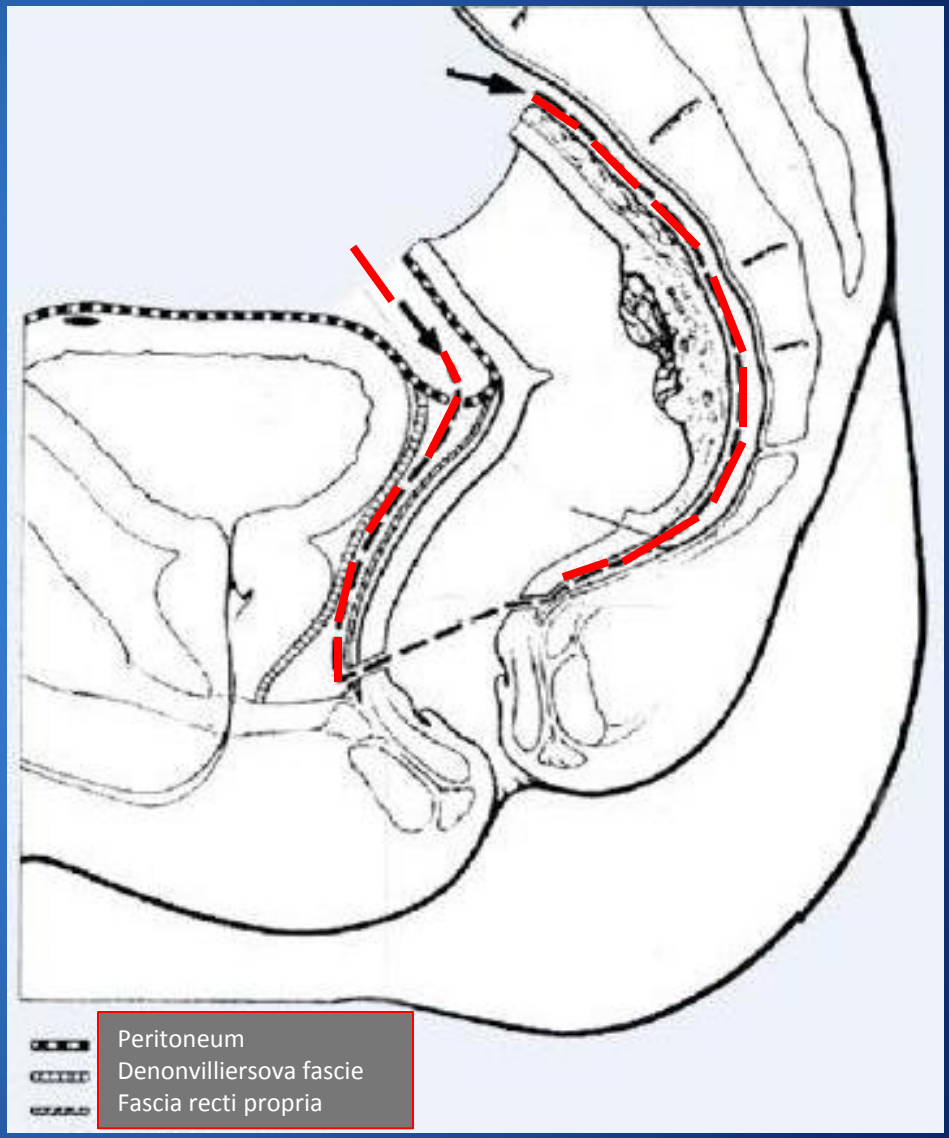
  „holy plane“

- Hlavní výhoda TME

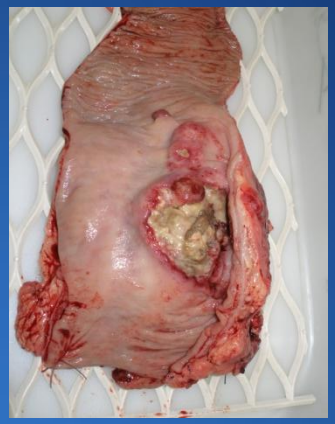
  resekce střeva s nádorem, regionálními lymfatickými uzlinami a perirektální tukovou tkání

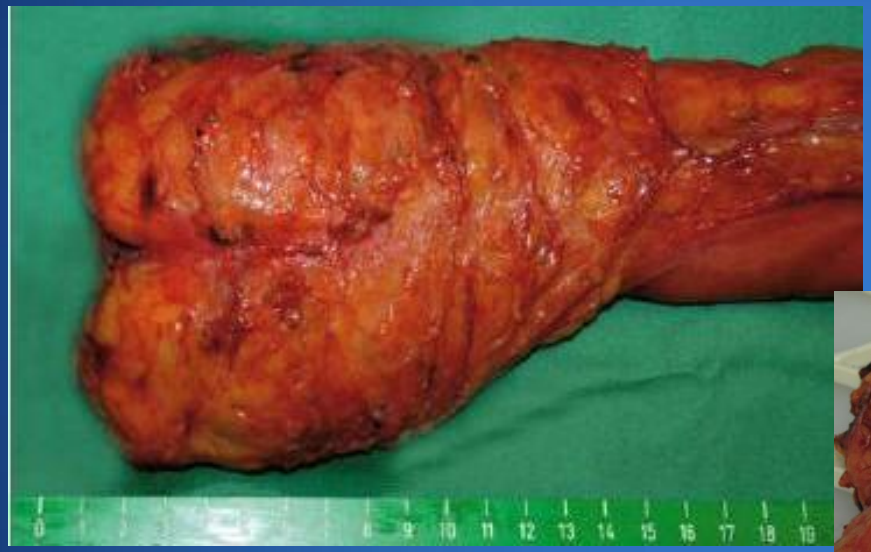
- intaktní pouzdro

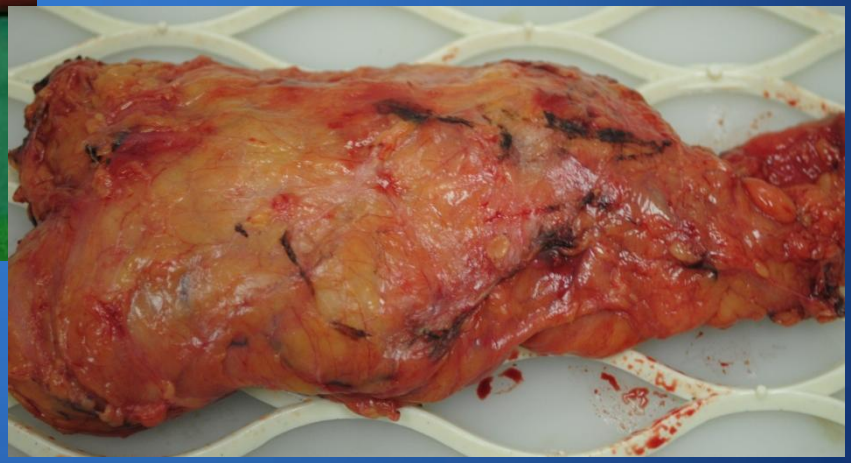
  → dosažení R0 s negativními cirkumferenčními okraji



TME – kontrola kvality

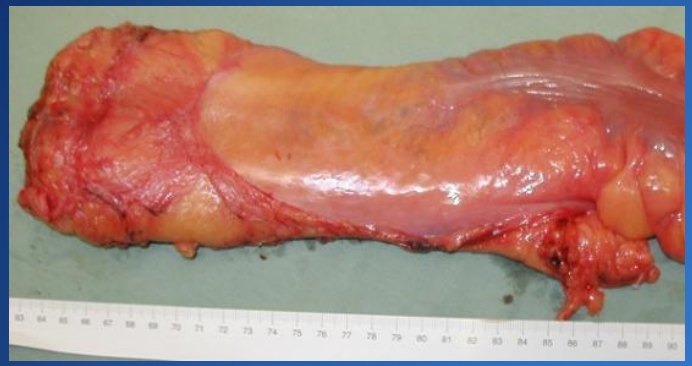


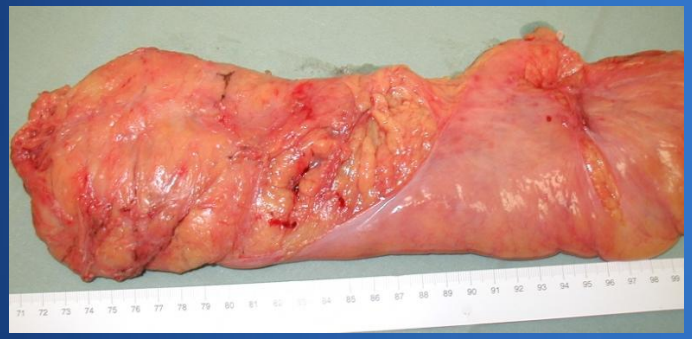




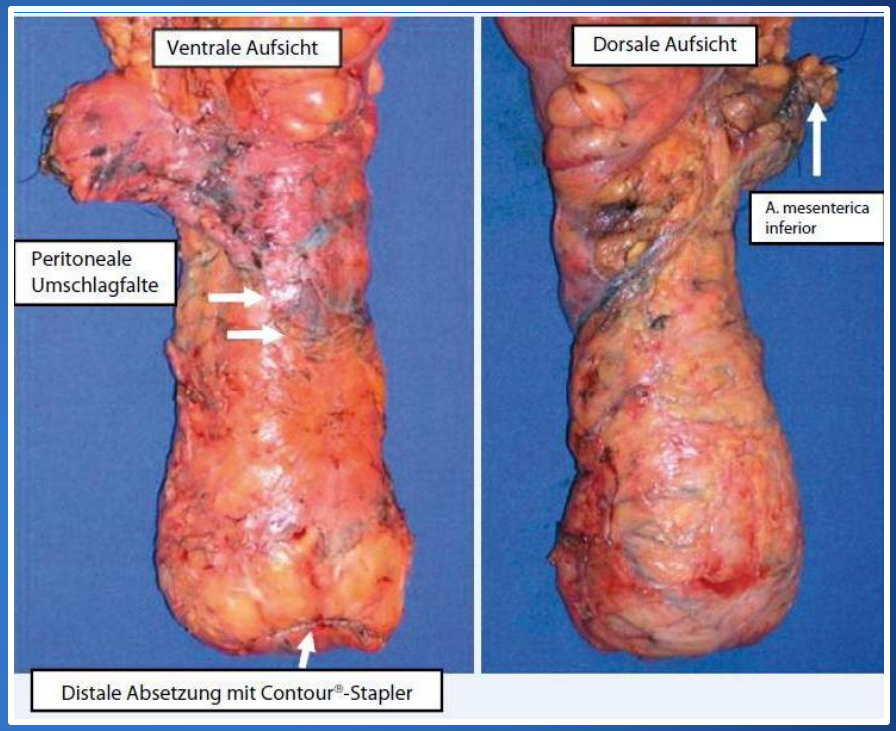
- Parciální *v.* kompletní TME
- Cylindrický tvar resekátu (ne konus)

TME – kontrola kvality

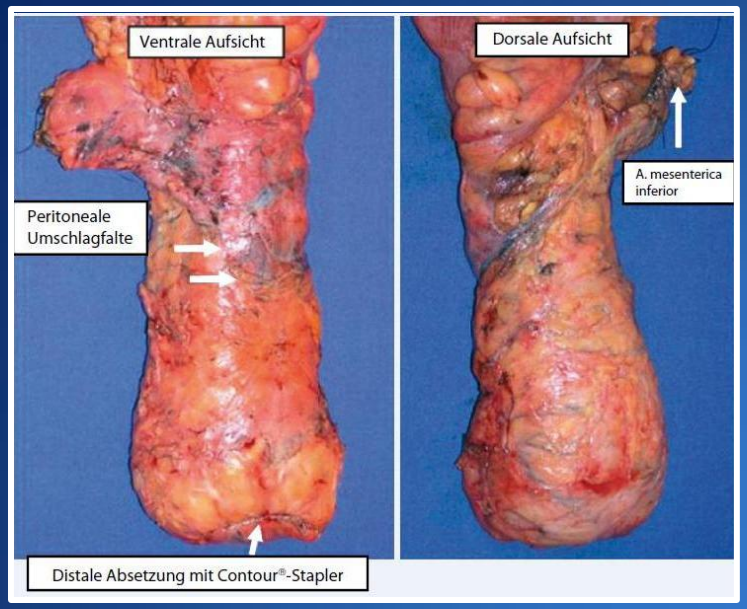


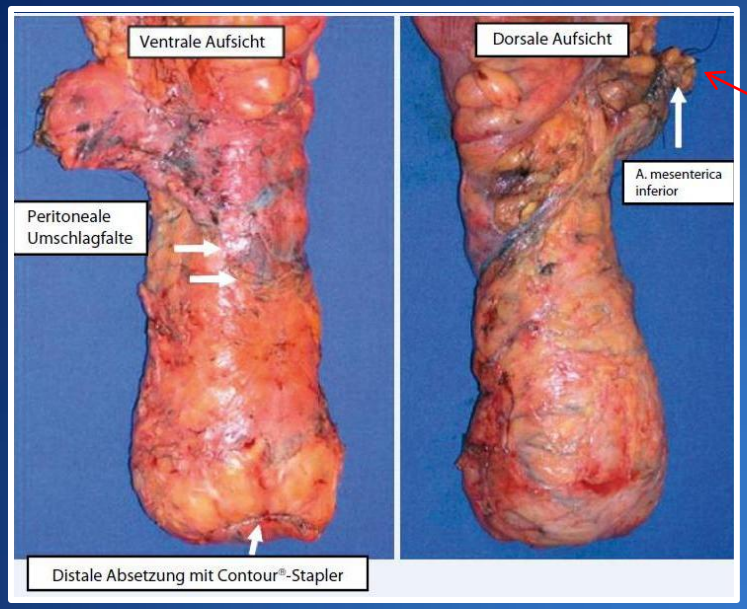


Ventrální strana resekátu
Dorzální strana s mezorektem



Kontrola kvality TEM s aplikací barviva
German Rectal Cancer Study Group CAO/ARO/AIO -94 trial
Liersch T et al. Chirurg 2009 80 : 266-273


Ventrale Aufsicht
Dorsale Aufsicht
A. mesenterica inferior
Peritoneale Umschlagfalte
Distale Absetzung mit Contour®-Stapler



AMI ? ARS ?

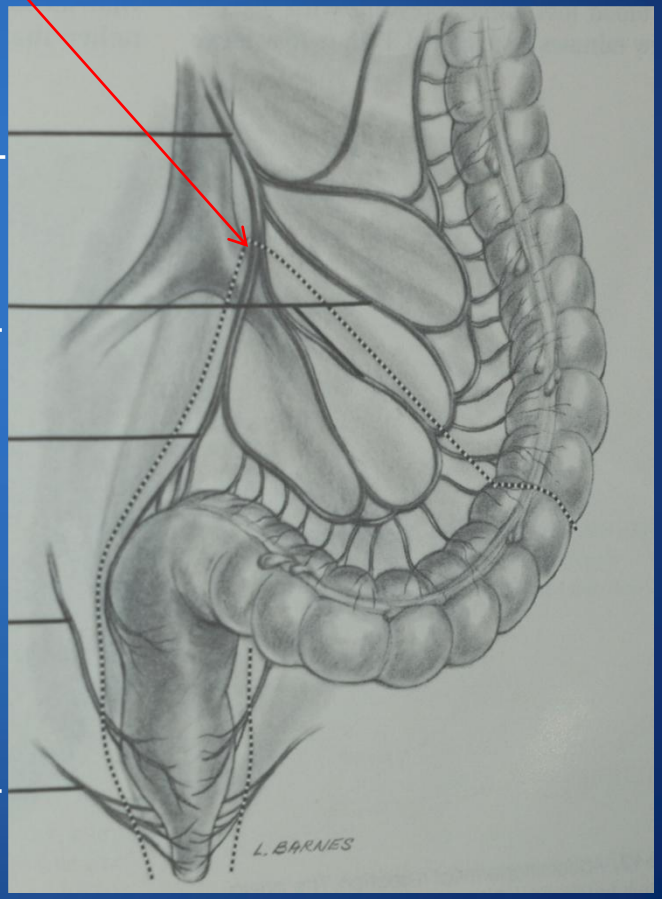
AMI ----------

Aa. sigmoidales--

AHS----------

AHM---------

AHI----------



„Quality of surgery“

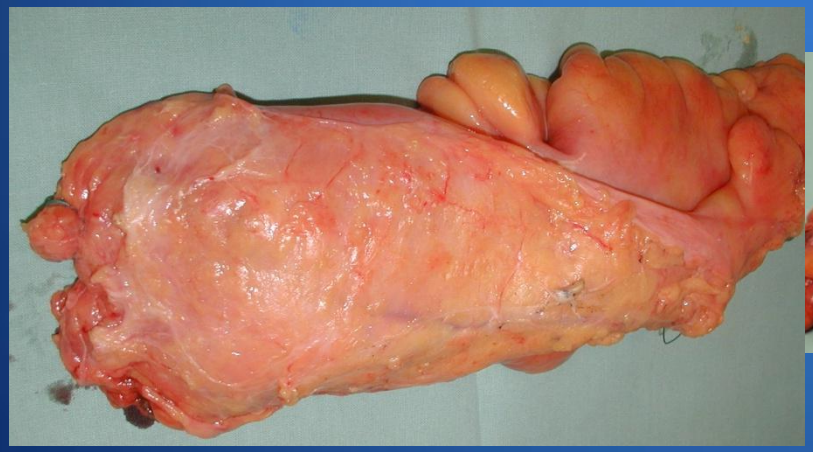
- Vztah mezi úplností excize a onkologickým výsledkem

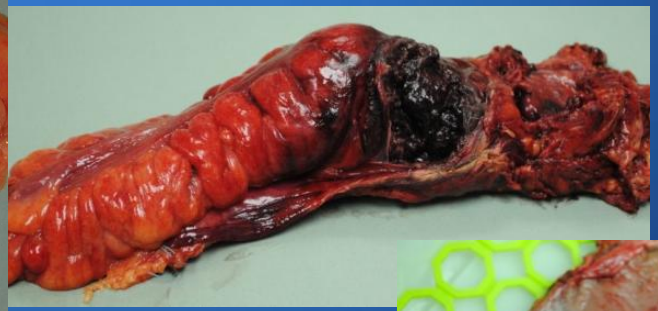
NP. West a spol. Lancet Oncol 2008 9
W.Hohenberger a spol. Colorectal Dis 2009 11
EL. Bokey a spol. Dis Colon Rectum 2003 46

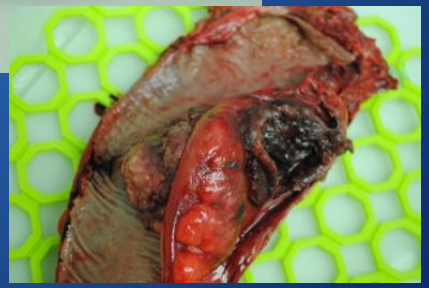
- I. grade – malý objem, trhliny pouzdra – fascia propria
- II. grade – středně objemná excize, nepravidelná, bez patrných lézí pouzdra
- III. grade – mezorektum hladké, lesklé, s intaktním pouzdrem

Macroscopic evaluation of rectal cancer resection specimen: clinical significance of the pathologist in quality control.

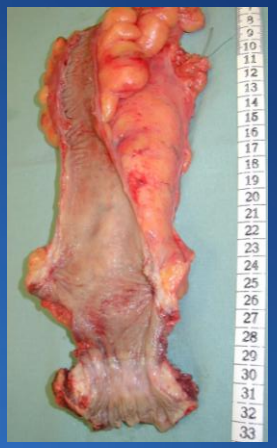
Nagtegaal ID a spol. J Clin Oncol 2002 20

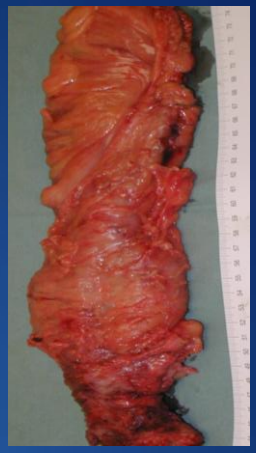




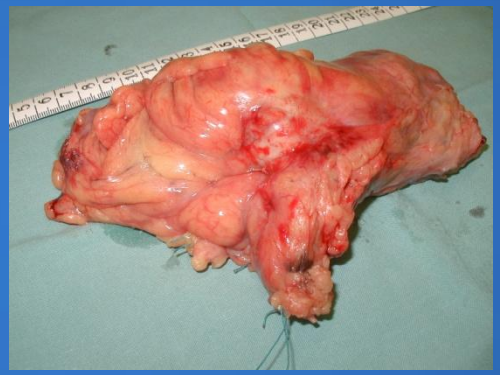


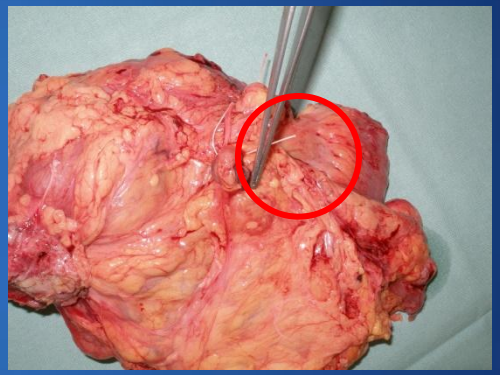
Pooperační opatření – úkoly pro chirurga



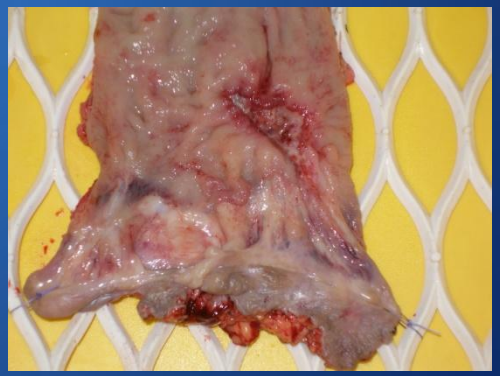


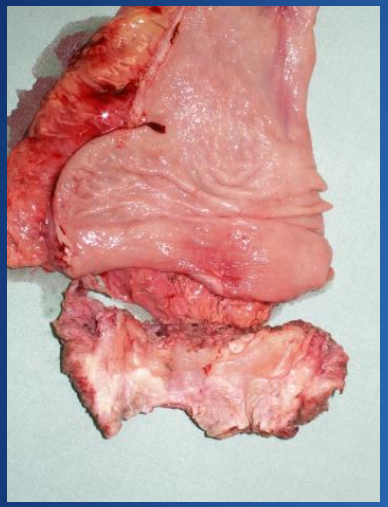
- ✓ Kontrola resekátu - celistvosti, kvality TEM
- ✓ Orientace resekátu , označení
- ✓ MaFo

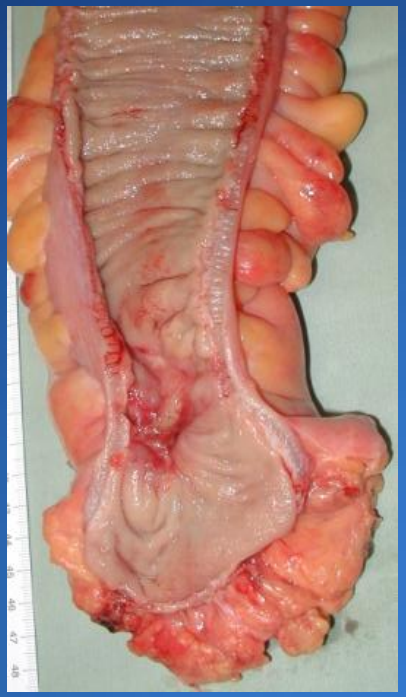


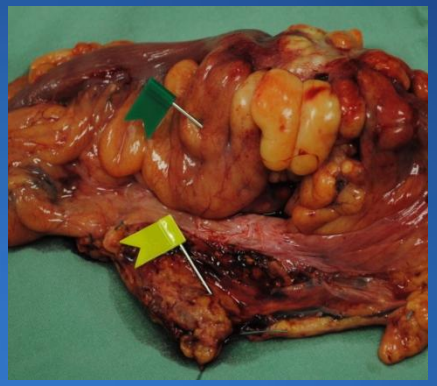


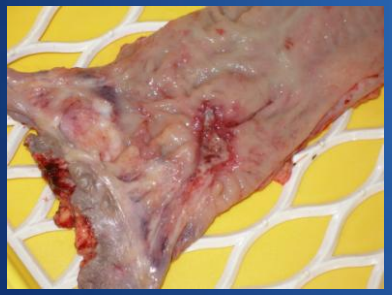
- ✓ Příprava k histopatologickému event. dalšímu vyšetření
- ✓ In vitro sentinelová uzlina ?

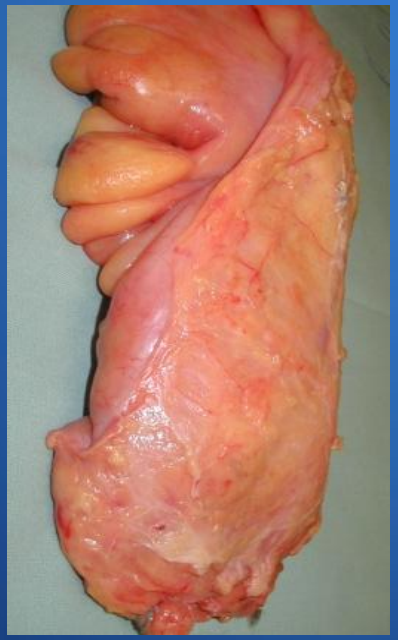


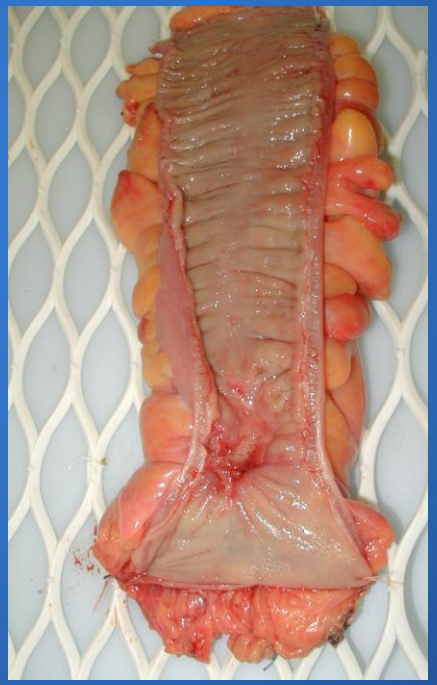


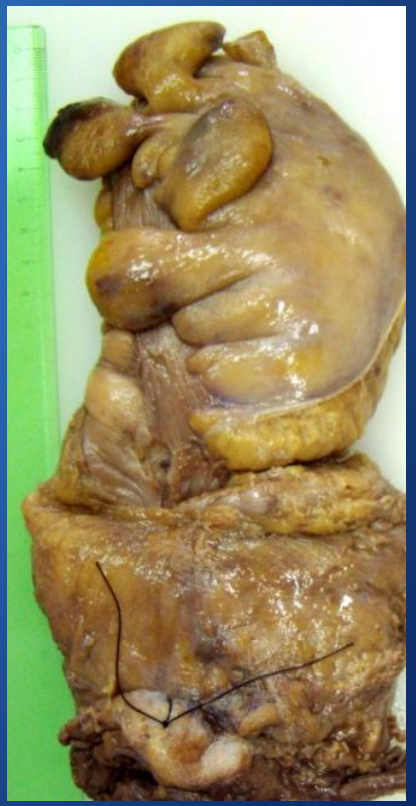












Optimalizace chirurgické léčby karcinomu rekta

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

  Kapiteijn E, Putter H, van Velde ChH et al. Br J Surg 2002

- Nationwide quality assurance of rectal cancer treatment (Norway).

  Wibe A, Carlsen E, Dahl O. et al. Colorectal Dis 2006

- Total mesorectal excision: a teaching and audited initiative of the Spanish Association of Surgeons.

  Ortiz, H. Cir Esp 2007

- Audite teaching program for the treatment of rectal cancer in Spain: results of the first year.

  Codina-Cazador A, Espin E, Bionda S et al. Cir Esp 2007

- The Swedish Rectal Cancer Registry.

  Pahlman L, Bohe M, Cedemark B et al. Br J Surg. 2008

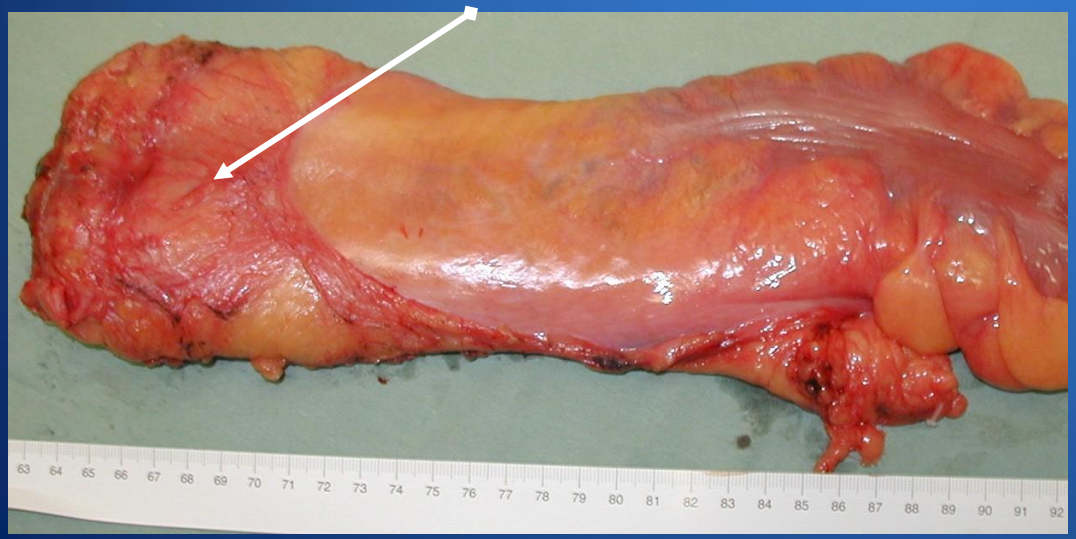
- Impact of surgical training programme on rectal cancer outcomes in Stockholm.

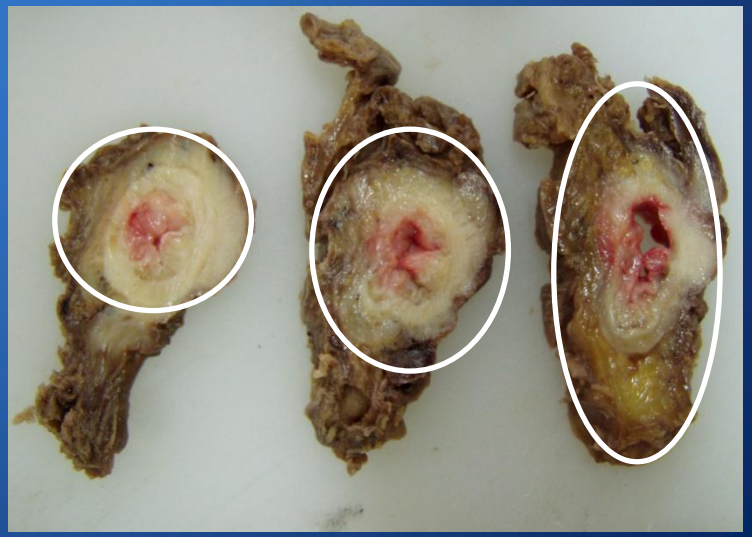
  Martling A, Holm T, Rutquist LE et al. Br J Surg 2005

Úkoly…

- ✓ Respektovat vrstvy a rozsahy – jsou garancí úplnosti resekce
- ✓ Neporušenost „obalů“ a vyloučení diseminace nádorových buněk během operace – klíčový moment zřejmě důležitější, než sama výška disekce (centrálního podvazu)
- ✓ Poučit se z dokumentace včetně fotografování - „feedback control“

N. Haboubi Colorectal Disease 2009 11





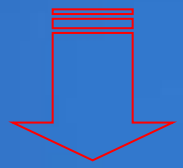
Tab. 6 Empfohlenes Tumorregressions-Grading nach Dworak [54]

Regressionsgrad		Regressive Veränderungen
0	Keine Regression	0%
1	Überwiegend Tumorgewebe mit Fibrose und/oder Vaskulopathie	1–25%
2	Überwiegend fibrotischer Umbau mit wenigen Tumorzellen oder Zellgruppen (einfach zu finden)	25–50%
3	Sehr wenig (schwierig mikroskopisch zu findende) Tumorzellen in fibrösem Gewebe mit oder ohne mukösem Inhalt	>50%
4	Keine Tumorzellen, nur Fibrose (komplette Regression)	100%

- Heald RJ, Husband EM, Ryall RD.

  The mesorectum in rectal cancer surgery. The clue to pelvic recurrence ?

  Br J Surg 1982; 69, 613 – 616

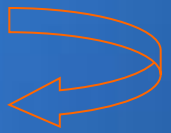


Standardizace operační techniky

Zlepšení výsledků léčby - pokles počtu pooperačních komplikací

- lokálních recidiv

- zlepšení přežití



Sledování a záznam

- ✓ Identifikace nálezu (včetně lokalizace!)
  Nálezy nezávislé na léčbě (a léčbou neovlivnitelné)
  Nálezy ovlivnitelné léčbou (NeoRT/CT)

Operace

Chirurgický výsledek operační léčby
Standardizované histopatologické vyšetření včetně distálního a cirkumferenčního resekčního okraje, kvality excize mezorekta, lymfatického šíření, TRG

→ kontrola kvality chirurgické léčby

Dlouhodobý onkologický výsledek

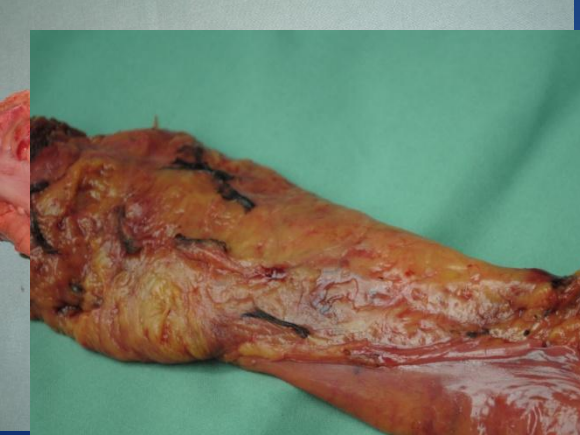
- ✓ Vytvoření registru

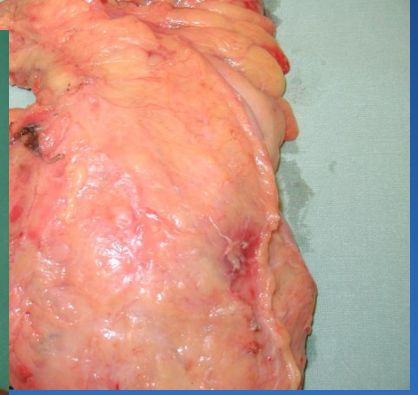
Co sledovat – kontrola kvality operace

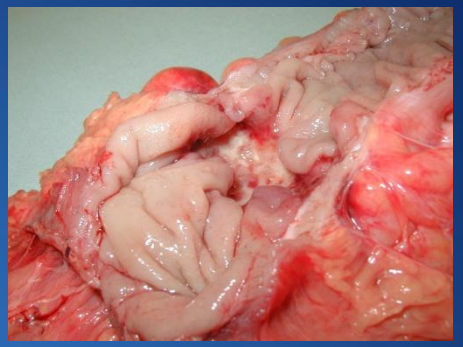
- Lokalizace (makro)
- Vzdálenost nádoru od orálního a aborálního resekčního okraje
- Kvalita mezorekta (klasifikace I-III) foto!
- Distální resekční okraje
- CRM (obvodové okraje) negativní - positivní
- Hodnocení nádoru – T včetně TRG „tumor regression grade“
- N – N/N
- p (yp)TNM R $_{0\,1\,2}$

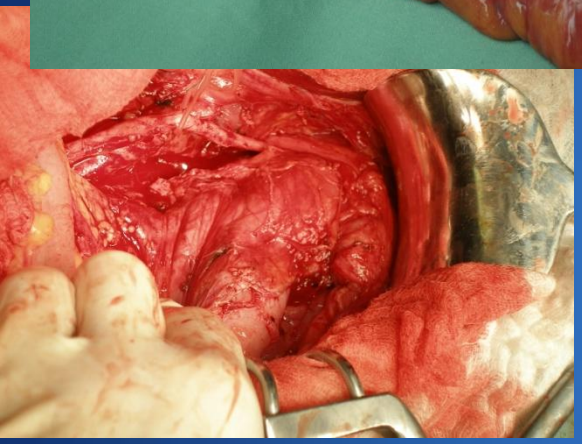
- **Wibe A**., Moller R, Norstein J et al.
  A national strategic change in treatment policy for rectal cancer – implementation of total mesorectal excision as a routine treatment in Norway. A national audit.

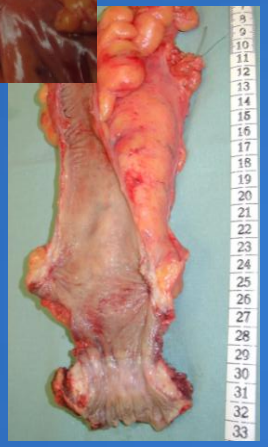
  Dis Colon Rectum 2002; 45, 857 – 66

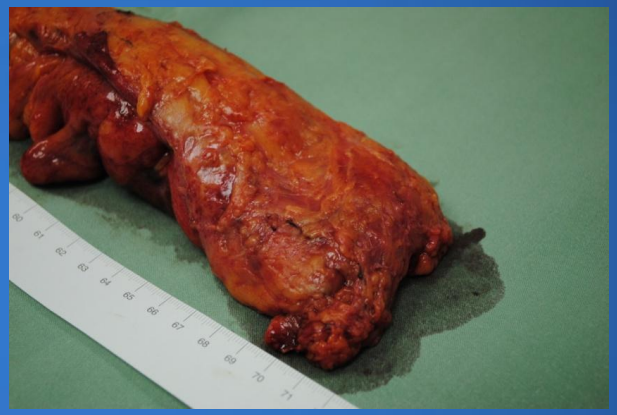


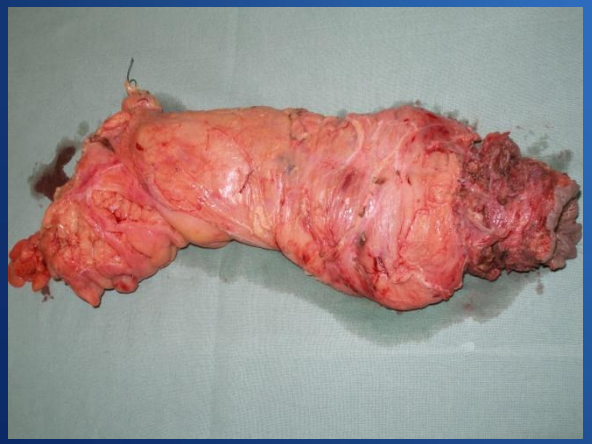


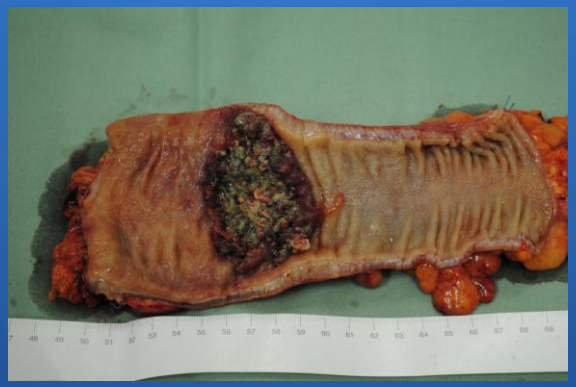


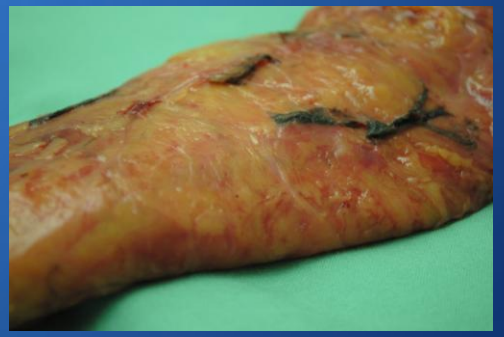


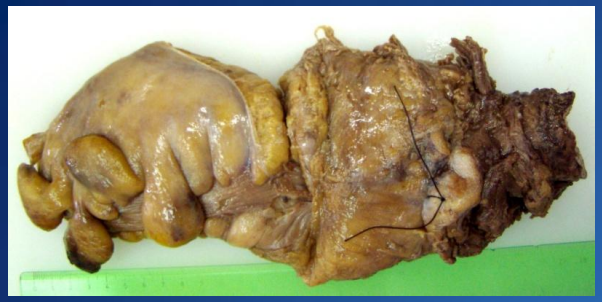


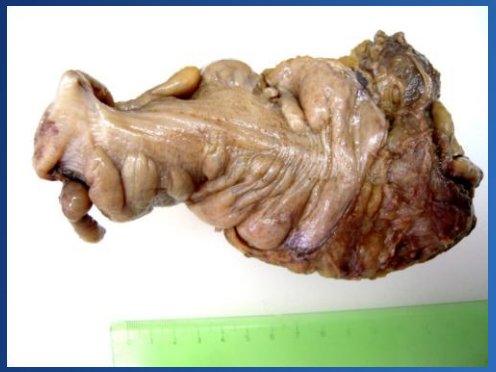


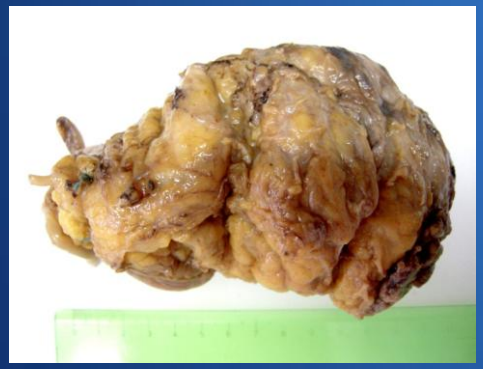


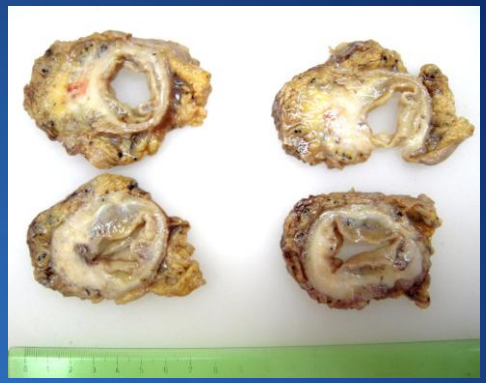


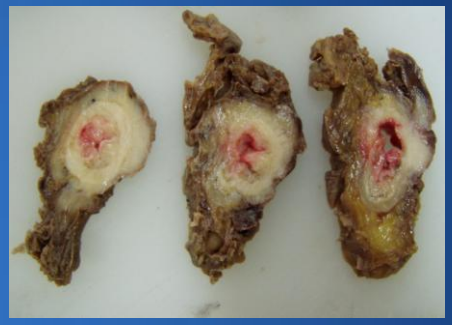


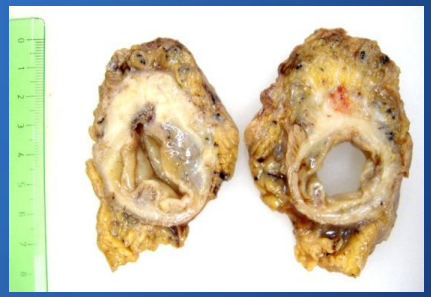


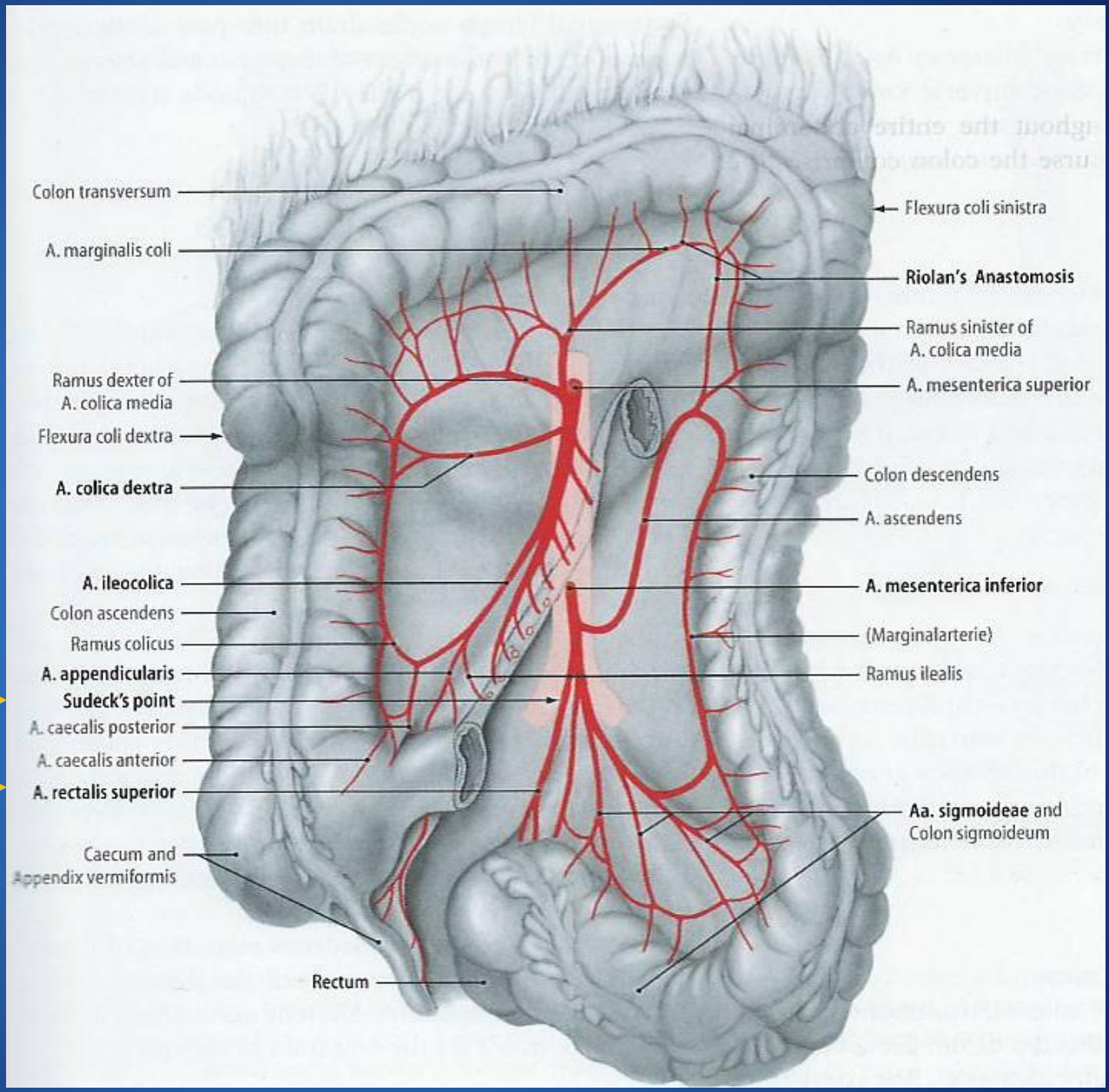










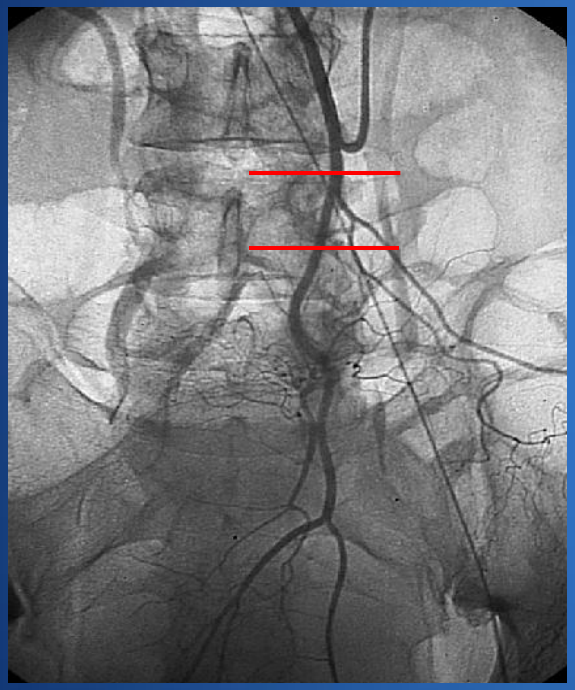

Colon transversum
A. marginalis coli
Ramus dexter of A. colica media
Flexura coli dextra
A. colica dextra
A. ileocolica
Colon ascendens
Ramus colicus
A. appendicularis
Sudeck's point
A. caecalis posterior
A. caecalis anterior
A. rectalis superior
Caecum and Appendix vermiformis
Rectum
Flexura coli sinistra
Riolan's Anastomosis
Ramus sinister of A. colica media
A. mesenterica superior
Colon descendens
A. ascendens
A. mesenterica inferior
(Marginalarterie)
Ramus ilealis
Aa. sigmoideae and Colon sigmoideum

TEM

rozšíření operace a „vyšší“ podvaz a přerušení cév

- High versus low ligation of the inferior mesenteric artery in rectal cancer

P.Surtees a spol. Br J Surg 1990 77



„ Low“ tie /ARS) *v.* „high“ tie (IMA) - odstranění dalších 1-2 cm arterie a získání několik dalších uzlin – v případě pozitivity spíše průkaz diseminace…

L.Påhlman Colorectal Disease 2009, 11

- EBM - Efektivita vysokého podvazu resp. „clearance“ podél AMI nebyla dostatečně ani původními, ani jinými studiemi prokázána

Rozšířená lymfadenektomie při operaci karcinomu rekta

- 30 – 40 % nemocných s karcinomem rekta má mts postižení uzlin v mezorektu, 10 – 25 % v laterálních pánevních uzlinách
- Standardní operace – resekce rekta + TME (vertikální lymfadenektomie)
- Rozšířená lymfadenektomie – laterální

Japanese Research Society for Cancer of the Colon and Rectum

Extended lymphadenectomy versus conventional surgery for rectal cancer: a meta-analysis P.Georgiou a spol. Lancet Oncol 2009 10

20 studií 1984 – 2009 5502 operovaných 2577 EL 2925 non-EL

Kriteria: perioperační výsledky 5-leté přežití recidivy

Bez rozdílu ve sledovaných kriteriích → rozšířená lymfadenektomie není odůvodněná