

Kolon Kanserinin Laparoskopik Cerrahisi

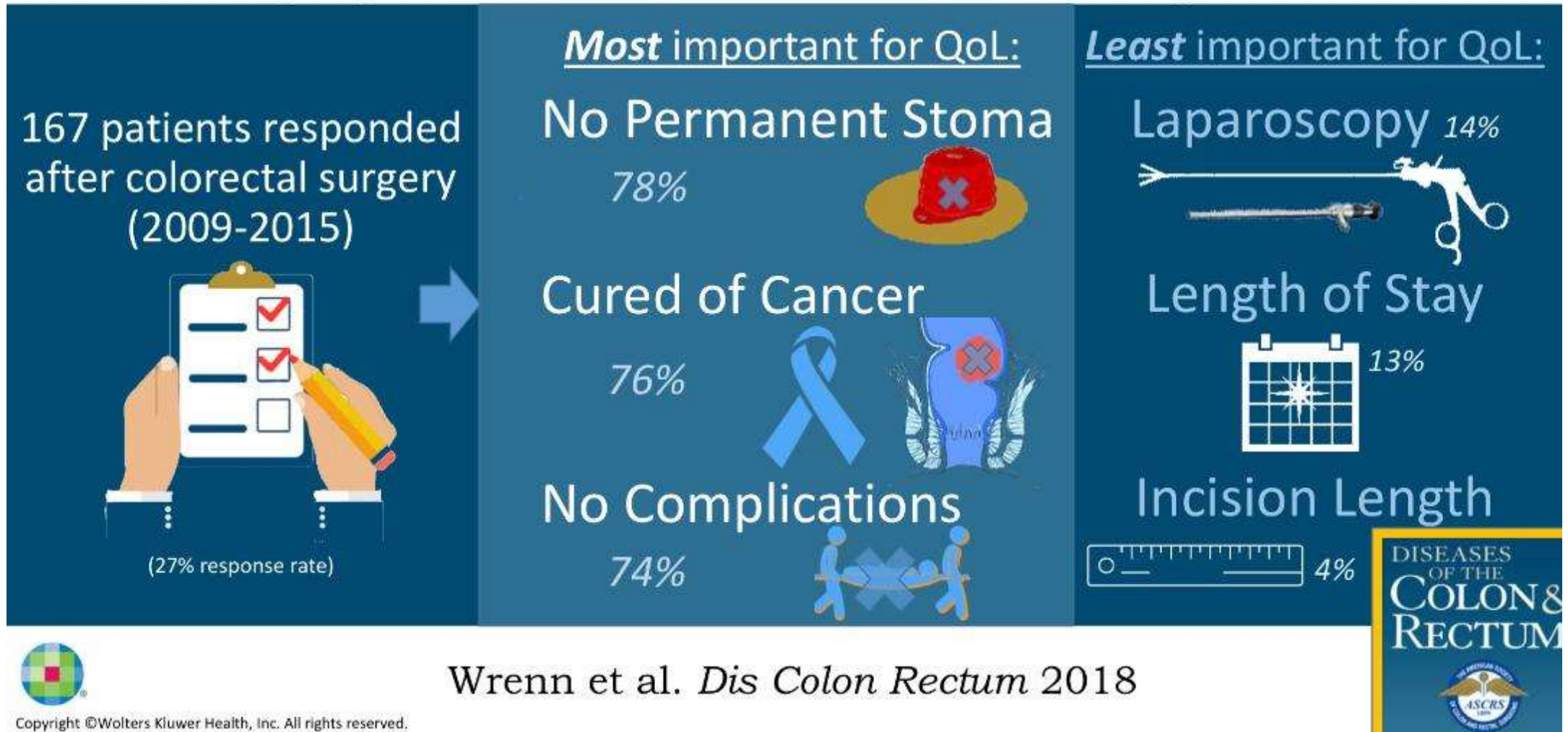
TC SAĞLIK BAKANLIĞI
PROF.DR. CEMİL TAŞCIOĞLU ŞEHİR HASTANESİ

Fazıl Sağlam
2024

Sunum akışı;

- Giriş
- Açık vs Laparoskopik kolektomi
- Laparoskopik vs Robotik kolektomi
- Cerrahi teknik
- Ameliyat videoları

Patient Perceptions and QoL After Colorectal Surgery: What Do Patients Really Want?



GİRİŞ

Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries

Türkiye

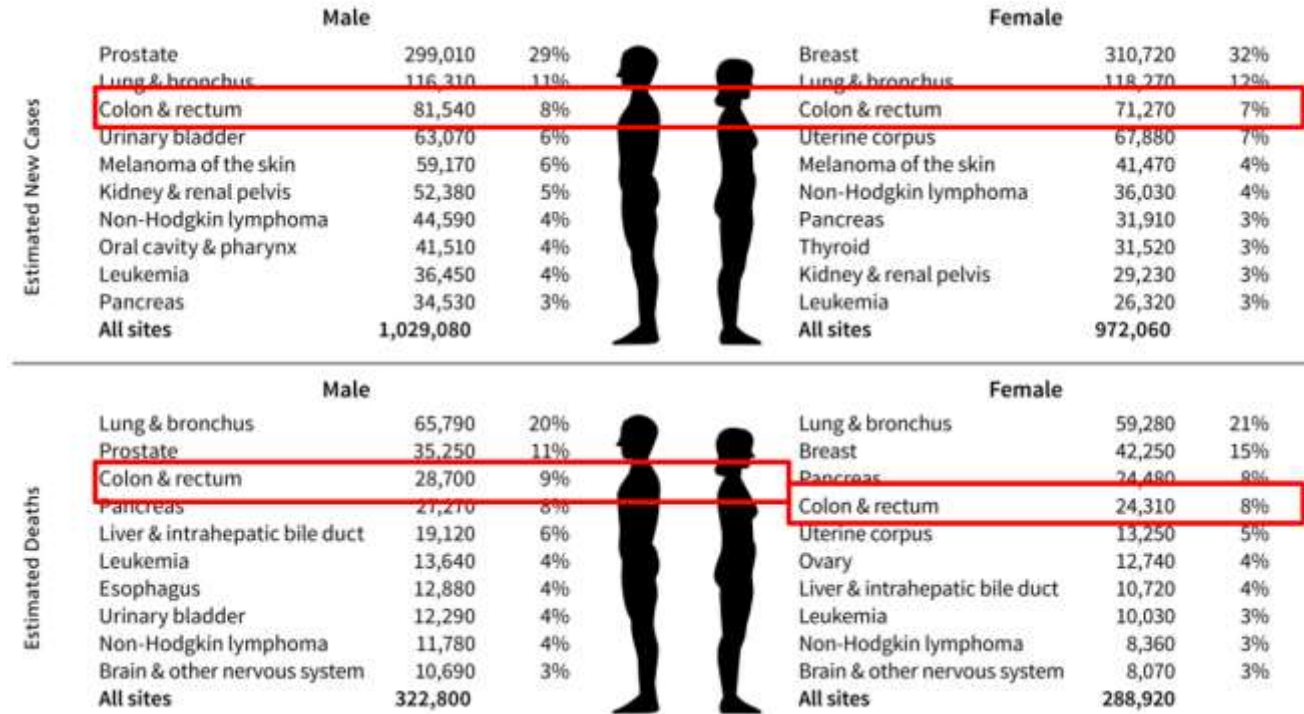
Statistics at a glance, 2022

	Males	Females	Both sexes
Population	42 231 223	43 330 753	85 561 976
Incidence*			
Number of new cancer cases	132 476	107 537	240 013
Age-standardized incidence rate	273.7	192.2	225.9
Risk of developing cancer before the age of 75 years (cum. risk %)	27.4	18.9	22.7
Top 3 leading cancers (ranked by cases)**	Lung Prostate Colorectum	Breast Thyroid Colorectum	Lung Breast Colorectum
Mortality*			
Number of cancer deaths	82 446	47 226	129 672
Age-standardized mortality rate	168.3	75.8	116.1
Risk of dying from cancer before the age of 75 years (cum. risk %)	17.8	7.9	12.5
Top 3 leading cancers (ranked by deaths)**	Lung Stomach Colorectum	Breast Lung Colorectum	Lung Colorectum Stomach

Cancer statistics, 2024

Rebecca L. Siegel MPH¹ | Angela N. Giaquinto MSPH¹ | Ahmedin Jemal DVM, PhD²

ABD



DOI: 10.3322/caac.21820

Visseral Organ Cerrahisi



Sir Berkeley George
Andrew Moynihan
1865-1936

“the surgery of malignant disease is not the surgery of organs, it is the anatomy of the lymphatic system”.

Lord Moynihan



Richard J. (Bill) Heald

TME

MEZOREKTUM

Br J Surg 1982;69:613-16



Prof. Markus W. Büchler,
Heidelberg

Kompartman Cerrahisi



Werner Hohenberger

CME–CVL

MEZOKOLON

*“kanser cerrahisi bir kompartıman meselesidir.
TME, santral pelvik kompartımanın dikkatli bir şekilde boşaltılmasıdır.”*

“Resectional surgery for malignant disease of abdominal digestive organs is not surgery of the organ itself, but also that of the mesenteric organ”.

Kolon kanseri

- Lokal ileri evre kolon kanserinin tedavisinde ilk seçenek cerrahidir.
- Kolon kanserinde güncel standart cerrahi tedavi CME - cvL(D3) dir.
- Çıkartılan LD sayısı doğru evreleme ve prognozda önemlidir.

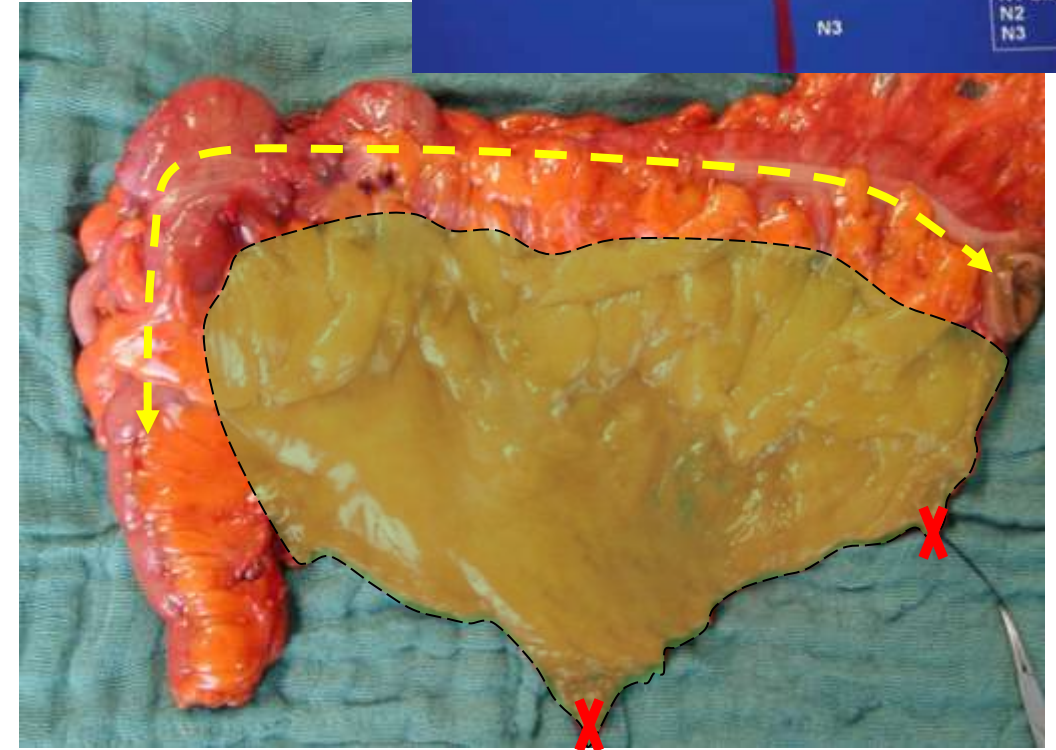
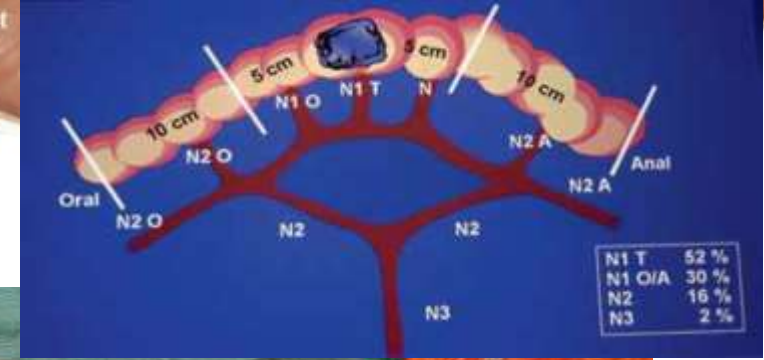
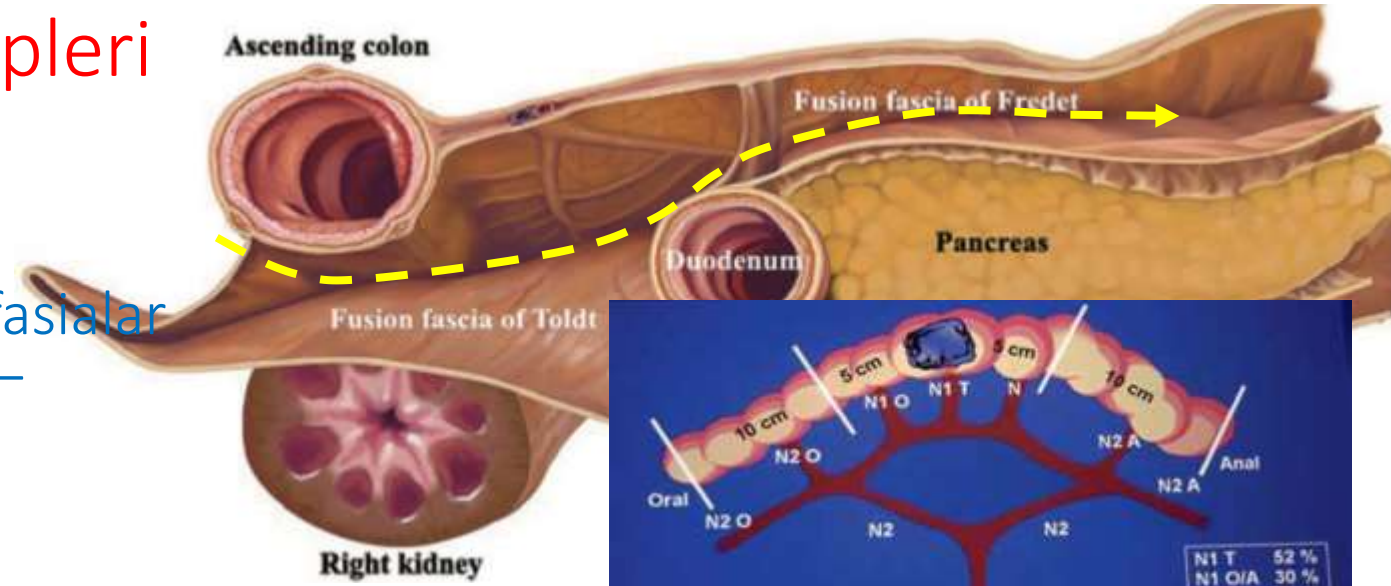
Kolon kanseri

Cerrahinin amacı;

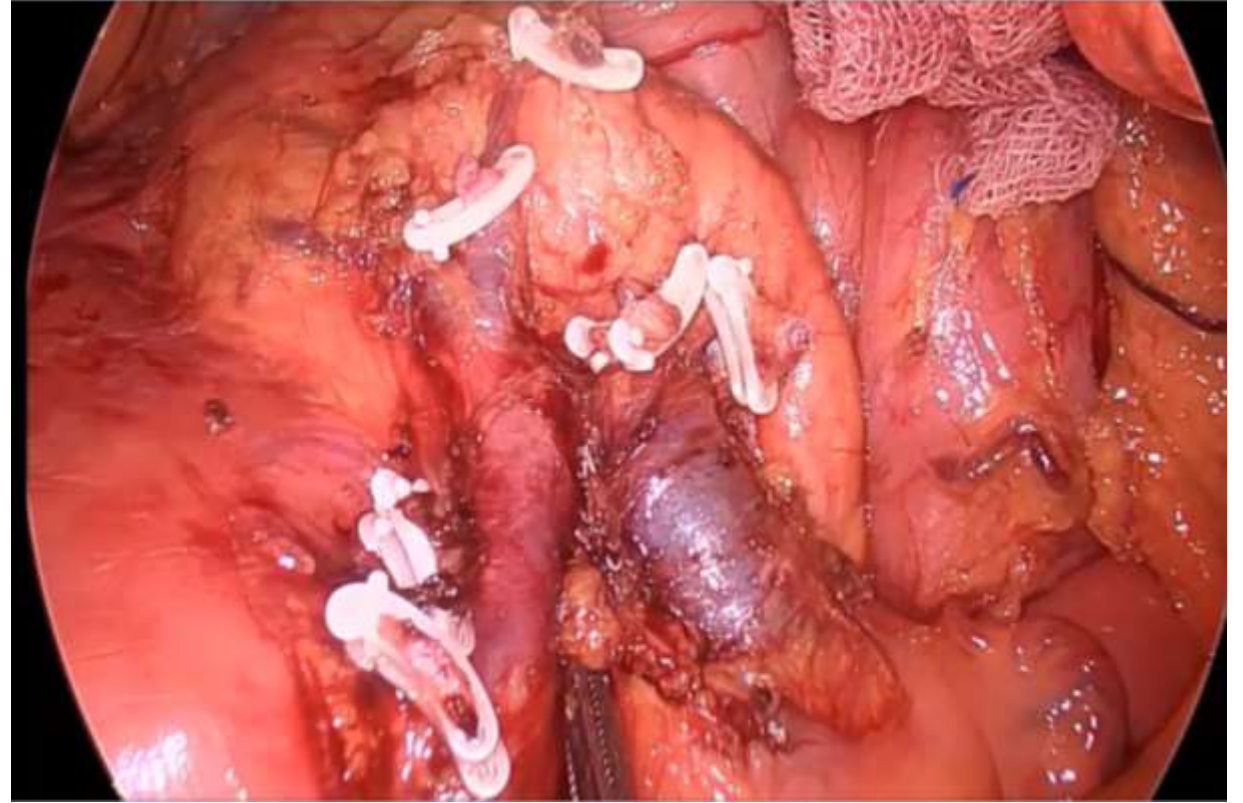
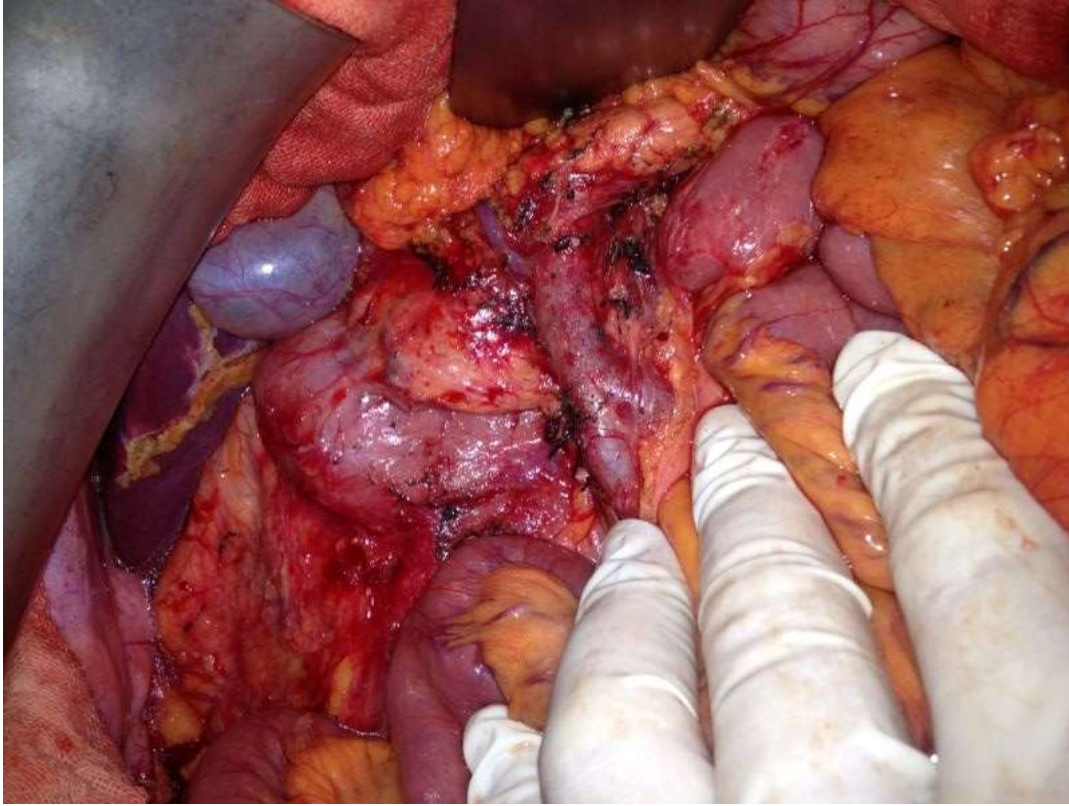
- Kür sağlamak,
 - Onkolojik sonuçları iyileştirmek,
 - ✓ Lokal nüksü azaltmak
 - ✓ Sağ kalımı uzatmak
 - Fonksiyonel sonuçları bozmamak
- Ro-rezeksiyon
 - Cerrahi prensiplere tam uyum

Kolon kanseri cerrahisi prensipleri nelerdir?

- Embriyolojik planda (visseral-parietal fasyalar arası) diseksiyon –Vertikal diseksiyon –
- Visseral fasyayı yırtmamak
- Yeterli uzunlukta bağırsak segmenti çıkarmak –Horizontal diseksiyon –
- Bağırsak segmentinin mezenterini tam çıkarmak
- Damarları santralden bağlamak



Kolon kanseri



Kolon kanseri



Kolon kanseri

Cerrahi yöntem

➤ Açık Cerrahi

➤ Minimal İnvaziv Cerrahi

- Laparoskopik
 - ✓ El-Yardımlı (HALS)
 - ✓ Multiport/Tek Port(SILS)
- Robotik
 - ✓ Multiport/Tek Port
 - ✓ İntralüminal cerrahi

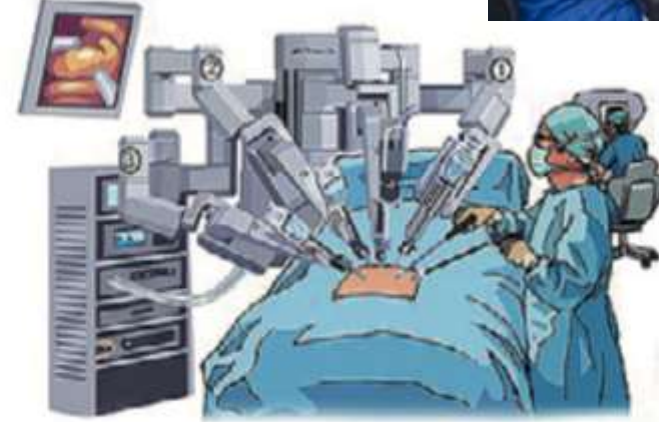
Kolorektal cerrahinin evrimi



-1990's



1990's



2000's



2020's

Kolorektal cerrahinin evrimi – Navigasyon cerrahisi

Güçlendirilmiş Gerçeklik (Augmented Reality- AI)



Laparoskopik kolektomi

Minimally invasive colon resection (laparoscopic colectomy)
20 hasta

M Jacobs¹, J C Verdeja, H S Goldstein

- İlk laparoskopik kolektomi 1991'de bildirilmiştir.

- ✓ Adenom/adenokarsinom (12)
- ✓ Divertiküler hastalık (5)
- ✓ Sigmoid endometriozis (1)
- ✓ Çekal volvulus (1)
- ✓ IBH (1)

- Sağ hemikolektomi 9 (155dk.)
- Sigmoid kolektomi 8 (170dk.)
- Hartman prosedürü 1
- LAR 1
- APR 1

➤ Laparoskopik yardımcı kolon cerrahisi evrim aşamasında olsa da, zaman içinde laparoskopik kolesistektomi kadar popüler olma potansiyeline sahip olduğunu düşünüyoruz.

Açık vs Laparoskopik kolektomi ile ilgili prospektif randomize çalışmalar.

Table 1
Large randomized controlled trials comparing laparoscopic and open colon cancer resections: study designs and patient demographics

	Barcelona [19]	COST [1]	COLOR [20]	CLASICC [21]
Accrual years	1993–1998	1994–2001	1997–2003	1996–2002
Study sites	Single-center	Multicenter	Multicenter	Multicenter
Surgery	Laparoscopic assisted	Laparoscopic assisted	Laparoscopic assisted	Laparoscopic assisted
Exclusion criteria	TC, DM, IO, PCS	TC, DM, IO, SMI, IBD, FP, P, OM	TC, SF, DM, IO, PCS, PM, BMI > 30	TC, IO, PM, P
Primary endpoint	Cancer-related survival	Time to tumor recurrence	Cancer-free survival at 3 y	Margin positivity, operative mortality
Subjects (n)	L: 106 O: 102	L: 435 O: 428	L: 536 O: 546	L: 273 O: 140
Median follow-up (mo)	L: 44 O: 43	52.8	Long-term results not yet reported	49.5

Abbreviations: DM, distant metastases; FP, familial polyposis; IBD, inflammatory bowel disease; IO, intestinal obstruction; L, laparoscopic-assisted resections; NR, not reported; O, open resections; OM, other concurrent malignancy; P, pregnancy; PCS, prior colon surgery; PM, prior malignancy; SF, splenic flexure cancers; SMI, severe medical illness; TC, transverse colon cancers.

Açık vs Laparoskopik kolektomi ile ilgili prospektif randomize çalışmalar.

Table 2

Large randomized controlled trials and meta-analysis comparing laparoscopic to open colon cancer resections: patient-oriented and oncologic outcomes

	Barcelona [19]	COST [1–3]	COLOR [20]	CLASICC [21,22]	Bonjer [24] ^a
Lymph nodes retrieved (median no.)	L: 11.1 O: 11.1	L: 12 O: 12	L: 10 O: 10	L: 12 O: 13.5	L: 11.8 O: 12.2
Positive margins (%)	NR	NR	L: 2 O: 2	L: 7 O: 5	L: 1.3 O: 2.1
OR time (minutes)	L: 142 O: 118 ^b	L: 150 O: 95 ^b	L: 145 O: 115 ^b	L: 180 O: 135 ^b	NR
Conversion rate (%)	11	21	17	25	19
Length of stay (days)	L: 5.2 O: 7.9 ^b	L: 5 O: 6 ^b	L: 8.2 O: 9.3 ^b	L: 9 O: 9	NR
Morbidity (%)	L: 10.8 O: 28.7 ^b	L: 21 O: 20	L: 21 O: 20	L: 26 O: 27	NR
Mortality (%)	L: 0.9 O: 2.9	L: 0.5 O: 1	L: 1 O: 2	L: 4 O: 5	L: 1.4 O: 1.6
Port site mets (%)	L: 0.9 O: 0	L: 0.9 O: 0.5	NR	L: 2.5 O: 0.6	NR
Local recurrence (%)	L: 6.6 O: 13.7	L: 2.3 O: 2.6	NR	L: 7.3 O: 6.0	L: 4.9 O: 6.5
Disease-free survival (%)	L: 83 O: 73	L: 69.2 O: 68.4	NR	L: NS O: NS	L: 75.8 O: 75.3
Overall survival (%)	L: 18 O: 26	L: 76.4 O: 74.6	NR	L: NS O: NS	L: 82.2 O: 83.5

^a Meta-analysis of the four RCTs (796 patients laparoscopic-assisted arm; 740 patients in the open arm). Disease-free survival and overall survival are at 3 years' follow-up.

^b $P < 0.05$.

Abbreviations: L, laparoscopic-assisted resections; Mets, metastases; NR, not reported; NS, no significant difference between groups, actual numbers not reported in trial; O, open resections; OR, operating room.

Laparoskopik kolektomi

Kısa dönem

- Ameliyat süresi uzun(30 - 84 dk.)
- Açığa dönüş oranı(%3-%25)
- Postop. ileus ve yatış süresi kısa (1-5 gün)
- Morbidite-mortalite benzer
- Ağrı az

Uzun dönem

- Onkolojik sonuçlar(OS,DFS,Rekurrens) benzer
- İnsizyonel herni ve bağırsak tıkanıklığı daha az
- Yaşam kalitesi- ilk 6-12 ayda daha iyi
- Maliyeti daha fazla (\$194,442 vs. \$136,420)

Laparoskopik kolektomi

Meta-Analysis > Br J Surg. 2022 Mar 15;109(4):319-331. doi: 10.1093/bjs/znab464.

Laparoscopic versus open colectomy for locally advanced T4 colonic cancer: meta-analysis of clinical and oncological outcomes

Mauro Podda ¹, Adolfo Pisanu ¹, Alessia Morello ^{2, 3}, Edoardo Segalini ², Kumar Jayant ⁴, Gaetano Gallo ⁵, Massimo Sartelli ⁶, Federico Coccolini ⁷, Fausto Catena ⁸, Salomone Di Saverio ⁹

Affiliations + expand

PMID: 35259211 DOI: 10.1093/bjs/znab464

24 çalışma(21 prospektif, 3 prospektif kohort)

18123 hasta	Laparoskopik (9024)	Açık (9099)	<i>p</i>
Mortalite(%)	Daha düşük		<0.001
Komplikasyon(%)	Daha düşük		<0.001
R0 rezeksiyon(%)		Fark yok	= 0.12
Rekürrens(%)		Fark yok	= 0.81

- Klinik sonuçları daha iyi ve onkolojik sonuçları benzerdir.
- T4 kolon kanserlerinde laparoskopik kolektomi güvenle uygulanabilir.

Laparoskopik kolektomi, Kılavuzlar ne diyor?



National
Comprehensive
Cancer
Network®

NCCN Guidelines Version 4.2024

Colon Cancer

[NCCN Guidelines In](#)
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[Discus](#)

PRINCIPLES OF SURGERY

Colectomy

- **Lymphadenectomy**
 - › Lymph nodes at the origin of feeding vessel(s) should be identified for pathologic examination.
 - › Clinically positive lymph nodes outside the field of resection that are considered suspicious should be biopsied or removed, if possible.
 - › Positive nodes left behind indicate an incomplete (R2) resection.
 - › A minimum of 12 lymph nodes need to be examined to establish N stage.¹
- Minimally invasive approaches may be considered based on the following criteria²:
 - › The surgeon has experience performing laparoscopically assisted colorectal operations.^{3,4}
 - › Minimally invasive approaches are generally not indicated for locally advanced cancer or acute bowel obstruction or perforation from cancer.



ESMO
EUROPEAN SOCIETY OF
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ANNALS of
ONCOLOGY
Creating Innovation in Oncology

SPECIAL ARTICLE

Localised colon cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up¹

Laparoscopic colectomy can be safely carried out for colon cancer when technical expertise is available in the absence of contraindications in view of reduced morbidity, improved tolerance and similar oncological outcomes [I, C].^{43,44}

Japanese Society for Cancer of the Colon and Rectum (JSCCR) guidelines 2019 for the treatment of colorectal cancer

Laparoscopic surgery:

- The indications for laparoscopic surgery are determined by considering the surgeon's experience and skills as well as tumor factors, such as the location and degree of progression of the cancer, and patient factors, such as obesity and history of open abdominal surgery (CQ-4).

Guidelines

Non-metastatic colon cancer: French Intergroup Clinical Practice Guidelines for diagnosis, treatments, and follow-up (TNCD, SNFGE, FFCD, GERCOR, UNICANCER, SFCD, SFED, SFRO, ACHBT, SFP, AFEF, and SFR)

Digestive and Liver Disease 56 (2024) 756–769

5.1. Surgery

Recommendations:

- The resection should include a segment of the colon measuring at least 5 cm on either side of the tumor, with mesocolon excision in one piece including vascular vessels.
- **Laparoscopic colectomy can be safely carried out (grade A).**

Laparoskopik kolektomi, Konversiyon(%5-20)

- Proaktif konversiyon
- Reaktif konversiyon



Surgery

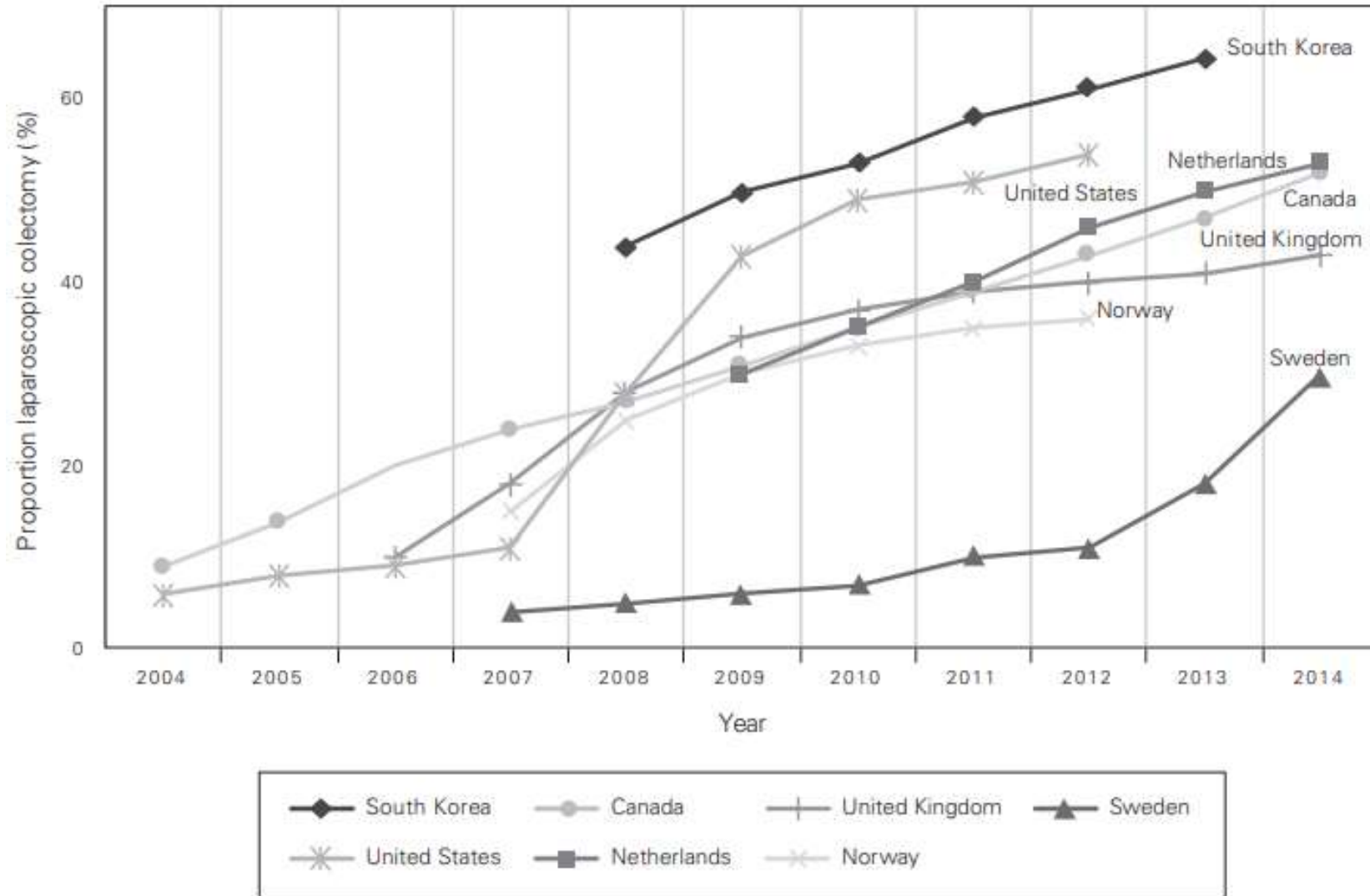
journal homepage: www.elsevier.com/locate/surg

Upfront laparotomy versus conversion from minimally invasive surgery to open surgery in colon cancer: Is there a difference in outcomes?

Evre I-III 65.083	Açık(57,091) 7,058	Converted 7,058	p
Genel sağ kalım(ay)	101.5	107.3	=0.006
>65 yaş	71.9	79.5	=0.001
Sol kolon	114,5	129,4	<0.001
↑CCSI	42.3	58.9	=0.03
Sınır pozitifliği(%)	5,6	6,3	=0.07
Tekrar yatış(30 gün)(%)	5.6	6.7	<0.001
Yatış süresi(gün)	6	5	<0.001
Mortalite(30gün)(%)	3.5	2.9	=0.07

- Kesin kontrendikasyon yok ise kolon kanseri cerrahisinde ilk seçenek minimal invaziv cerrahi olmalıdır.

Laparoskopik kolektomi, Uygulanma oranları



Laparoskopik vs Robotik kolektomi

Comparative Study

> J Surg Res. 2018 Apr;224:72-78. doi: 10.1016/j.jss.2017.11.059.

Epub 2017 Dec 22. 40,063 hasta MIS

Robotic versus standard laparoscopic elective colectomy: where are the benefits?

Robotic colectomy with CME versus laparoscopic colon resection with or without CME for colon cancer: a systematic review and meta-analysis

7 çalışma (677 hasta) R(269) vs L(408) Ann R Coll Surg Engl 2023; 105: 113-125

H Oweira¹, C Reissfelder¹, H Elhadedy¹, N Rahbari¹, A Mehrabi¹, W Fattal¹, JS Khan², MA Chaouch³

Uptake of robot-assisted colon cancer surgery in the Netherlands

18,886 Açık %15.2 L %78.9 R%5.9

Surgical Endoscopy (2023) 37:8196-8203

Marlou F. M. Sterk¹ · Rogier M. P. H. Crolla¹ · Mareille Verseveld² · Jan Willem T. Dekker³ · George P. van der Schelling¹ · Cornelis Verhoef⁴ · Pim B. Olthof^{1,4}

Systematic Review

Systematic Review and Meta-Analysis of Laparoscopic versus Robotic-Assisted Surgery for Colon Cancer: Efficacy, Safety, and Outcomes—A Focus on Studies from 2020–2024

50,771, R(%21.75), Lap.(%78.25)

Cancers 2024, 16, 1552

Roxana Lorian Negrut^{1,2}, Adrian Cote^{3,*}, Vasile Aurel Caus⁴ and Adrian Marius Maghiar^{1,3}

Robotic versus laparoscopic right hemicolectomy: a systematic review of the evidence 16 çalışma

Journal of Robotic Surgery (2024) 18:116

Jeremy Meyer^{1,2} · Elin Meyer³ · Guillaume Meurette^{1,2} · Emilie Liot^{1,2} · Christian Toso^{1,2} · Frédéric Ris^{1,2}

Laparoskopik vs Robotik kolektomi

Robotik kolektomide;

- Klinik sonuçlar aynı, konversiyon oranı düşük
- Onkolojik sonuçlar benzer
- Tam minimal invaziv kolektomi sık
- İntrakorporeal anastomoz daha sık
- Spesmenin orta hat dışından çıkarılması fazla
- Rektum rezeksiyonu daha sık

Laparoskopik vs Robotik kolektomi

- Laparoskopik; kolon ve üst rektum tümörlerinde, robotik orta ve alt rektum tümörlerinde uygundur.
- Cerrahi yöntemin seçimi; cerrahın tecrübe ve becerisi, tıbbi olanaklar ve hasta faktörü göz önünde bulundurularak kişiye özel yapılmalıdır.

Laparoskopik vs Robotik kolektomi

**Cochrane
Library**

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Informed decisions.
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Review language : English

Title Abstract

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Cochrane Central Register of Controlled Trials

RoLaCaRT-1: a Randomized Trial of Robotic Surgery versus Laparoscopic Surgery for Colon Cancer

ACTRN12620001378910
<https://trialsearch.who.int/Trial2.aspx?TrialID=ACTRN12620001378910>, 2020 | added to CENTRAL: 31 March 2021 | 2021 Issue 3

Sourced from: [ICTRP](#) | Links: [WHO ICTRP](#) 

Sonuçları bekleniyor.

Kolon tümörü tanısı;

- **Kolonoskopi-Bx.**
- **Torako-abdominal BT**
- **Pet BT**

➤ Minimal invaziv cerrahide dokunma hissi olmadığı için ameliyat öncesi tümör yeri iyi belirlenmelidir.

- Elektif hastalarda preoperatif yanlış lokalizasyon kolonoskopide bu %21 %6.3 iken görüntülemeler ile bu oran %6.3 inebilmektedir.

- ✓ Distal sınıra boya işaretlemesi (3 noktadan)

- ✓ İntraoperatif kolonoskopi

➤ Kolon damarlanması değişken olduğundan preoperatif damar yapısının bilinmesi ameliyat sırasında komplikasyonu azaltabilir.

Kolonun damar anatomisi;

Sağ kolon damarları;

- ICA. %100
- RCA. %33.3
- MCA %100
- ICV %100
 - ✓ SMV ye drenaj %92.8(103)
 - ✓ GPCT'a drenaj %6.3(7)
 - ✓ jejunal trunkusa drenaj %0.9(1)

Variations in the Vascular Anatomy of the Right Colon and Implications for Right-Sided Colon Surgery

Mehmet Ayhan Kuzu, M.D.¹ • Erkin İsmail, M.D.² • Safa Çelik, M.D.³
Muhammed Feyzi Şahin, M.D.⁴ • Mehmet Ali Güner, M.D.⁵
Werner Hohenberger, M.D.⁶ • Halil İbrahim Açar, M.D.⁷

DCR 2017

111 kadavra

- GPCT %78.4 (87)
- AMCA %11,7
- MCV %94,5
 - ✓ Tek 72 (%72)
 - ✓ İki 29 (%26)
 - ✓ Üç 2 (%2)

Splenik fleksura damarları;

Redefining the collateral system between the superior mesenteric artery and inferior mesenteric artery: a novel classification

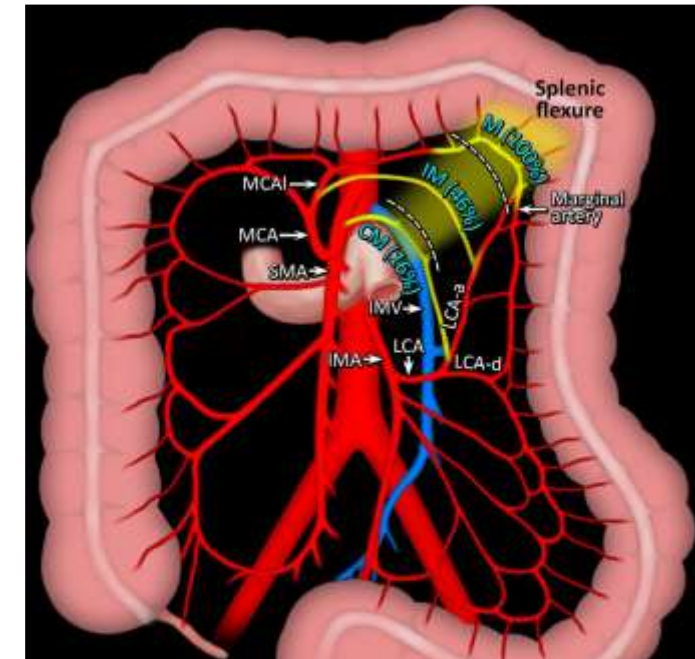
Mehmet Ayhan Kuzu¹ | Mehmet Ali Güner² | Akın Fırat Kocaay³ | Erkin İsmail⁴
Murat Nihat Arslan⁵ | İbrahim Tekdemir⁶ | Halil İbrahim Açar⁷

Colorectal Dis. 2021

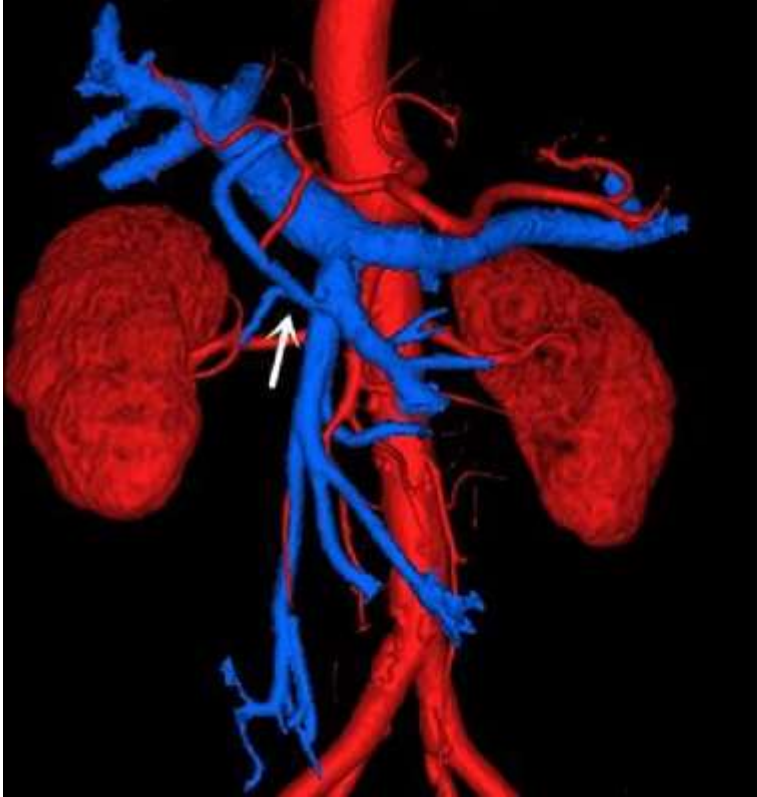
107 kadavra

Mezenterde 3 tip anastomoz;

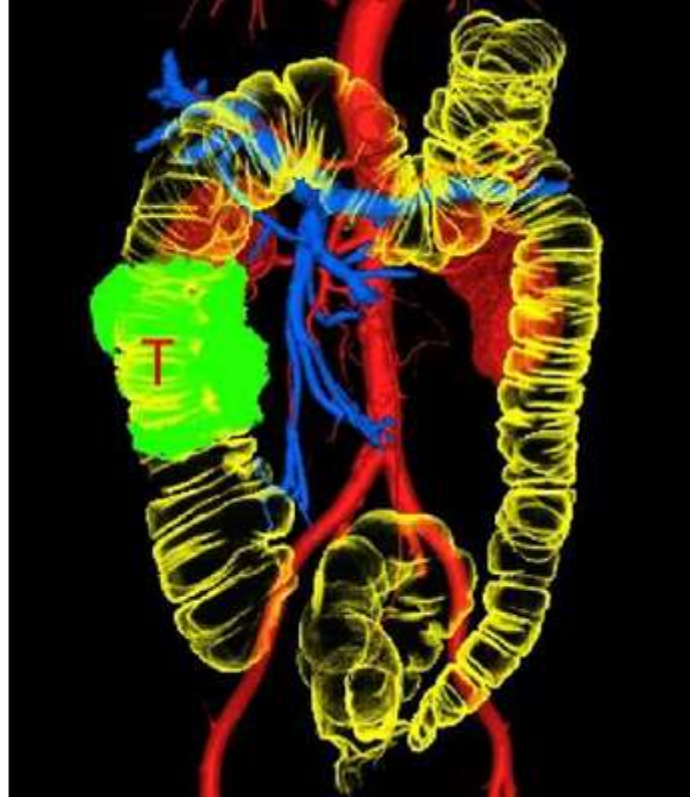
- marjinal (M)
- intermediate mezokolik (IM)
- santral mezokolik(CM)



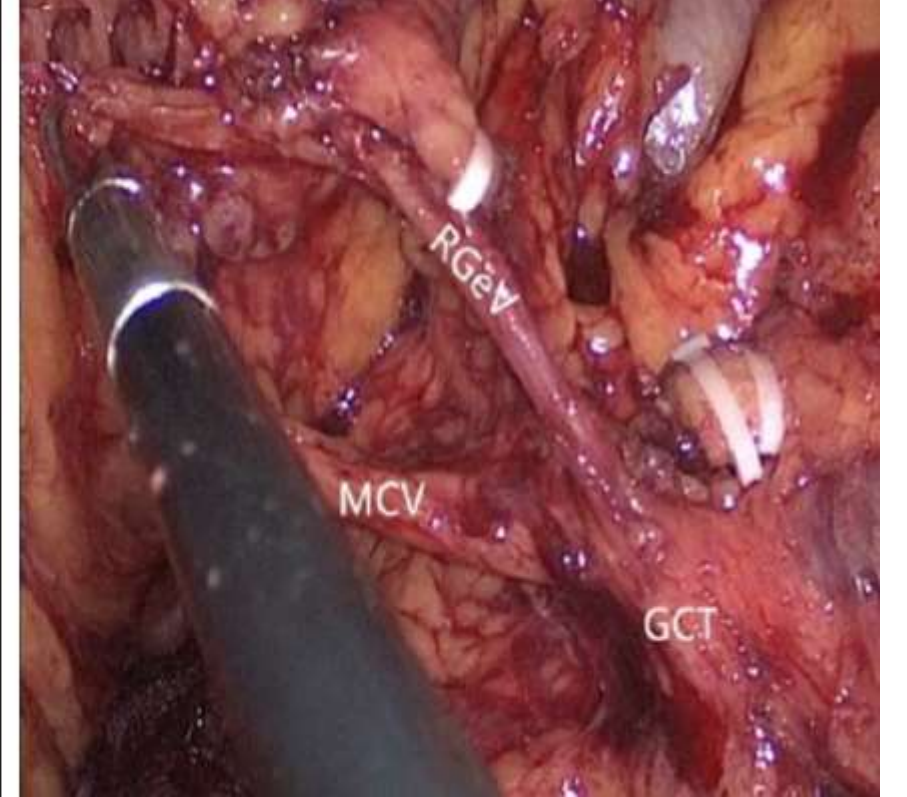
Kolon tümörü tanısı;



3-D BT Anjiyografi



BT Kolonografi



Ameliyat öncesi kolon temizliği;

Randomised Controlled Trial



INTERNATIONAL JOURNAL OF SURGERY

OPEN

Region-specific protection effect of preoperative oral antibiotics combined with mechanical bowel preparation before laparoscopic colorectal resection: a prospective randomized controlled trial

Purun Lei, MD^a, Guiru Jia, PhD^a, Xiaofeng Yang, MD^a, Ying Ruan, MD^b, Bo Wei, PhD^{a,*}, Tufeng Chen, PhD^{a,*}

OA+MBT; 157 ve MBT;152

SSIs ;

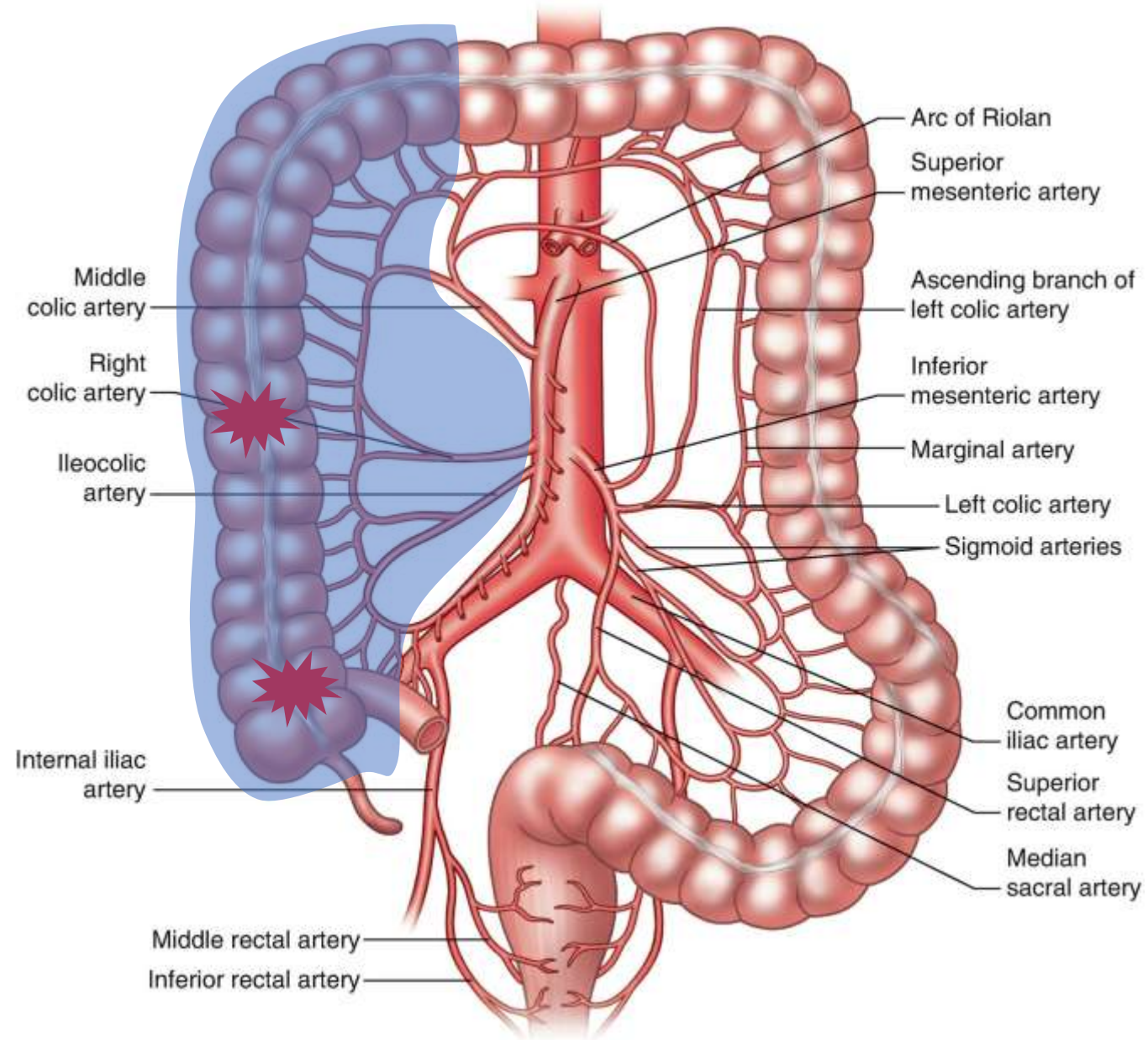
Tüm hastalar; MB27/152, OA+MBP 13/157; P= 0.013

Sol kolon; MBP 20/111 , OA+MBP 9/115 P= 0.022

Sağ kolon; MBP 3/37 , OA+ MBP 7/36, P=0.286

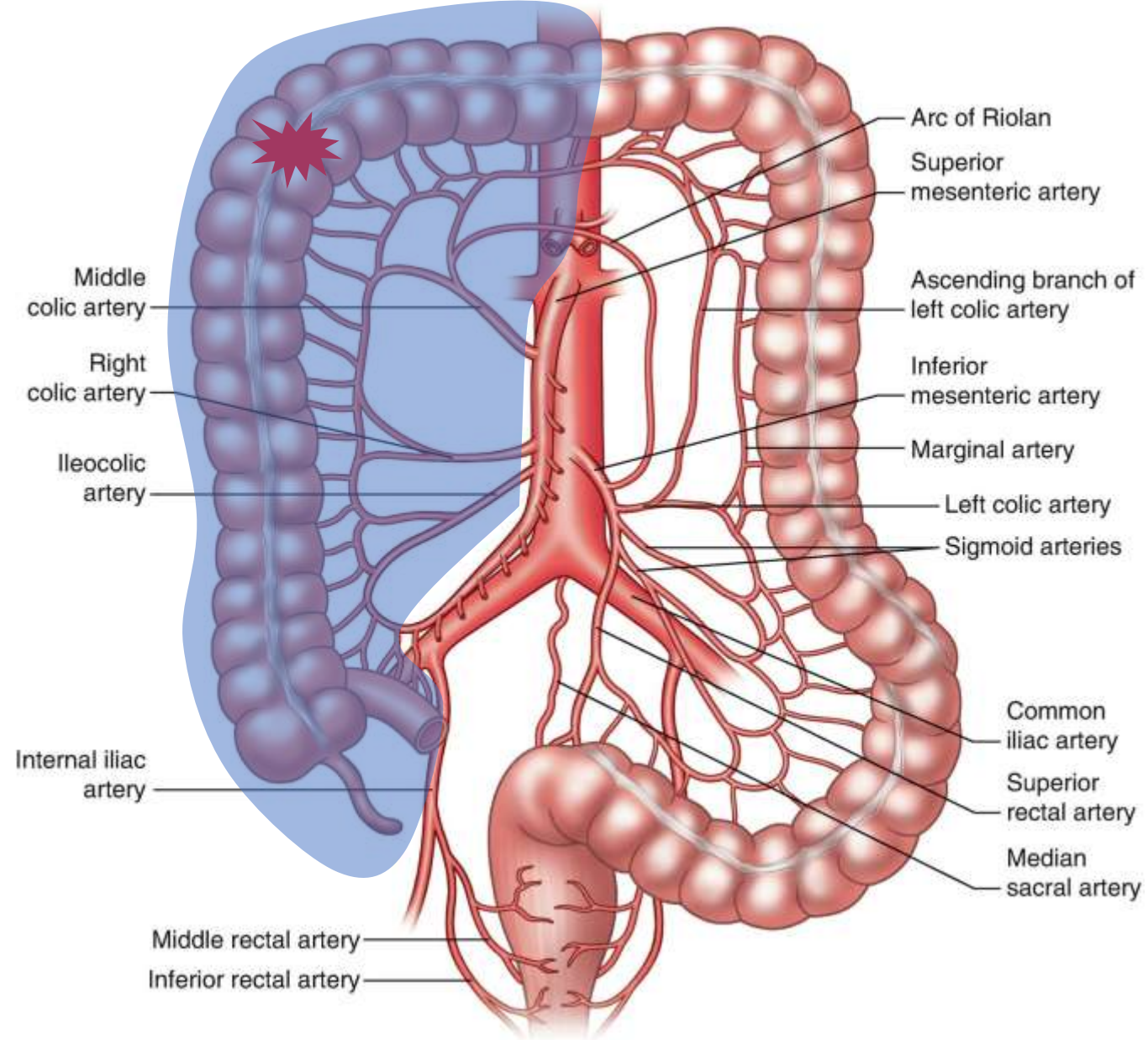
Elektif hastalarda OA+MBP uygulanmalıdır.

Kolon tümörü - Hangi kolektomi?



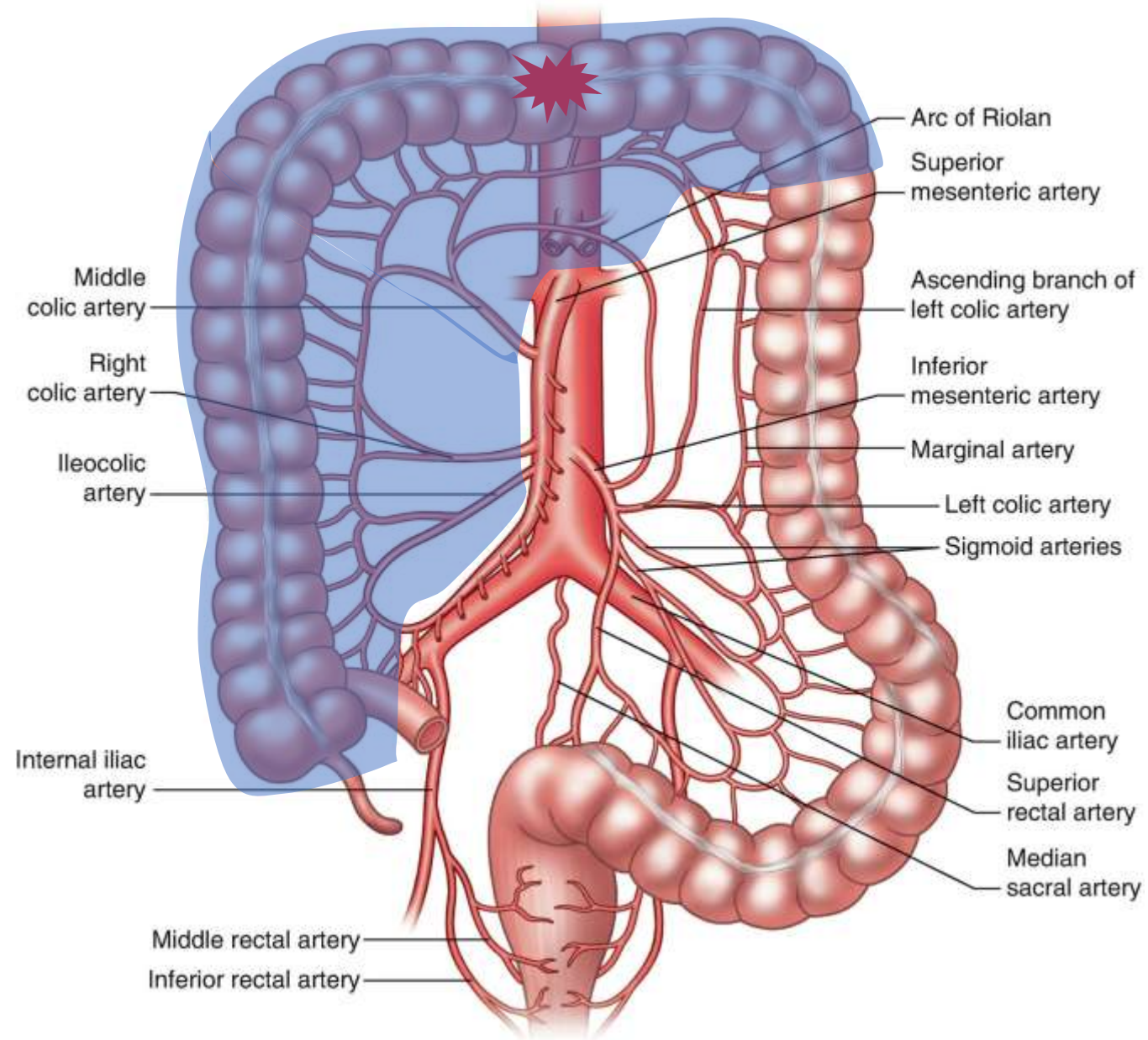
- ÇEKUM & SAĞ KOLON TM.
- SAĞ HEMİKOLEKTOMİ

Kolon tümörü - Hangi kolektomi?



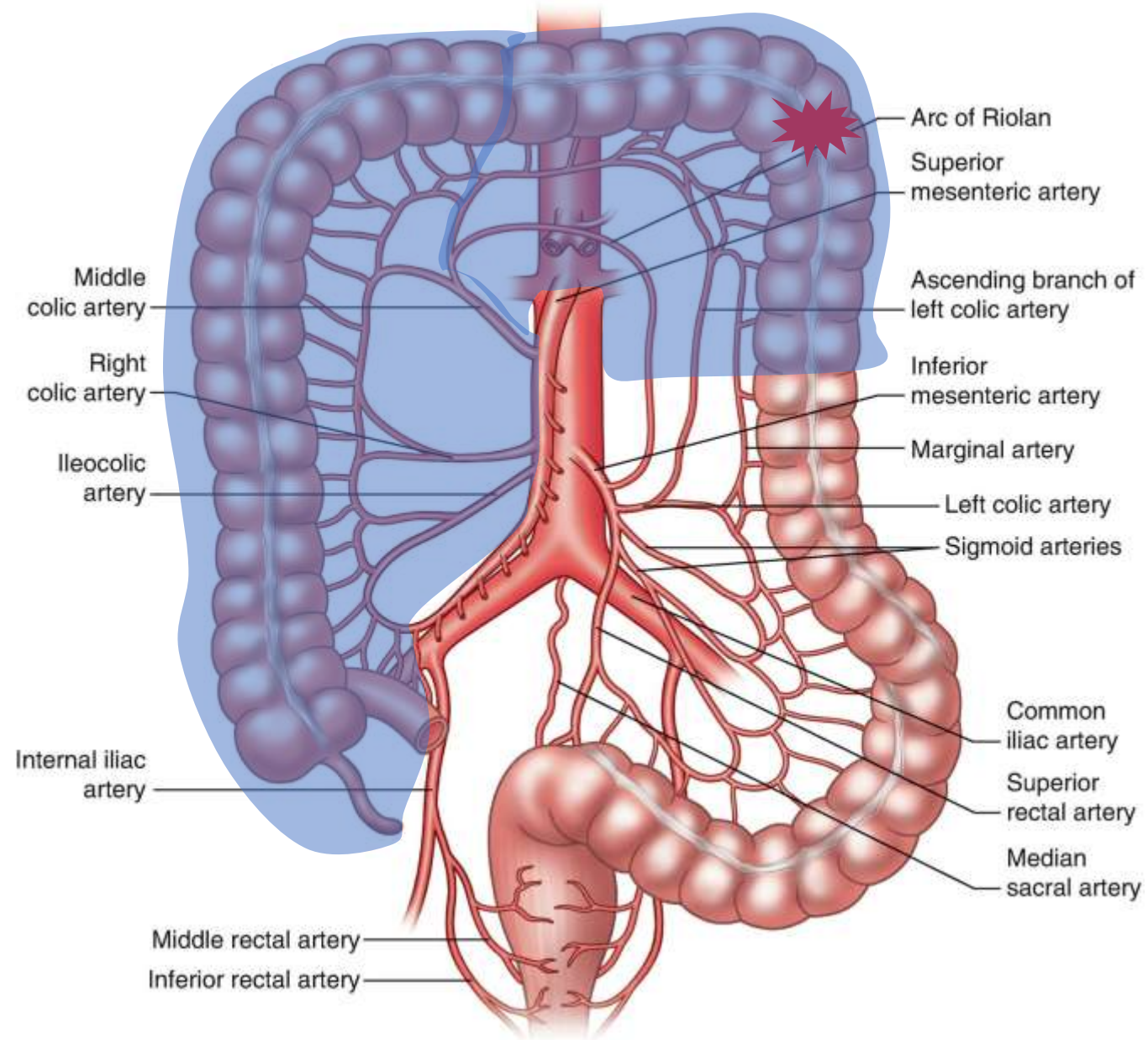
- **HEPATİK FLEKSURA TM.**
- **SAĞ HEMİKOLEKTOMİ**

Kolon tümörü - Hangi kolektomi?



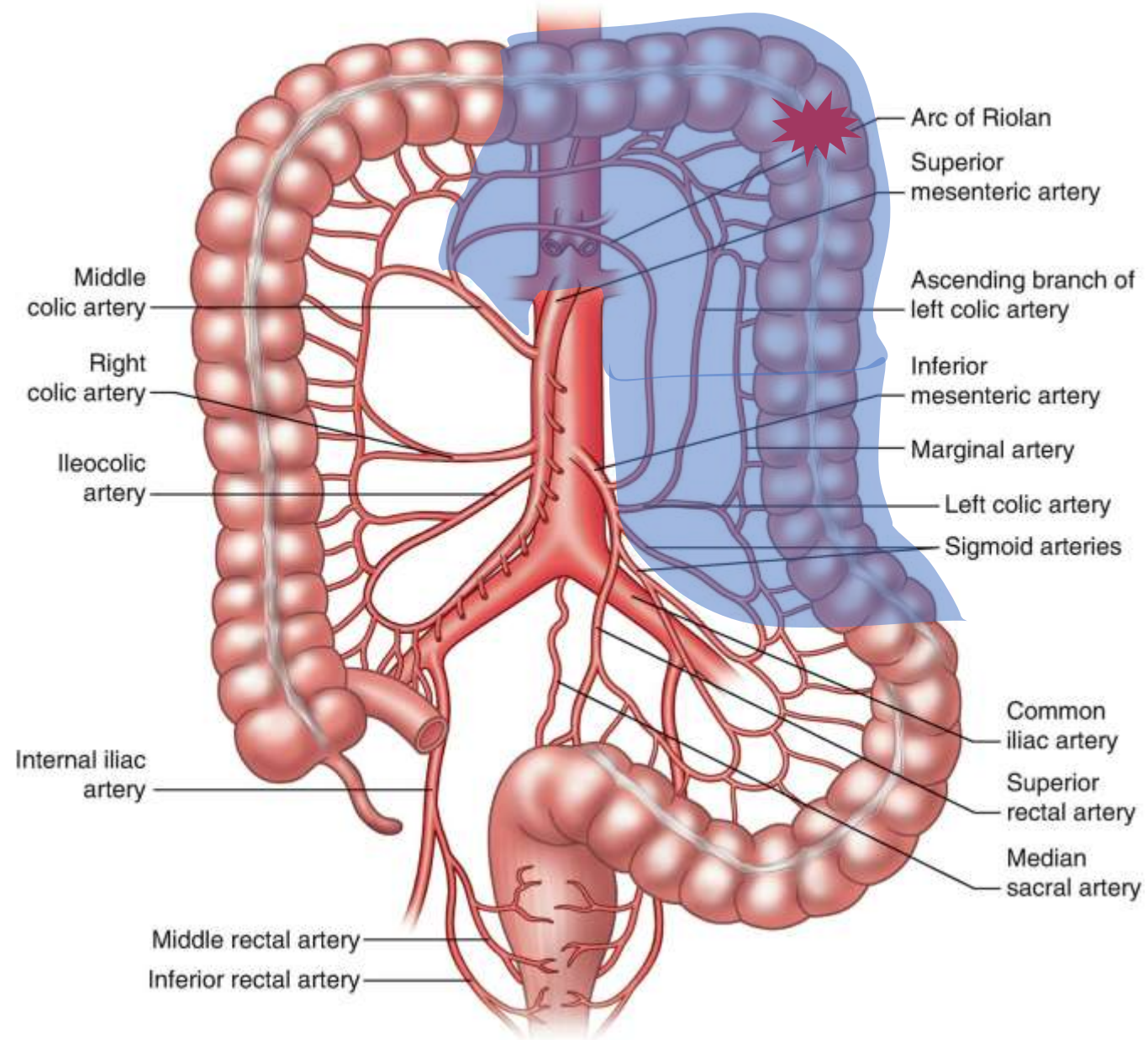
- **TRANSVERS KOLON TM.**
- **TRANSVERS KOLEKTOMİ**
- **GENİŞLETİLMİŞ SAĞ HEMİKOLEKTOMİ**

Kolon tümörü - Hangi kolektomi?



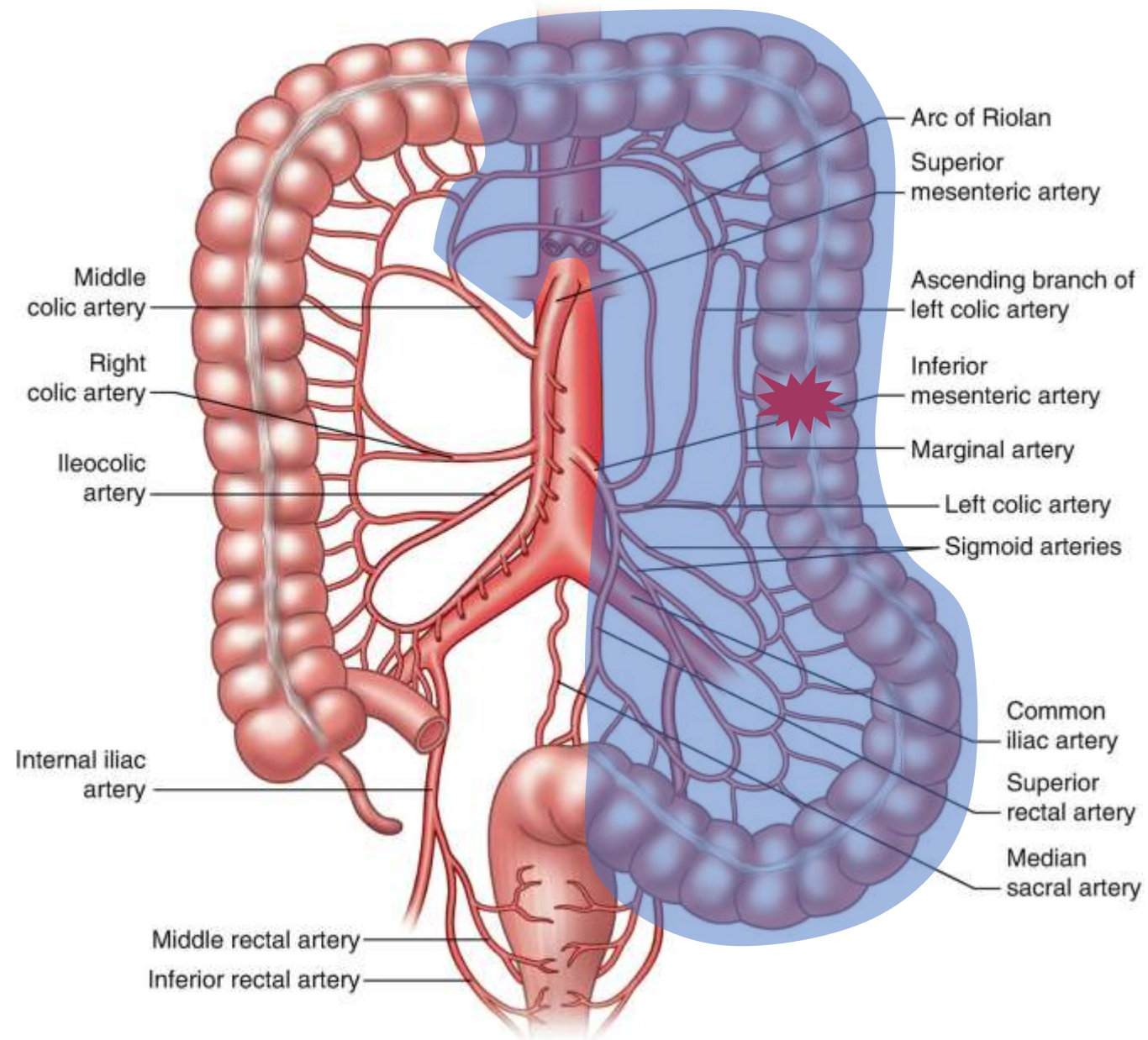
- **SPLENİK FLEKSURA TM.**
- **SPLENİK FLEKSUREKTOMİ**
- **SUBTOTAL KOLEKTOMİ**

Kolon tümörü - Hangi kolektomi?



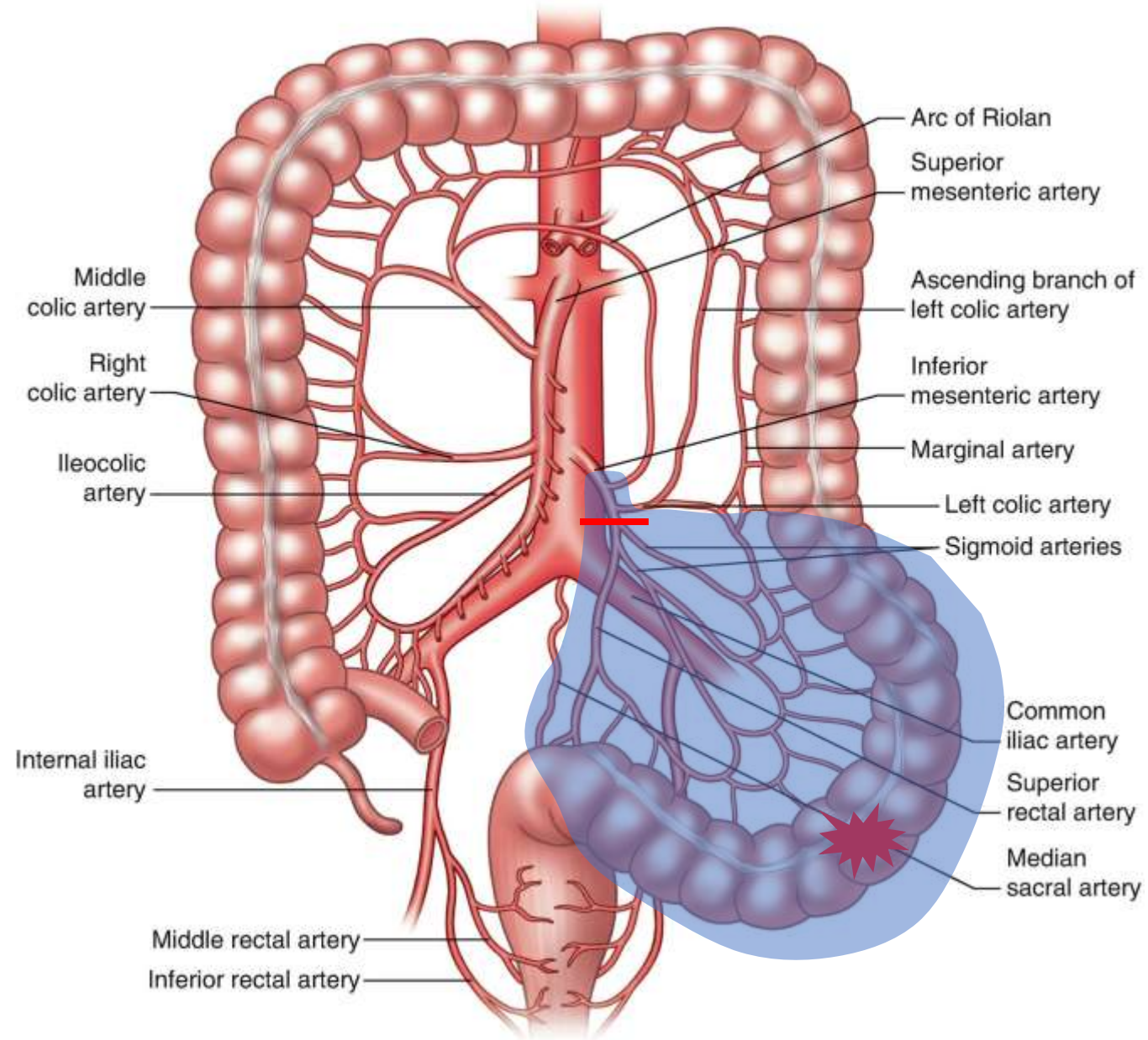
- **SPLENİK FLEKSURA TM.**
- **SOL HEMİKOLEKTOMİ**

Kolon tümörü - Hangi kolektomi?



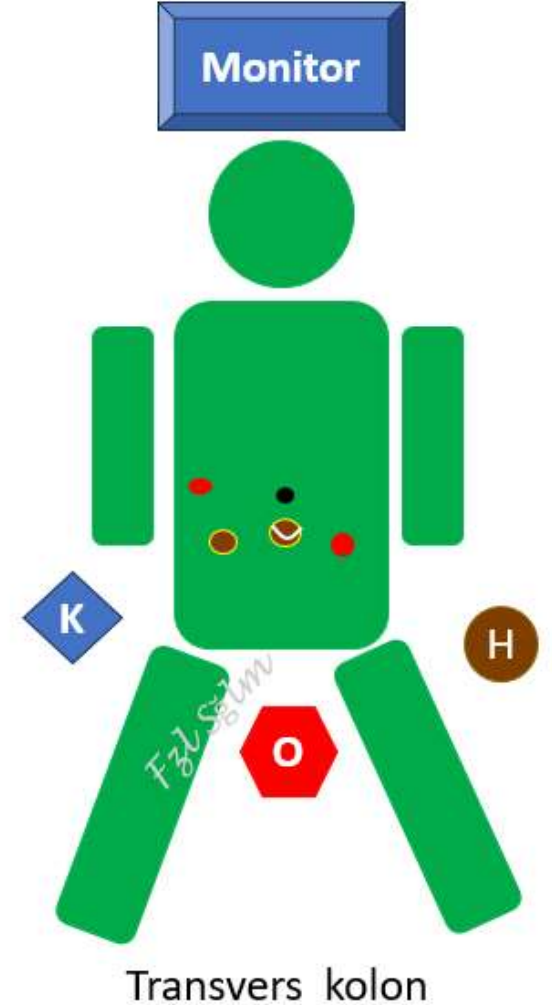
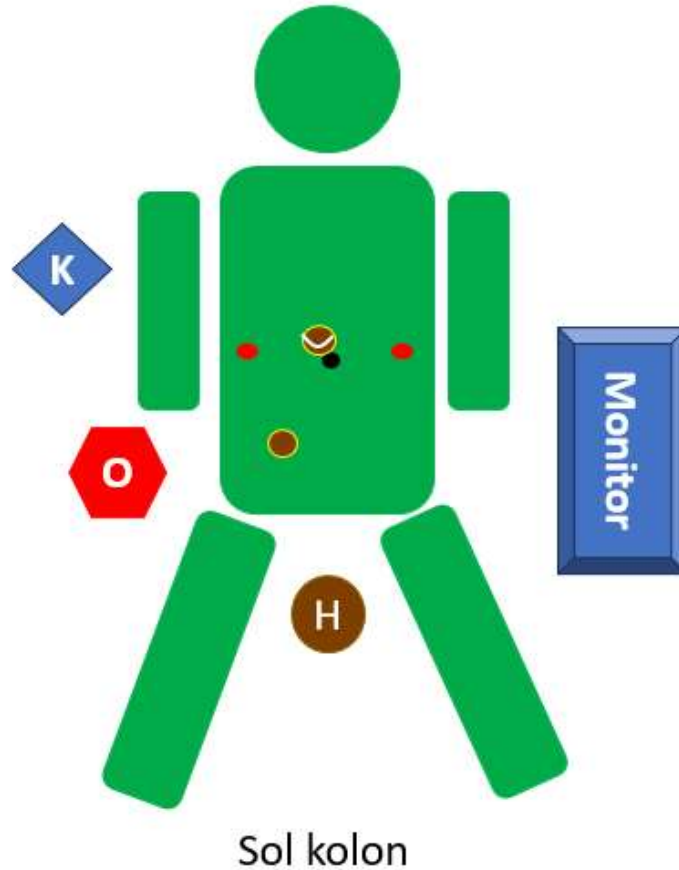
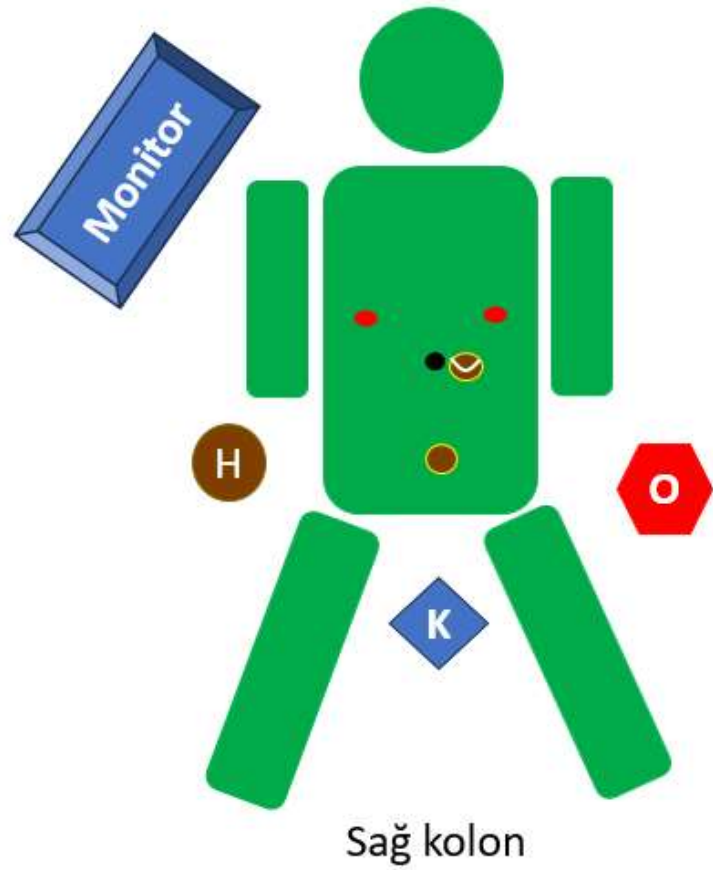
- **SOL KOLON TM.**
- **SOL HEMİKOLEKTOMİ**

Kolon tümörü - Hangi kolektomi?



- **SIGMOID TM.**
- **SIGMOIDEKTOMİ**

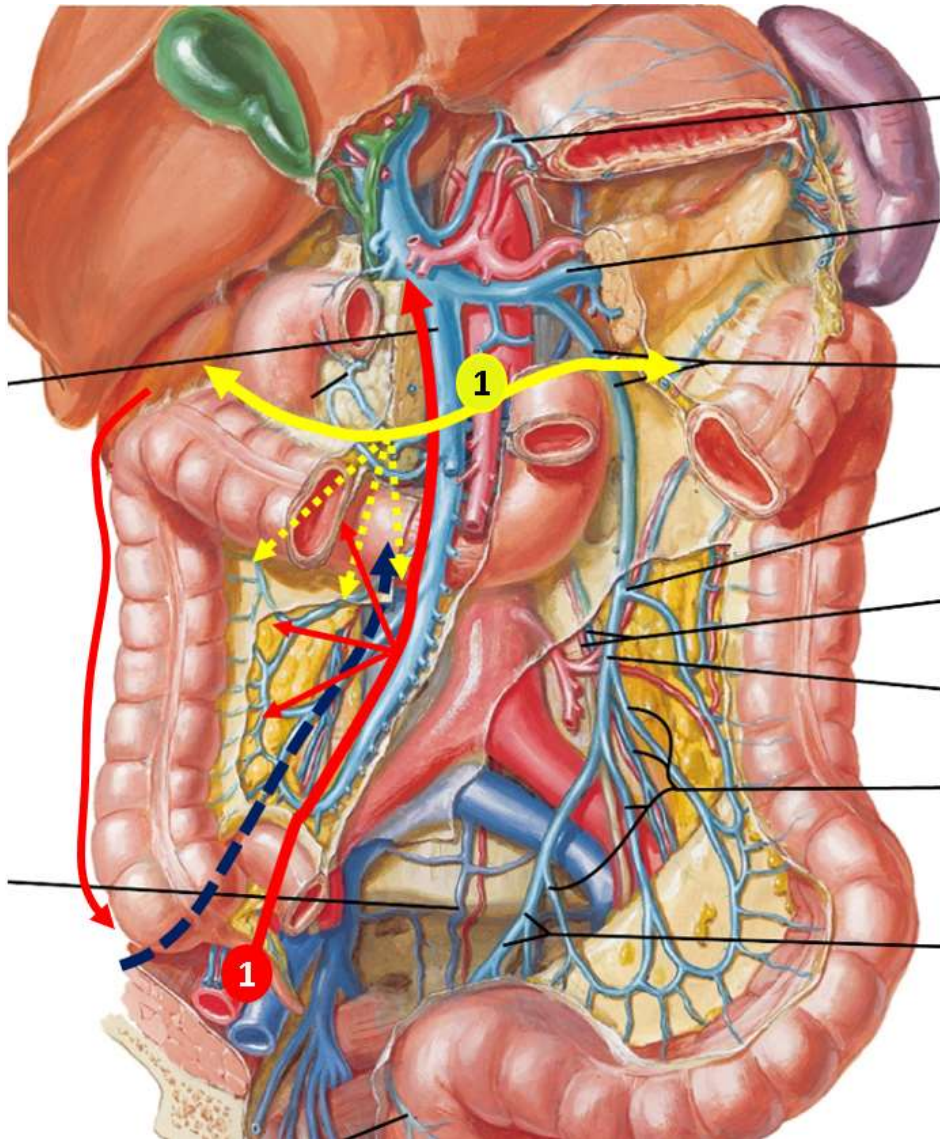
Laparoskopik kolektomi – Trokar yerleri



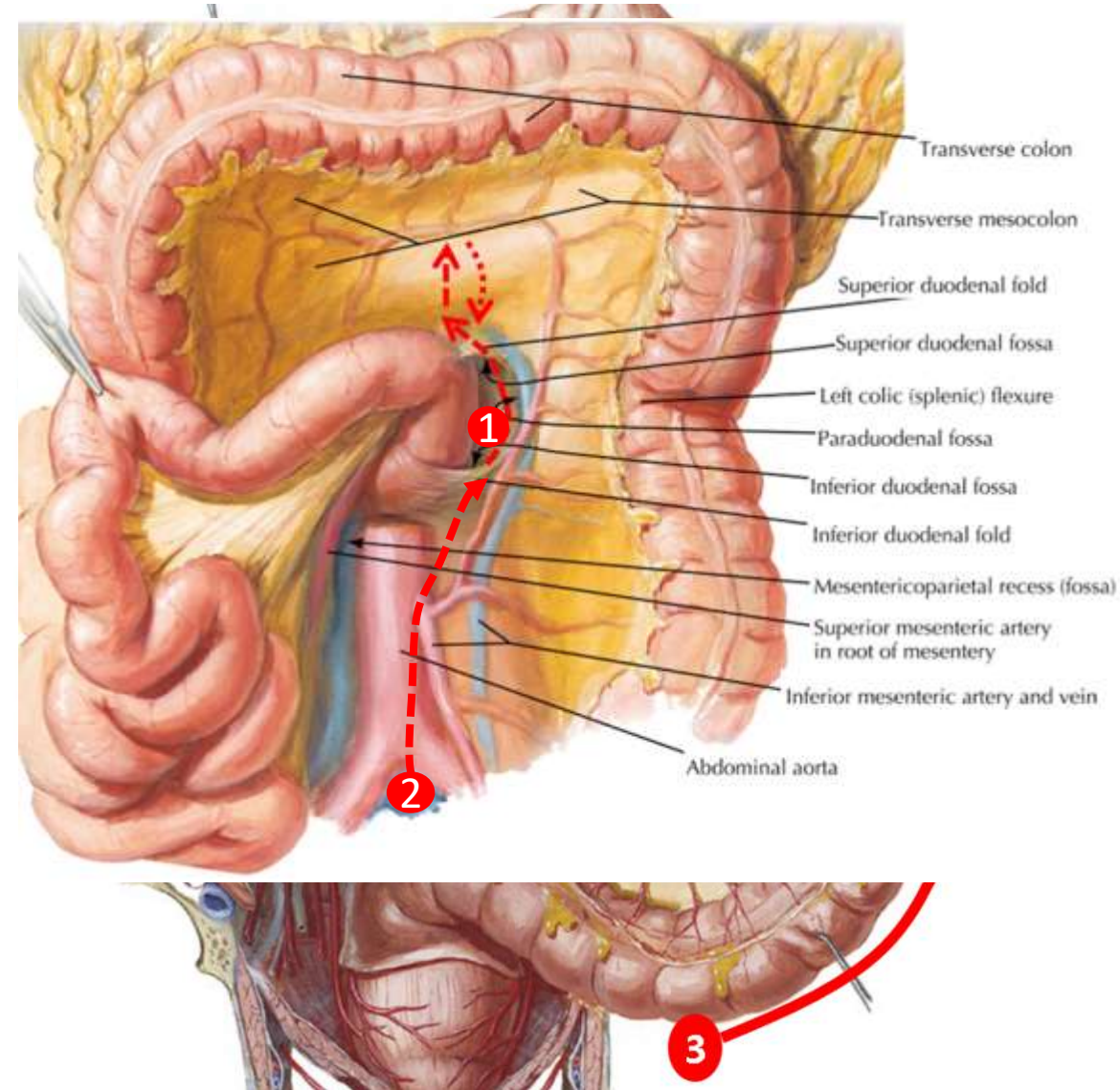
- 5 mm trokar
- 10-12 mm trokar
- Kamera



Sağ hemikolektomi



Sol hemikolektomi



Yaklaşımlar arası fark var mı?

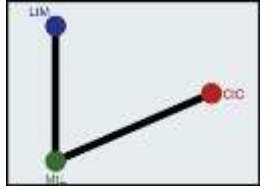


Comparison between different approaches applied in laparoscopic right hemi-colectomy: A systematic review and network meta-analysis

Fei Li, Xin Zhou, Bingyan Wang, Lei Guo, Jilian Wang, Wendong Wang, Wei Fu

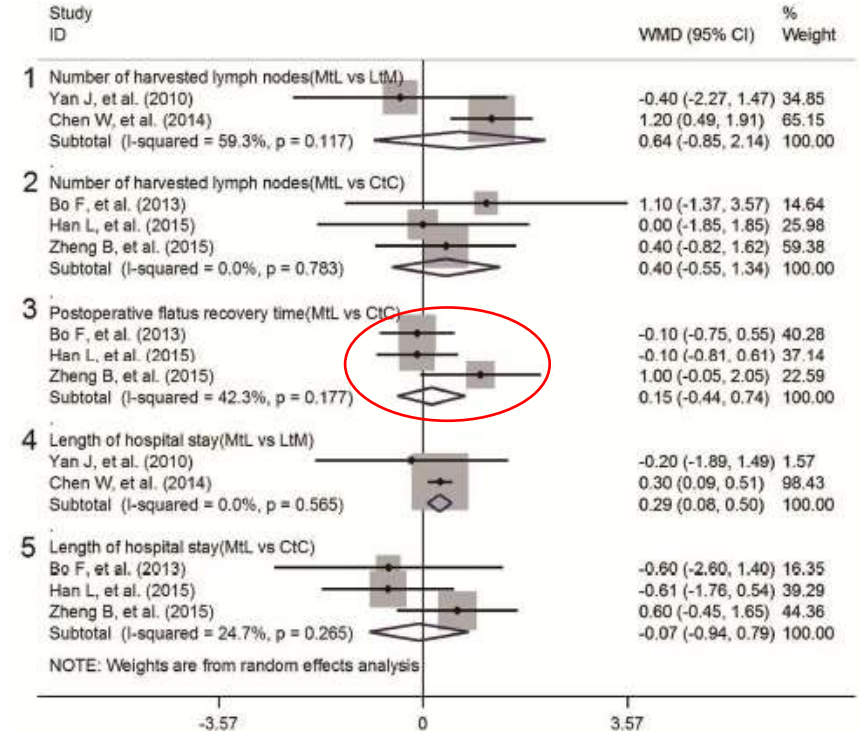
6 klinik(3 RKÇ, 3 non-randomize) çalışma, 571 hasta

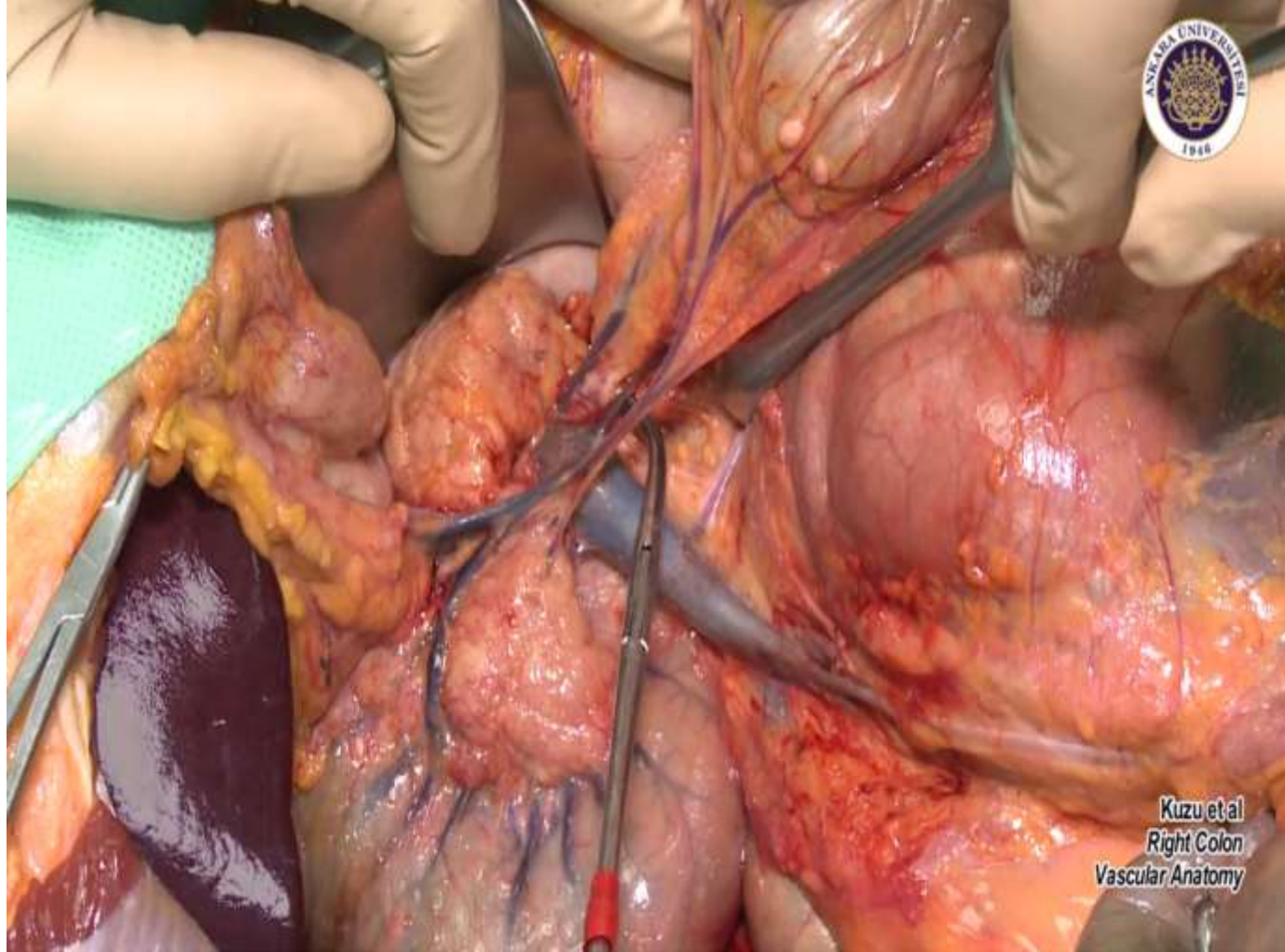
CtC: cranial to caudal
MtL: medial to lateral
LtM: lateral to medial



Sonuçlar

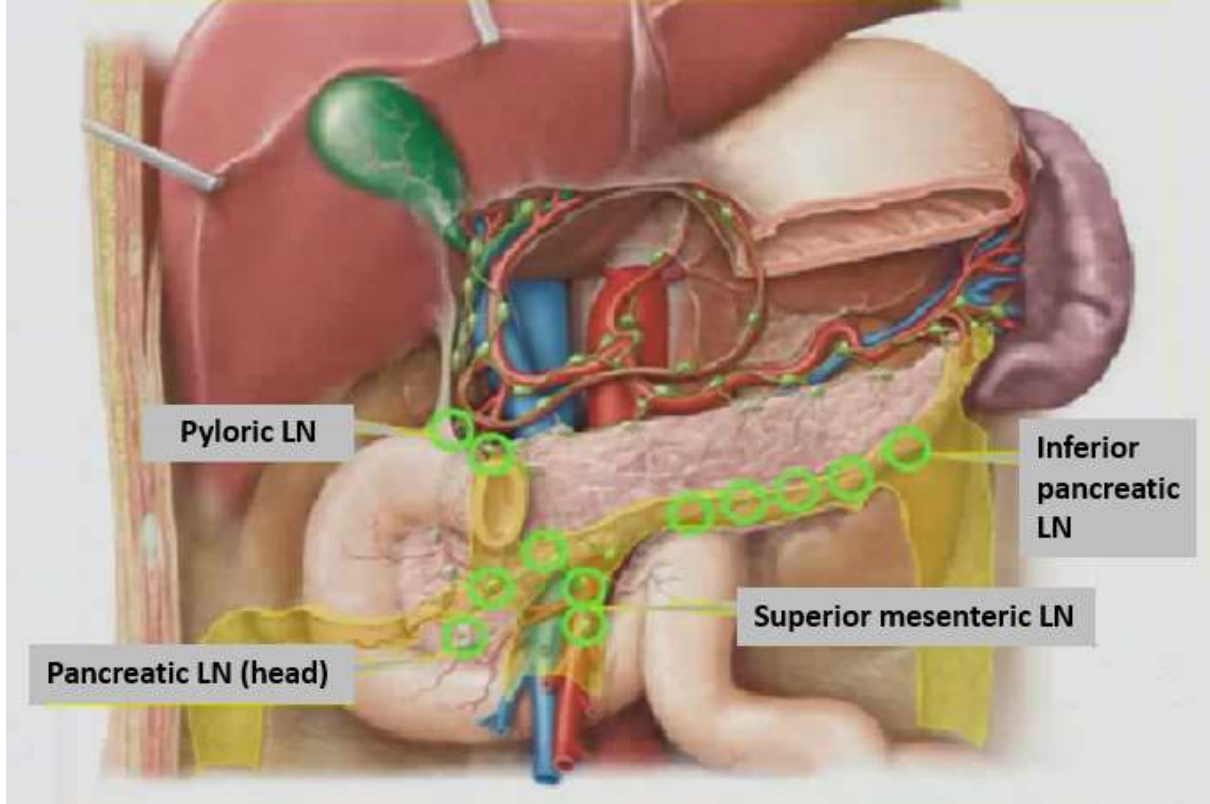
- LtM, PO flatus ve yatış süresi kısa ($p < 0.05$).
- CtC, PO komplikasyon daha az ($p < 0.05$)
- Her 3 yaklaşım da güvenli





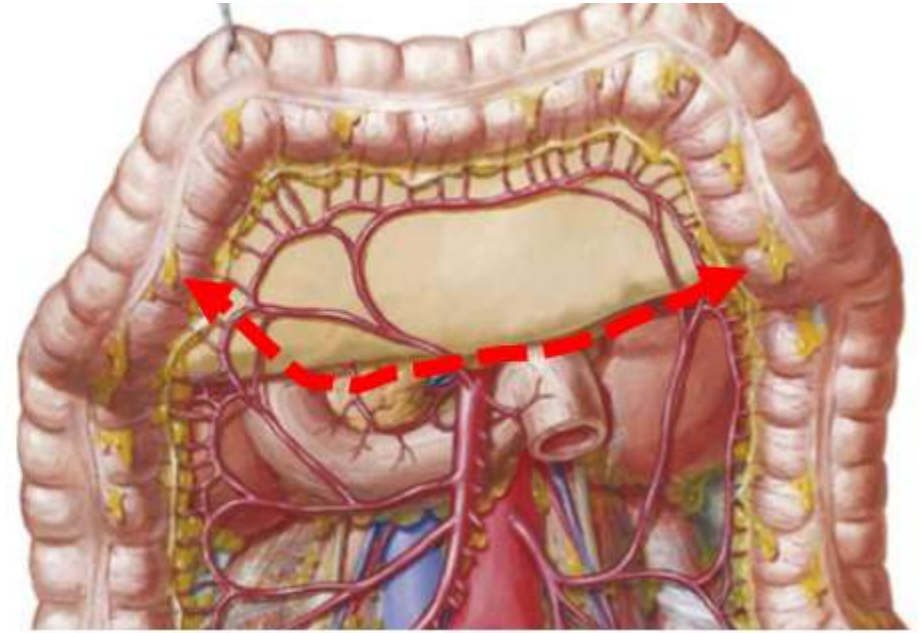
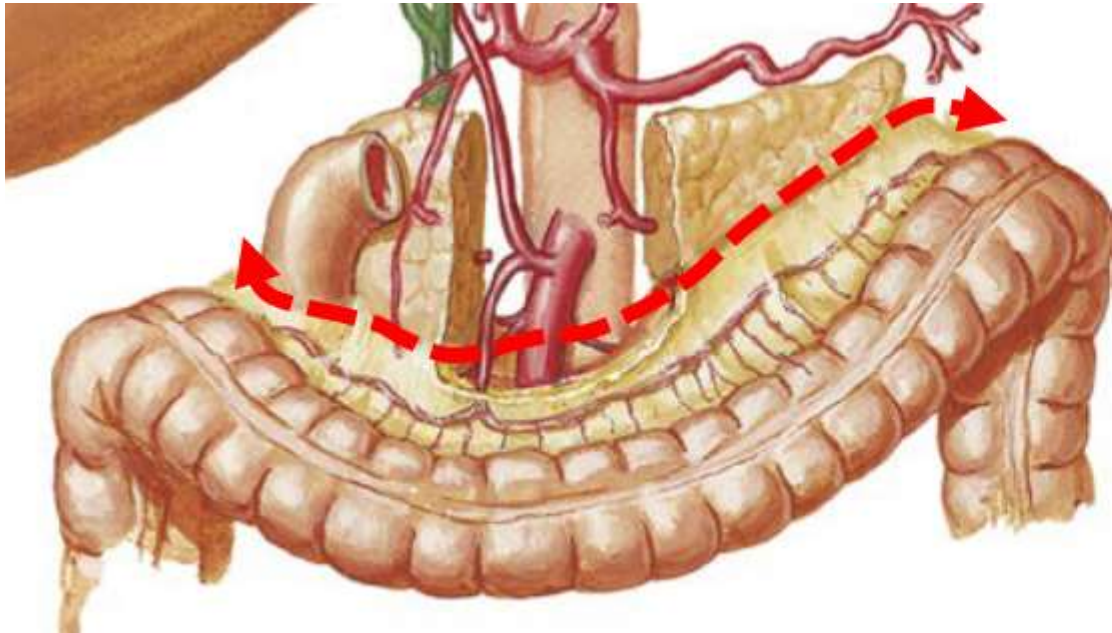
Minimal invaziv teknikte sađ kolik vene traksiyon olmayacađı iin kanama daha azdır.

Transvers kolektomi

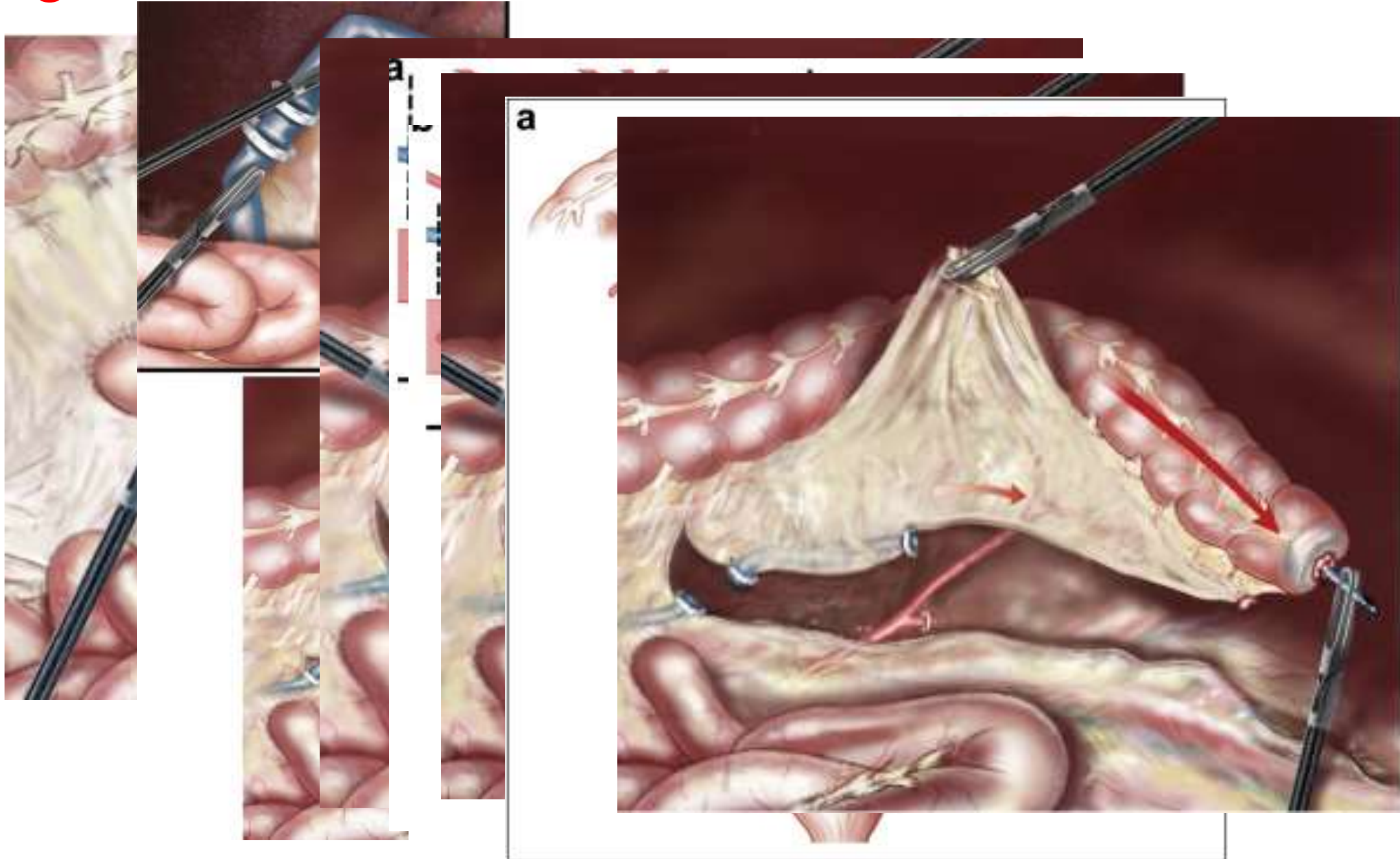


- Fleksuralar ve transvers kolon tümöründe LN diseksiyonu çok yönlü yapılmalıdır.

Transvers kolektomi



Sigmoid kolektomi

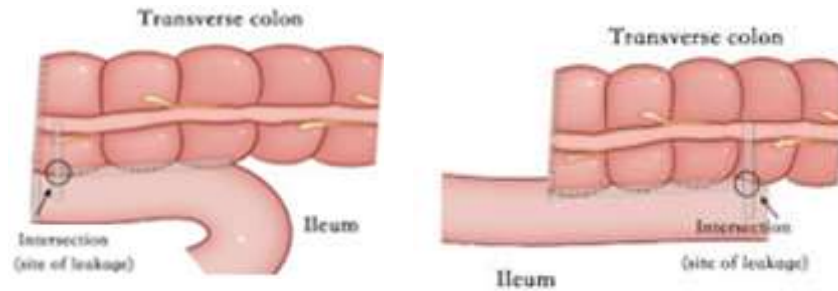


Anastomoz

- İnttrakorporeal (İKA)

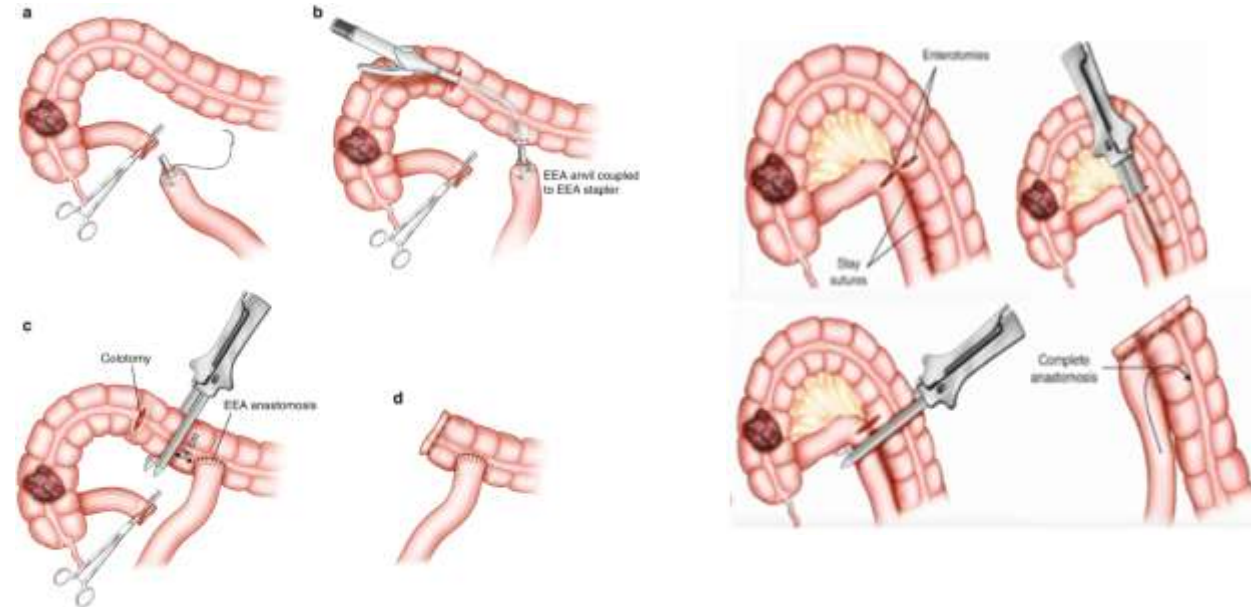
Robotik(%85,7) -Laparoskopik(%20)

- ✓ Konversiyon daha az
- ✓ Kısa dönem sonuçları(ileus, yara komplikasyonları, yatış) avantajlı
- ✓ Kesi daha küçük, fıtık daha az
- ✓ Sağlık harcamaları daha az
- ✓ Robotta süre daha kısa ve kolay



- Ekstrakorporeal(EKA)

(El/Stapler)



İntrakorporeal vs Ekstrakorporeal anastomoz

Review > Int J Colorectal Dis. 2023 May 30;38(1):147. doi: 10.1007/s00384-023-04445-2.

Meta-analysis of randomized controlled trials comparing intracorporeal versus extracorporeal anastomosis in minimally invasive right hemicolectomy: upgrading the level of evidence

Tuo Zhang ¹, Yigong Sun ², Weizheng Mao ³

- 7 RCT - 750 hasta

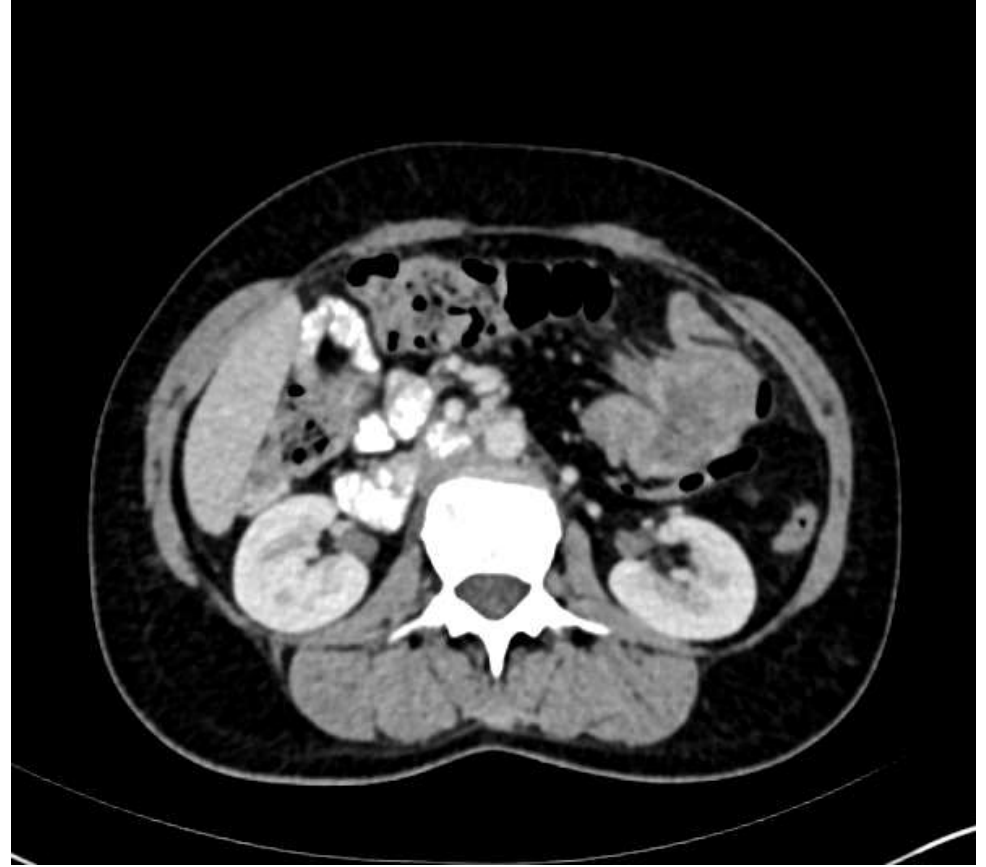
IKA'da ;

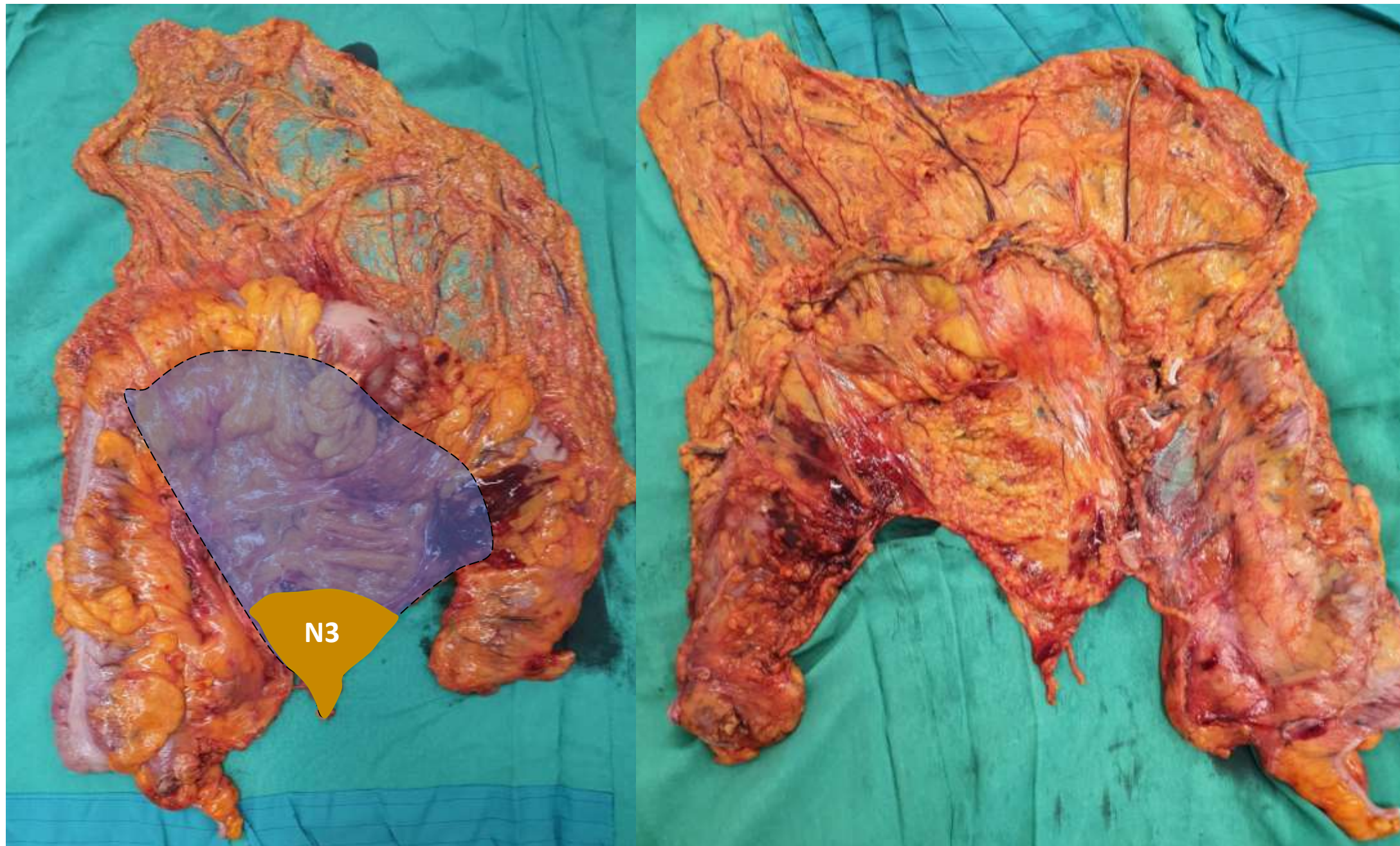
- Paralitik ileus az
- Ameliyat süresi uzun
- Kesi daha kısa

- Kanama
- Anastomoz kaçağı
- CAE
- Operatif morbidite
- Çıkarılan LN sayısı
- Hastane yatış süresi

Fark yok

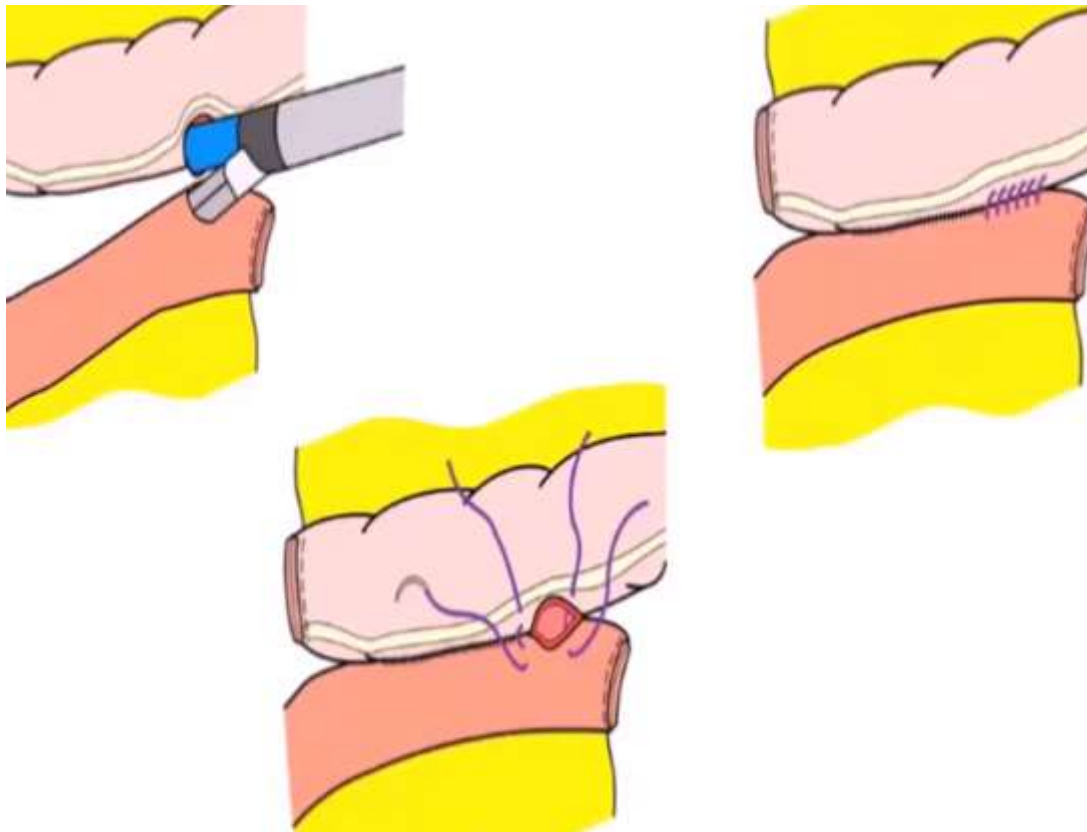
50y-K Transvers kolon tümörü



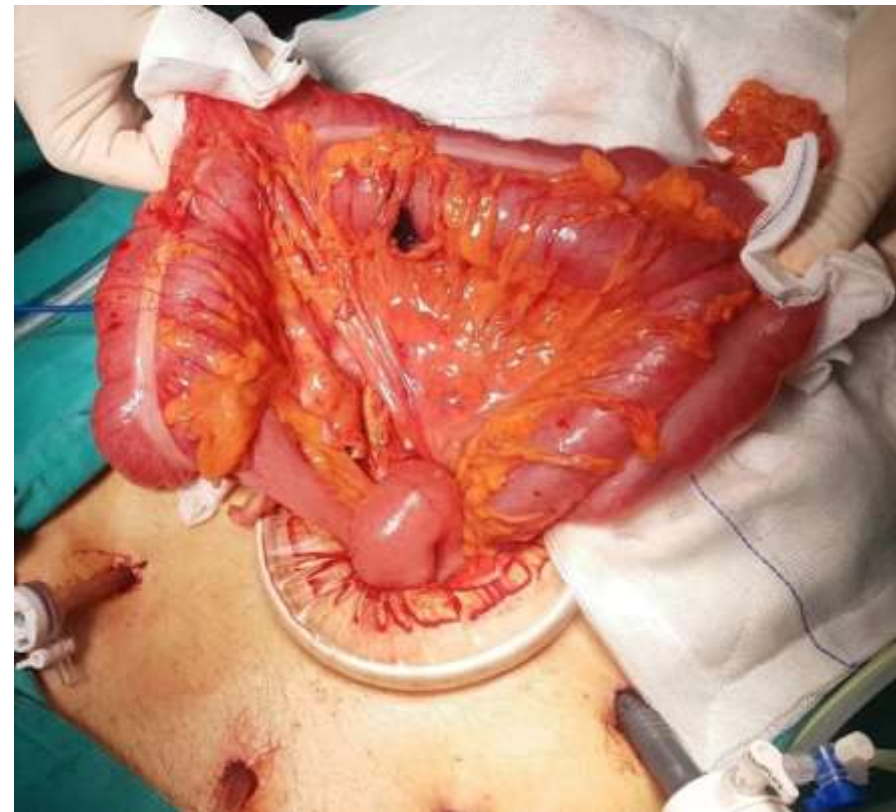


ANASTOMOZ

Intrakorporeal



Extrakorporeal





Sonuçlar;

- Laparoskopik kolektomi tecrübeli ellerde güvenle yapılabilir.
- Erken ve geç sonuçları açık ve robotik yöntemle aynıdır.
- Robotik yöntemden daha ucuz ve açığa dönüş fazladır.
- İntra/ekstrakorporeal anastomozda klinik sonuçlar benzerdir.
- Spesmen mümkün ise orta hat dışından çıkartılmalıdır.
- Kolektomide ilk tercih edilecek yöntem olmalıdır.

Teşekkür ederim.