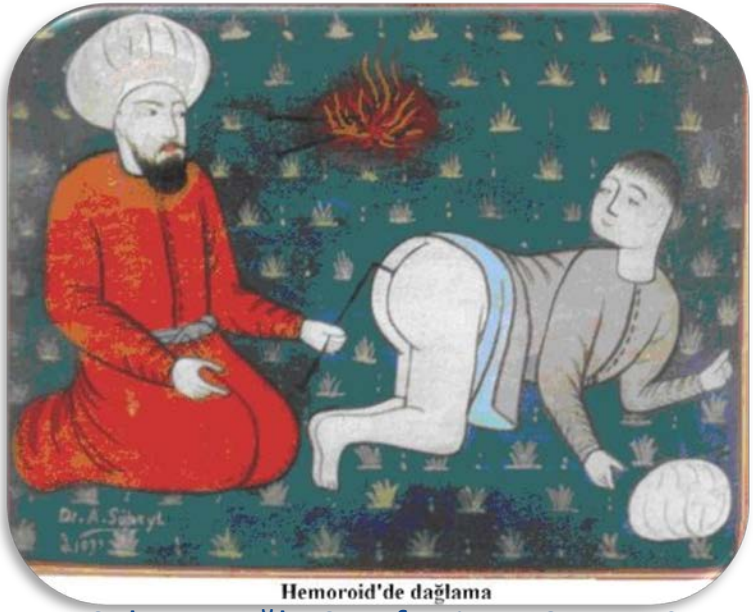
TKRCD
4. Selim Anorektal Hastalıklar Kursu

Anatomik Açıdan Anorektal Bölge Hastalıkları

Dr. Mustafa Güvençer
Dokuz Eylül Üniversitesi
Anatomi AD

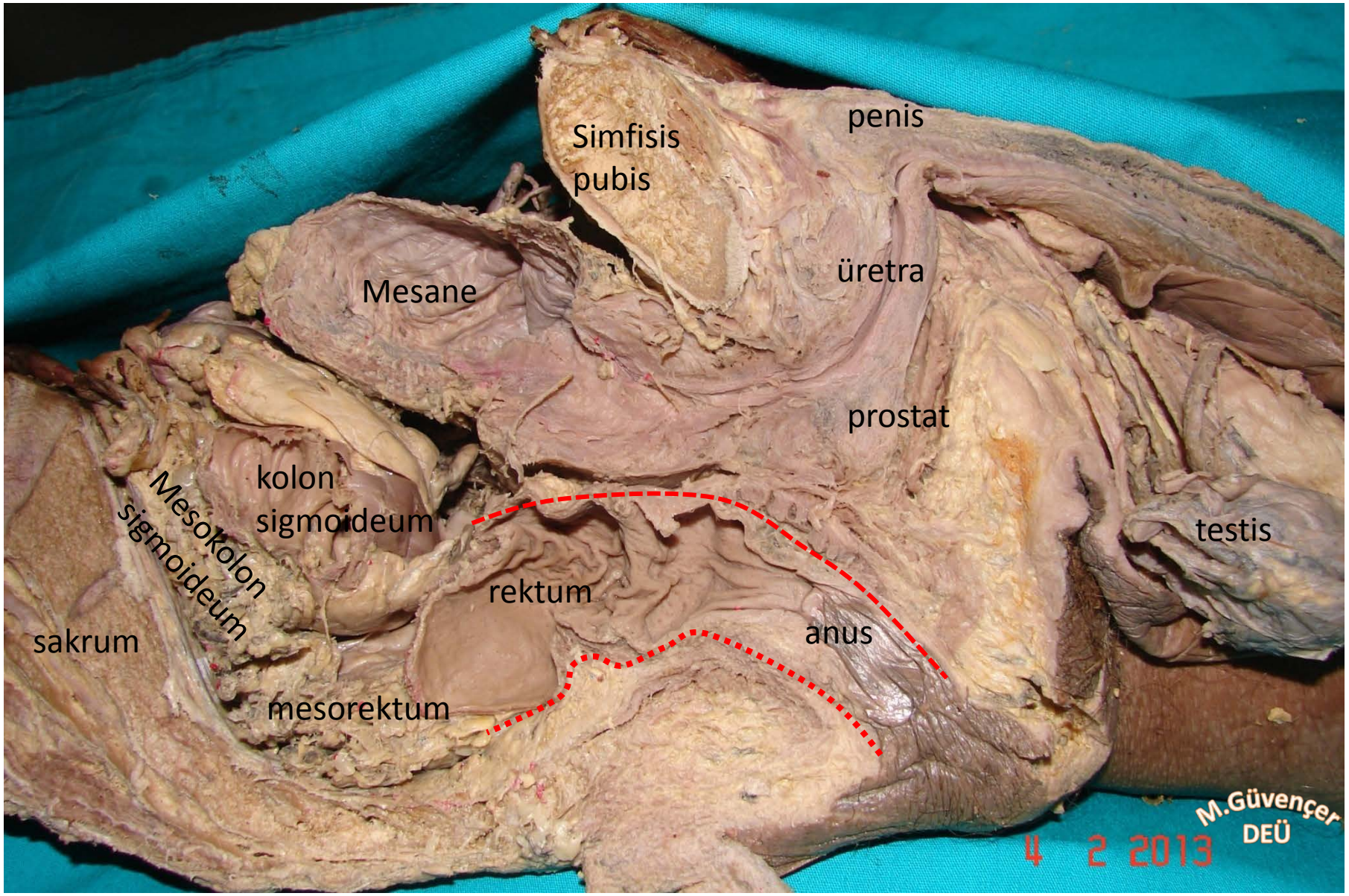


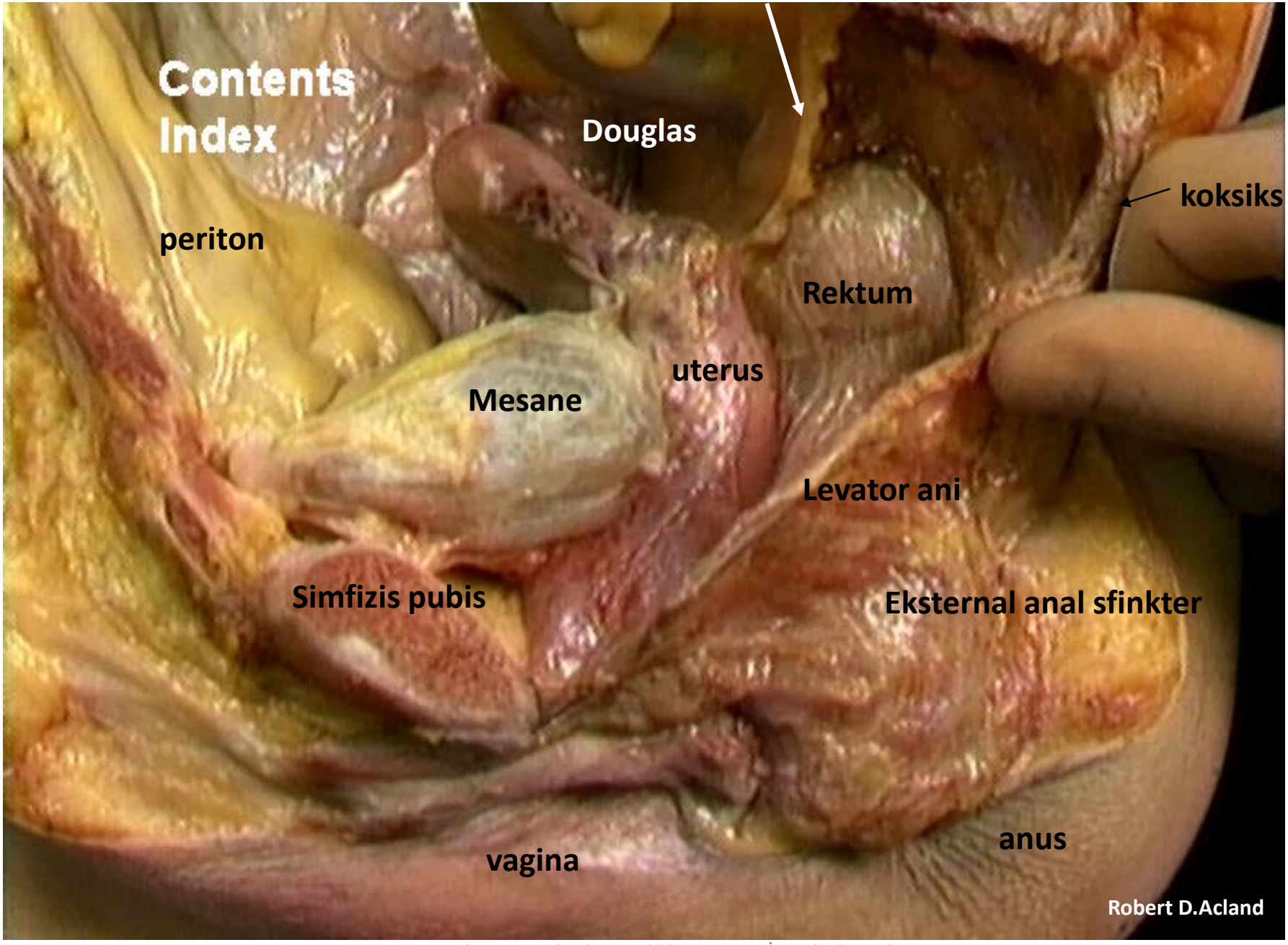
Sabuncuoğlu Şerafettin 1485-1470



Robotik Cerrahi 21.yy

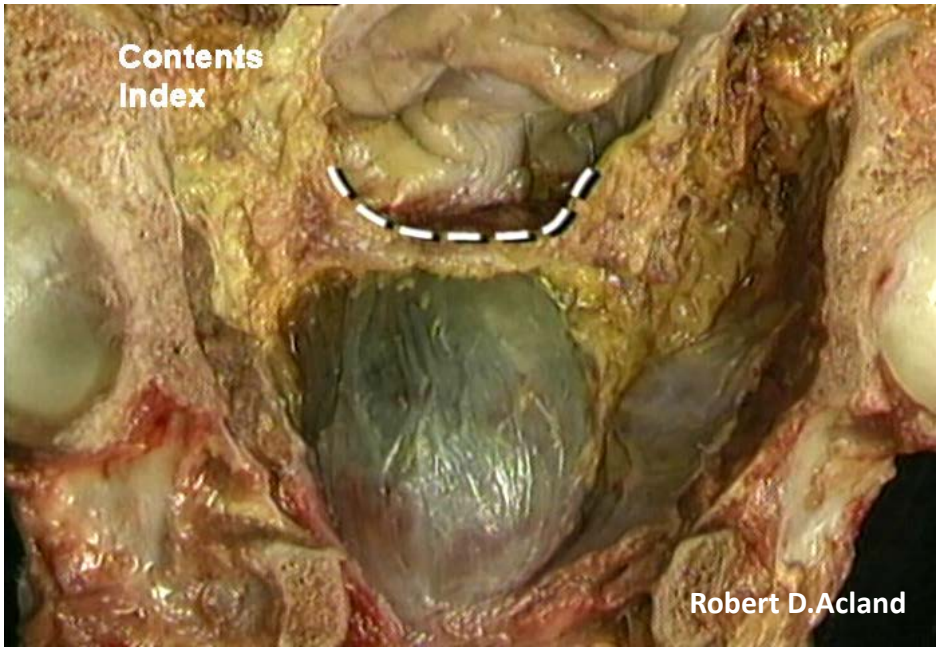
Rektum yerleşim ve konumu

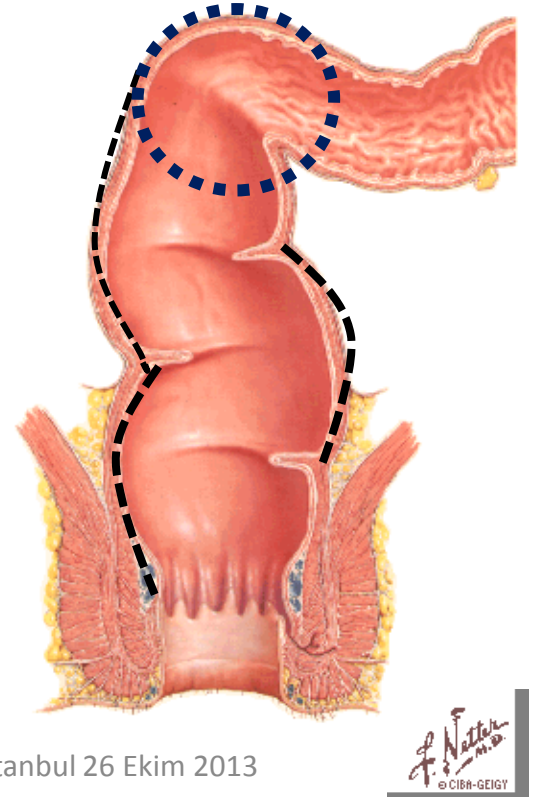



Peritoneal refleksiyon
Contents
Index
Douglas
koksiks
periton
Rektum
uterus
Mesane
Levator ani
Simfizis pubis
Eksternal anal sfinkter
anus
vagina
Robert D.Acland

Rektosigmoid bileşke:

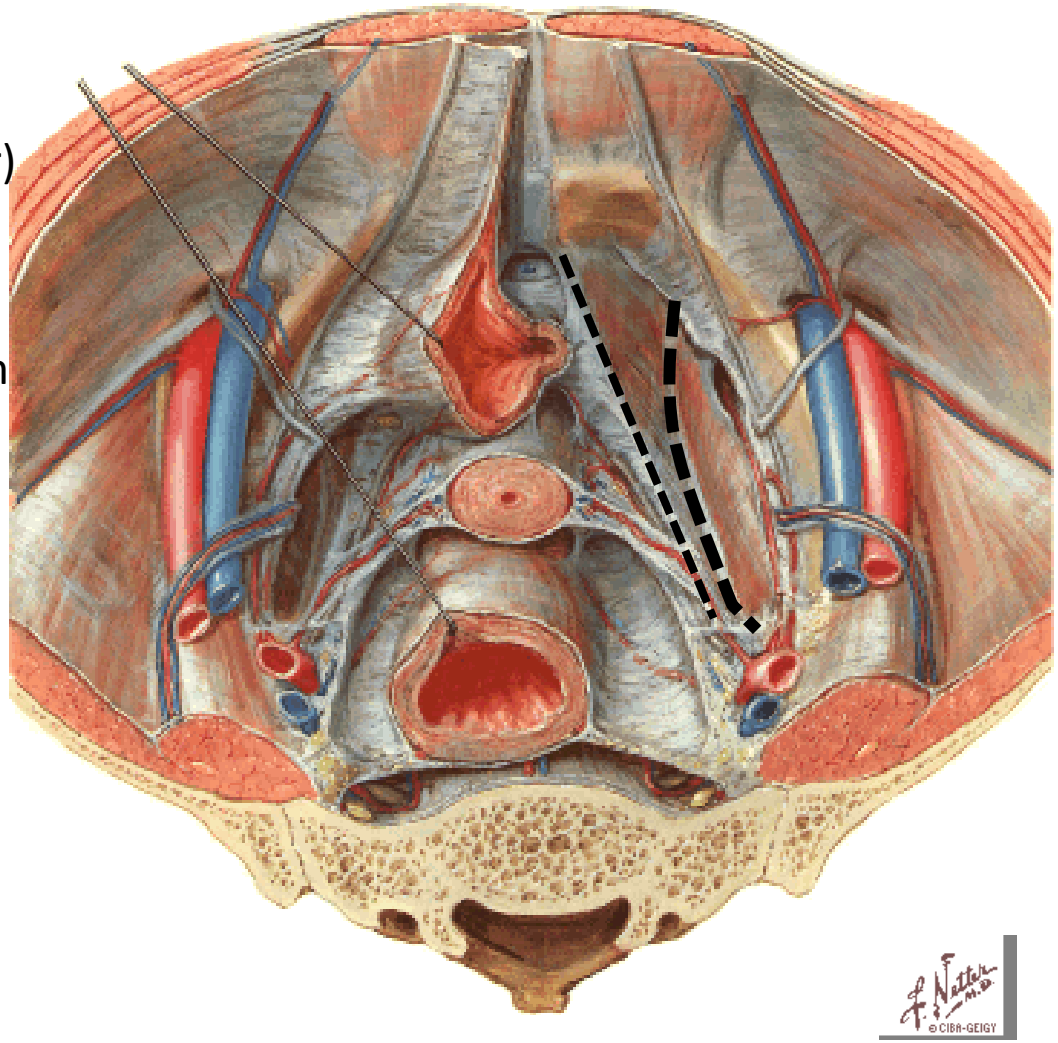
	Sigmoid kolon	Rektum
Mezenter	+	-
Sakkulasyon (haustra koli)	+	-
Appendises epiploika	+	-
Teniya koliler	+	-
İç yüzeyde mukoza kıvrımları	+	-
Plika transversi (Houston Plikaları)	-	+





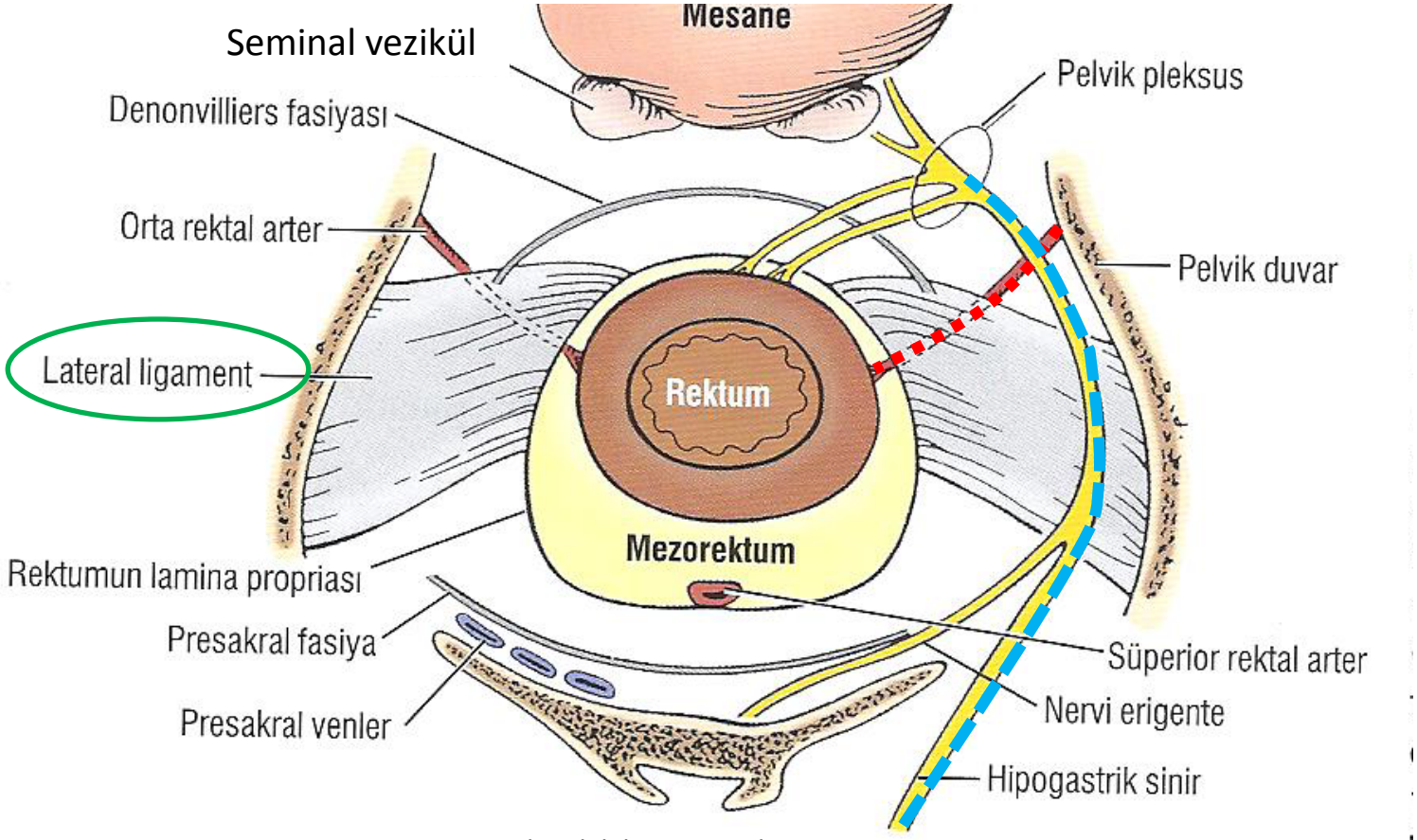
Pelvik fasya

- **Parietal fasya**
  - Presakral fasya (Waldeyer)
  - Rektovajinal septum (Denonvillier)
  - Uterosakral ligament
- **Visseral fasya**
  - Fasya propria rekti →mezorektum
  - Hipogastrik kılıf
    - Lateral rektal ligament
    - Servikal transvers ligament
    - Lateralis vezikal ligament



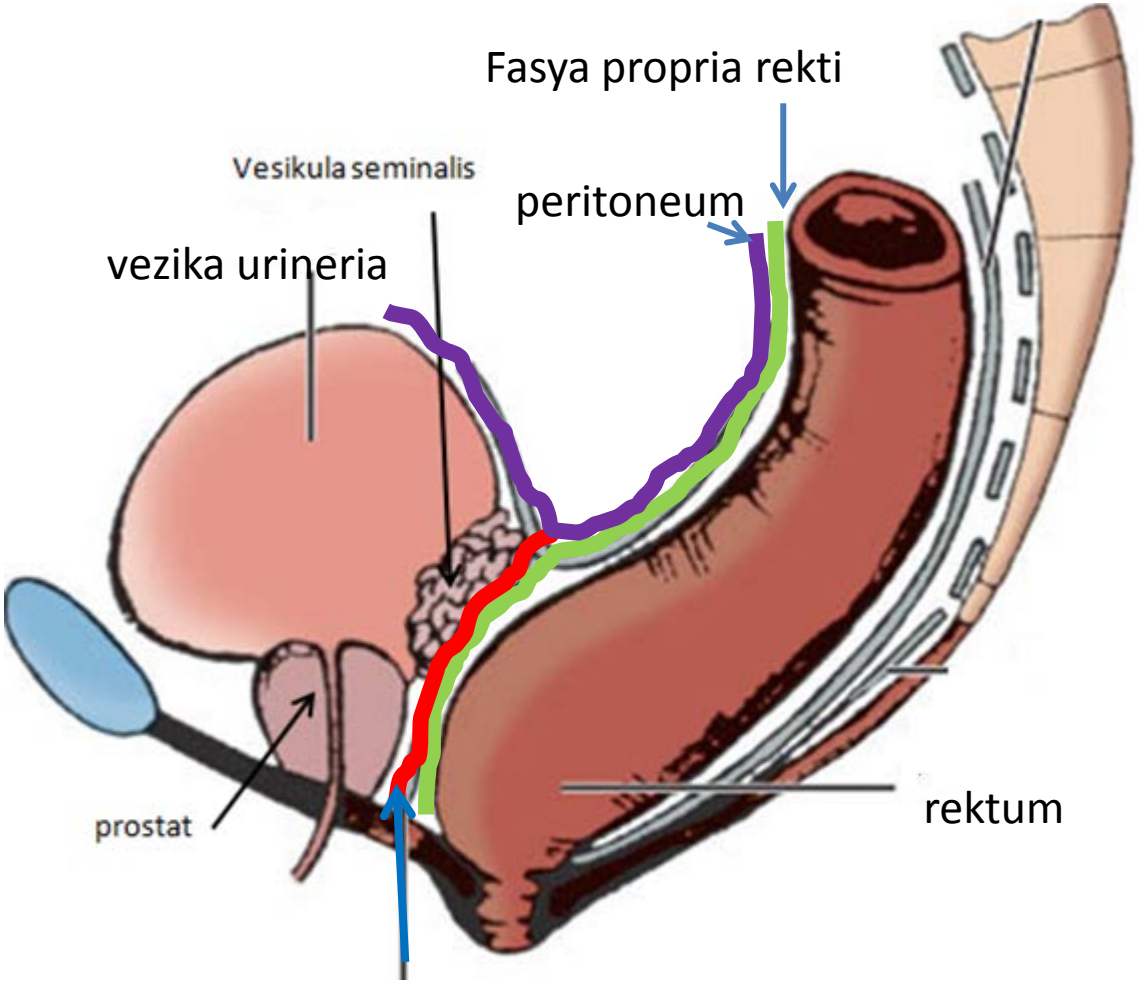
- **Lateral ligament:**

Lifler arasından **a.rektalis media**, dış yandan **hipogastrik sinir** geçer.

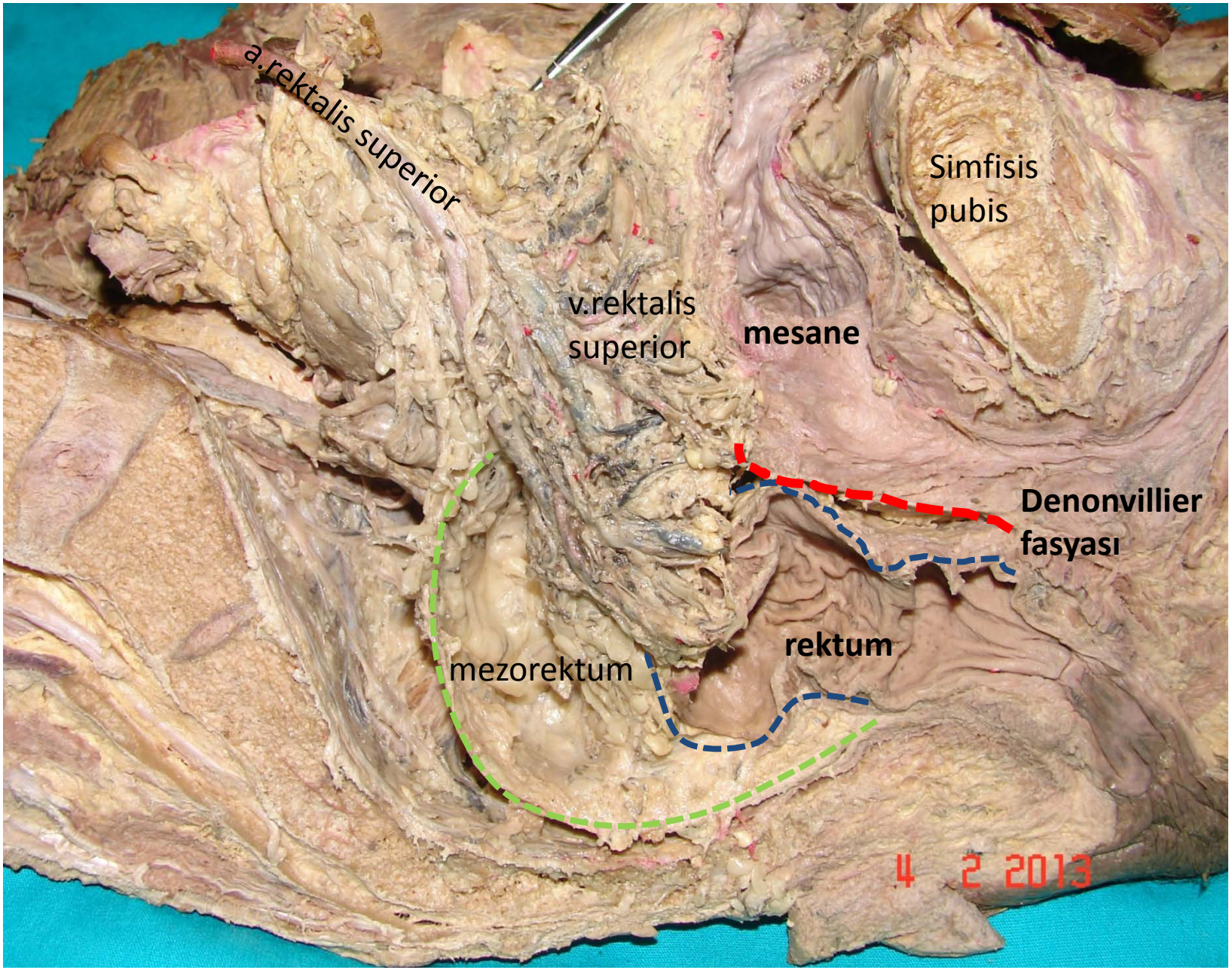


Skandalakis, Surgical Anatomy

Rektum-Mesane İlişkisi

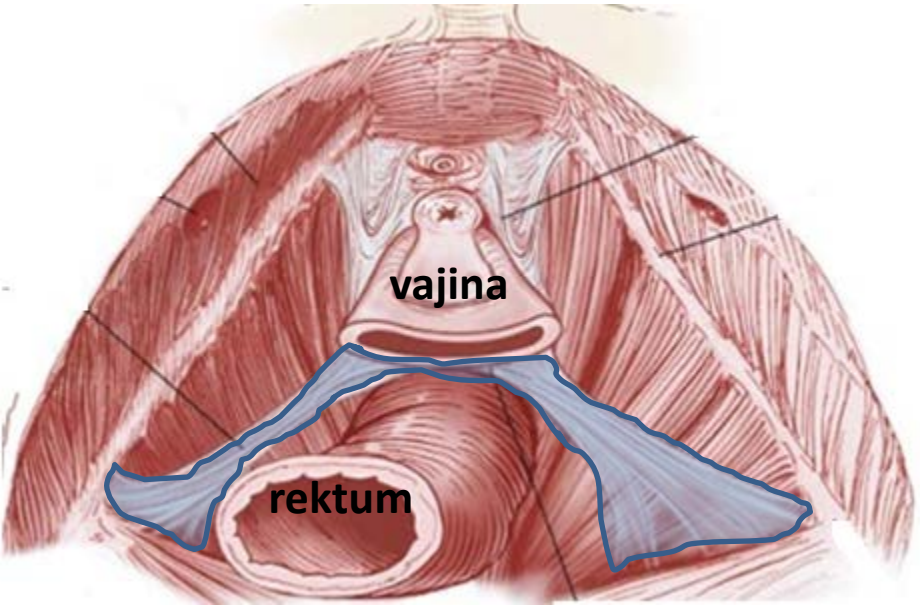


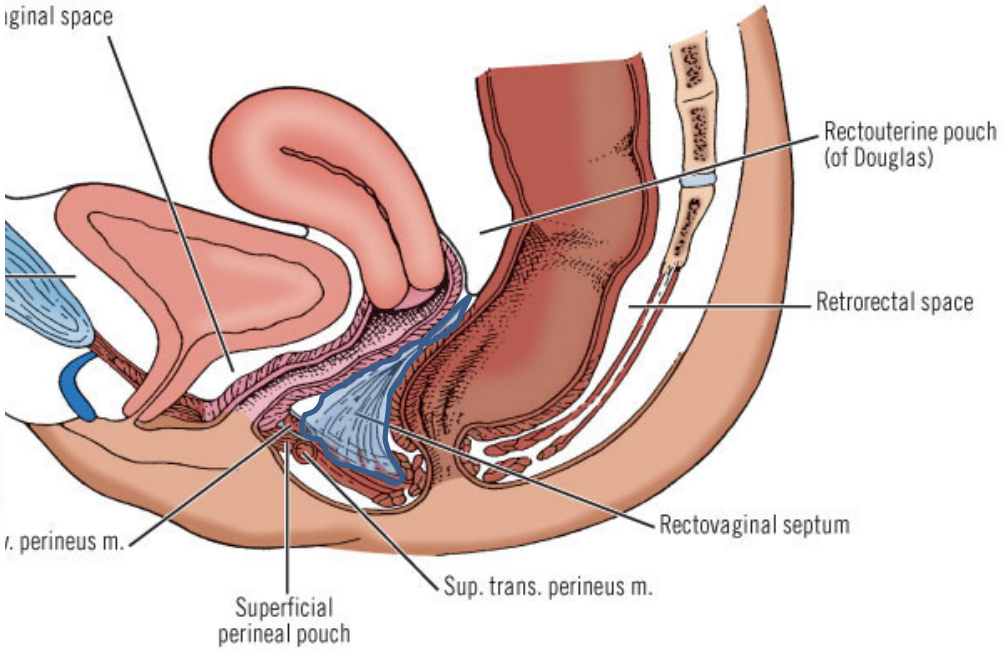
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a.rektalis superior
Simfisis pubis
v.rektalis superior
mesane
Denonvillier fasyası
rektum
mezorektum
4 2 2013

Rektum-Vajina İlişkisi

Denonvillier fasyası (Rektovajinal septum)

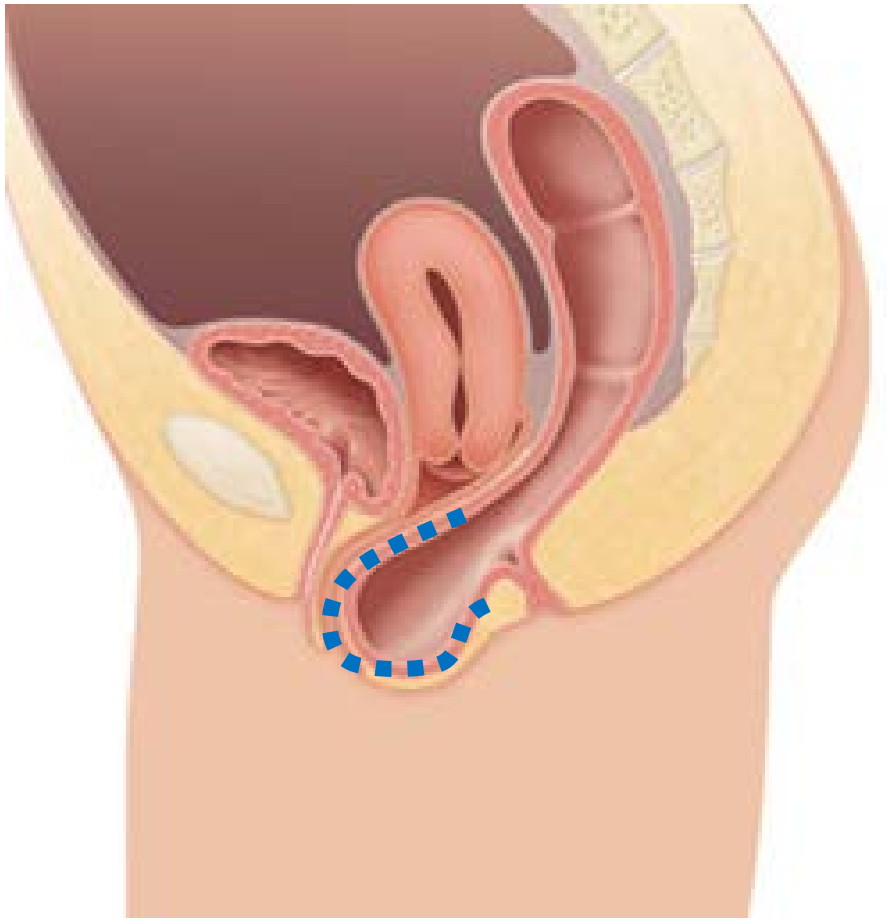




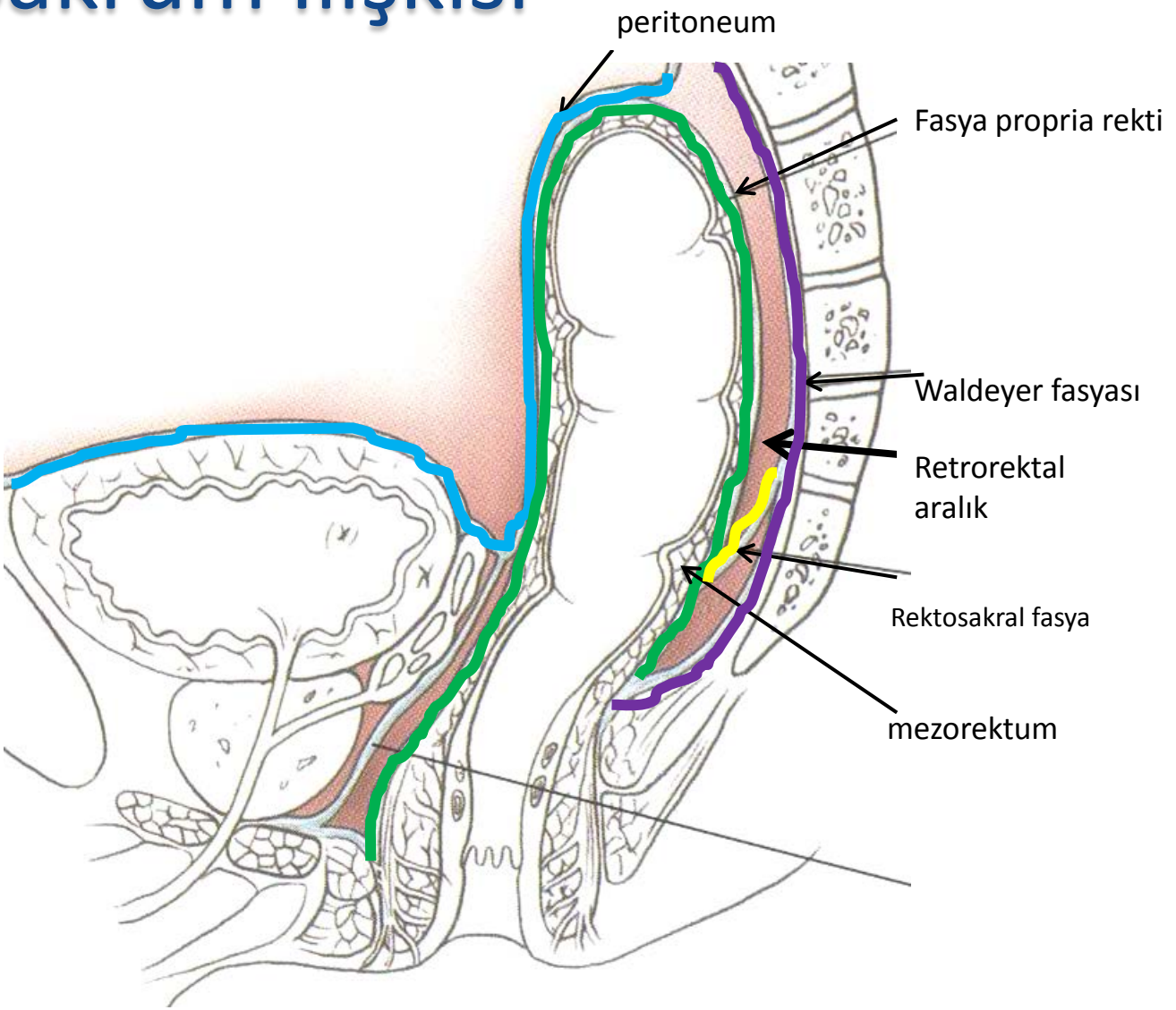
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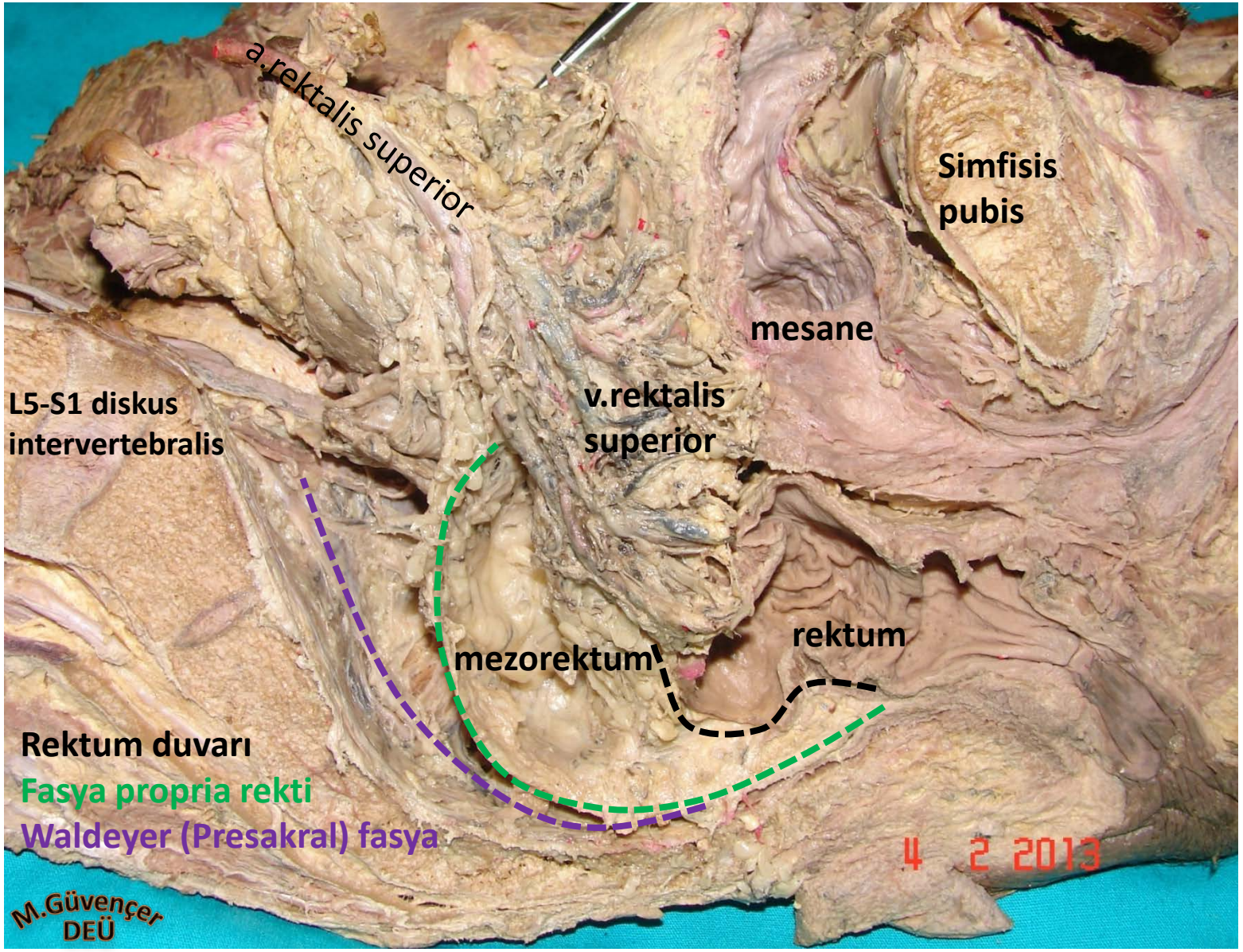
Rektosel

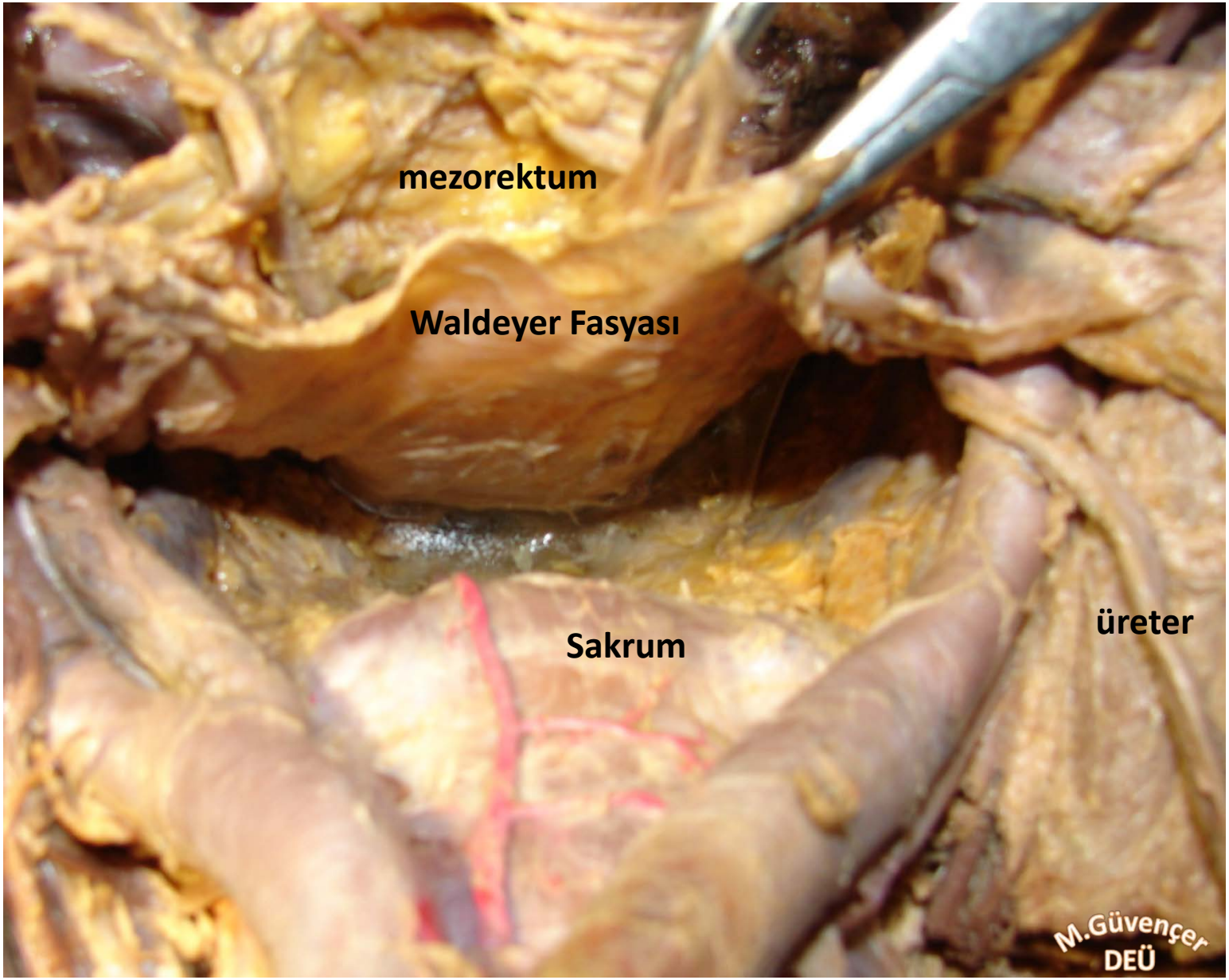


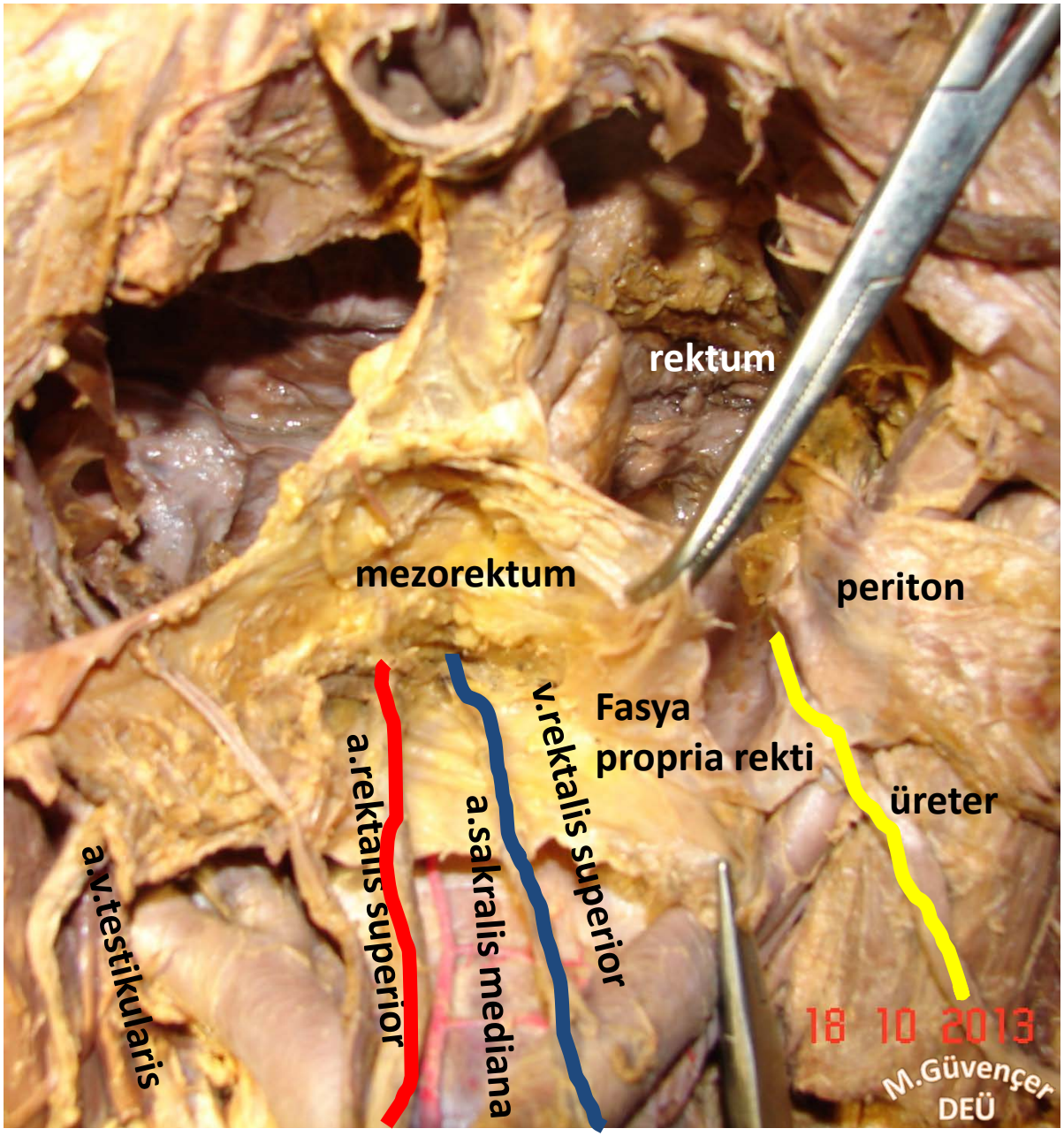


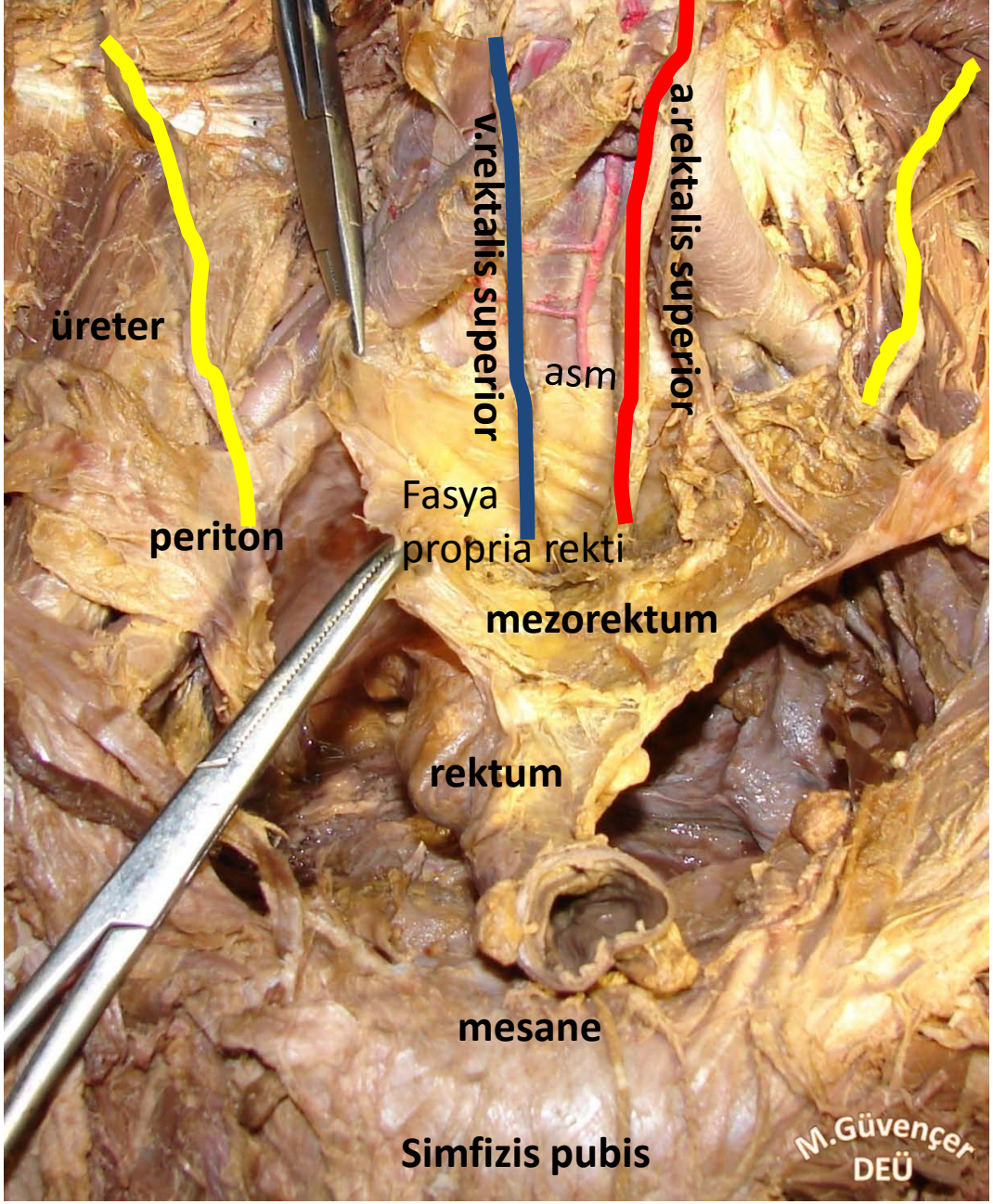
Rektum-Sakrum İlişkisi



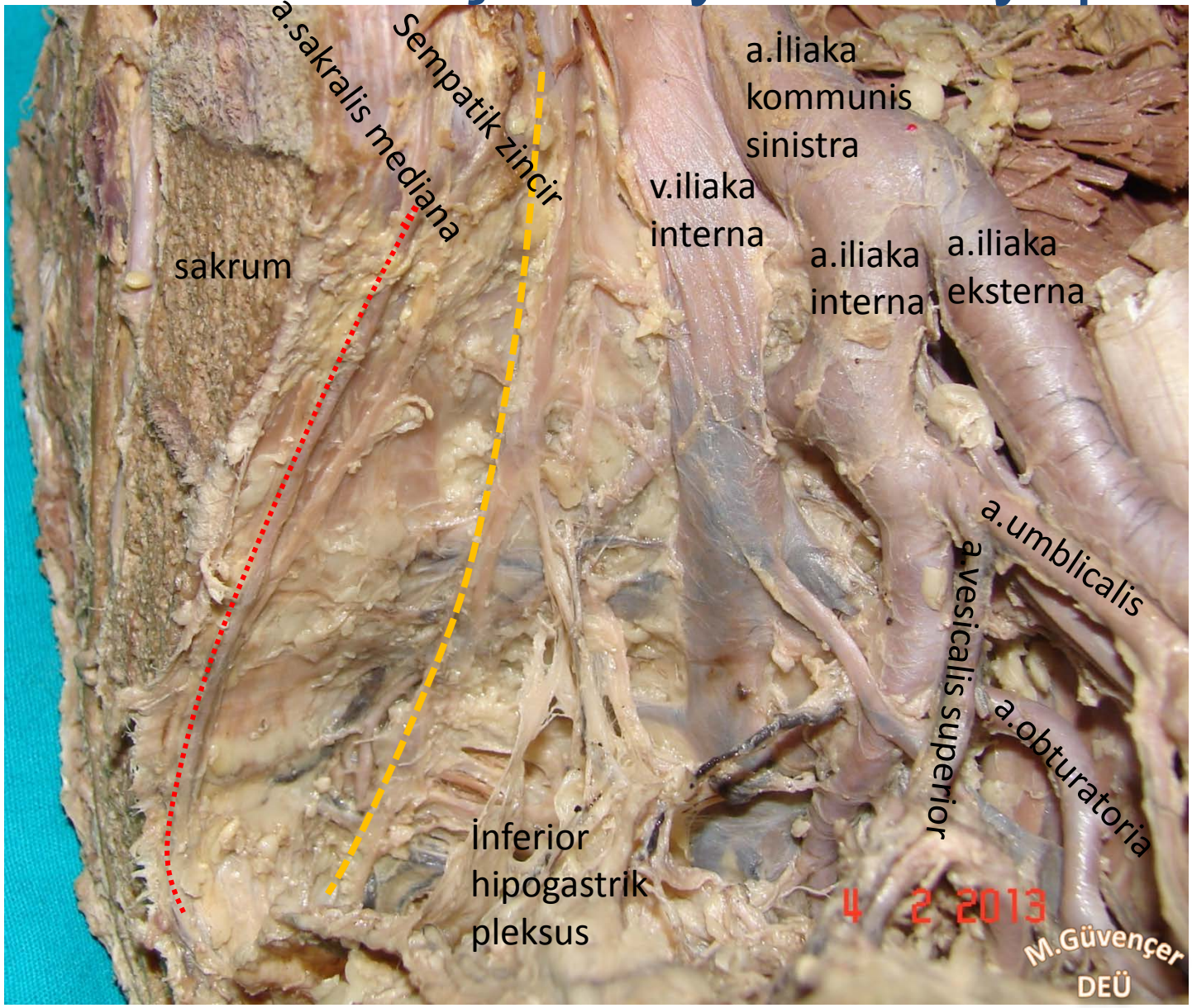

a.rektalis superior
Simfisis pubis
mesane
L5-S1 diskus intervertebralis
v.rektalis superior
mezorektum
rektum
Rektum duvarı
Fasya propria rekti
Waldeyer (Presakral) fasya
4 2 2013
M.Güvençer DEÜ

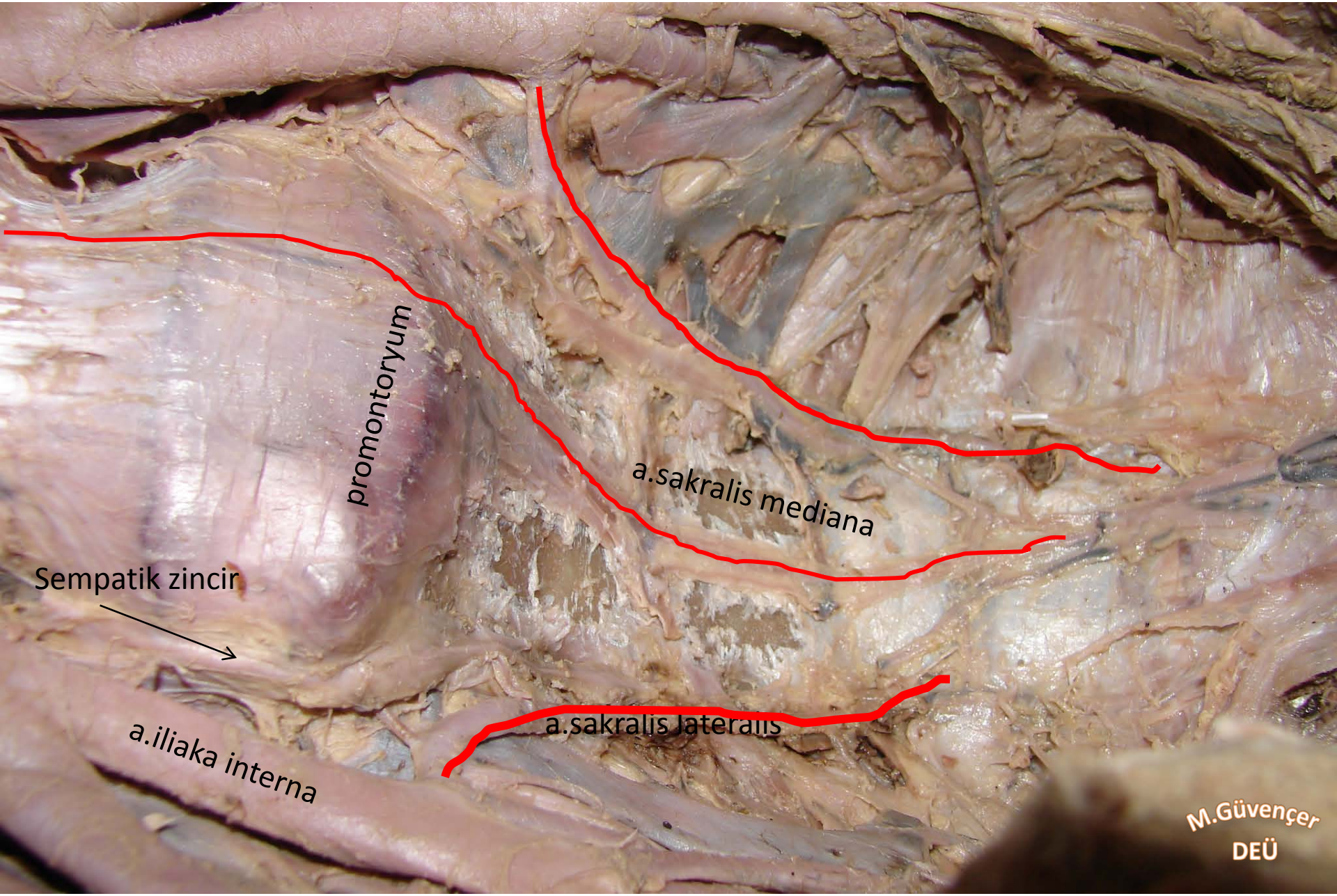

mezorektum
Waldeyer Fasyası
üreter
Sakrum
M.Güvençer
DEÜ

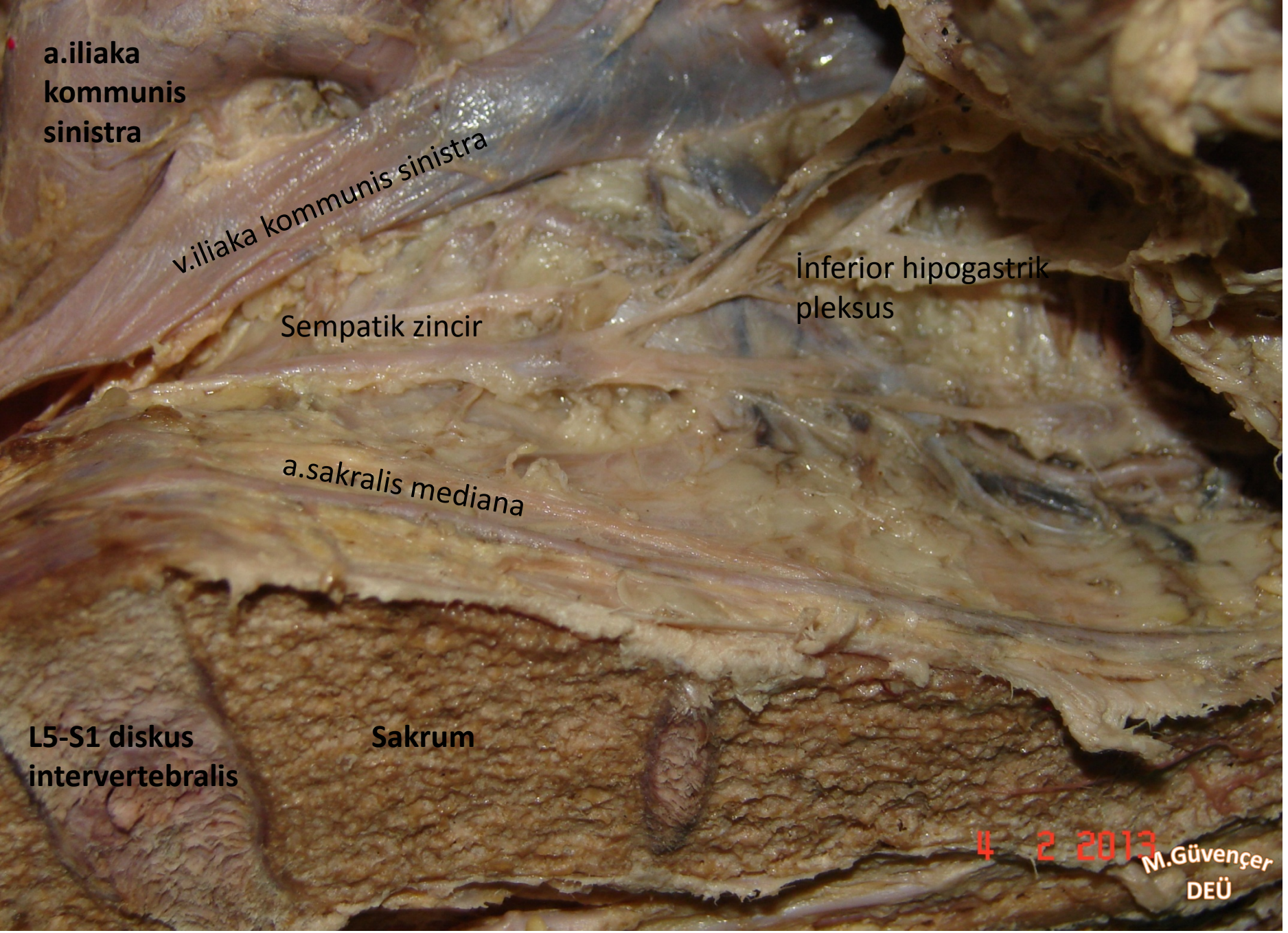

rektum
mezorektum
periton
Fasya
propria rekti
üreter
a.v.testikularis
a.rektalis superior
a.sakralis mediana
v.rektalis superior
18 10 2013
M.Güvençer
DEÜ


üreter
v.rektalis superior
asm
a.rektalis superior
Fasya
propria rekti
periton
mezorektum
rektum
mesane
Simfizis pubis
M.Güvençer
DEÜ

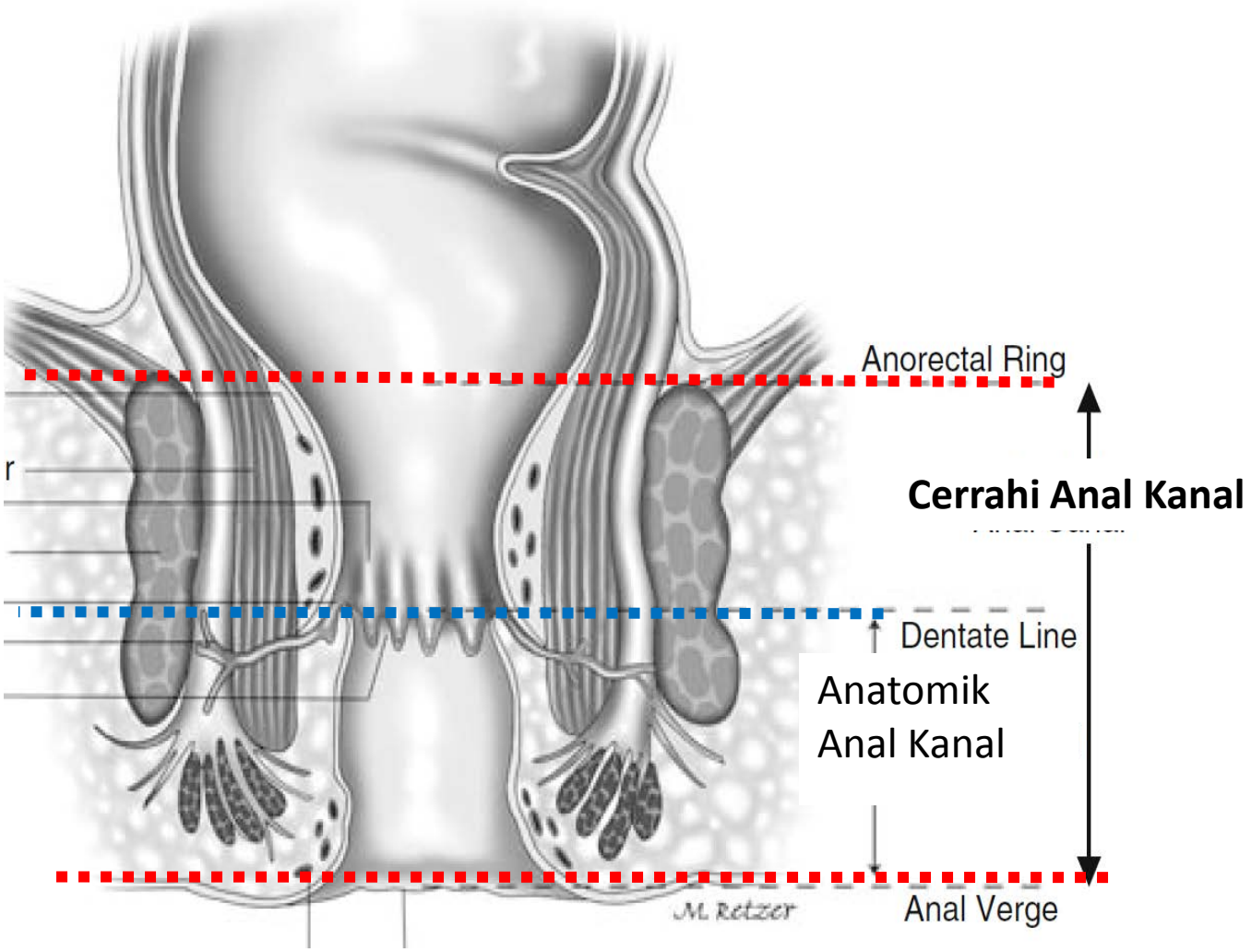
Presakral boşlukta yer alan yapılar



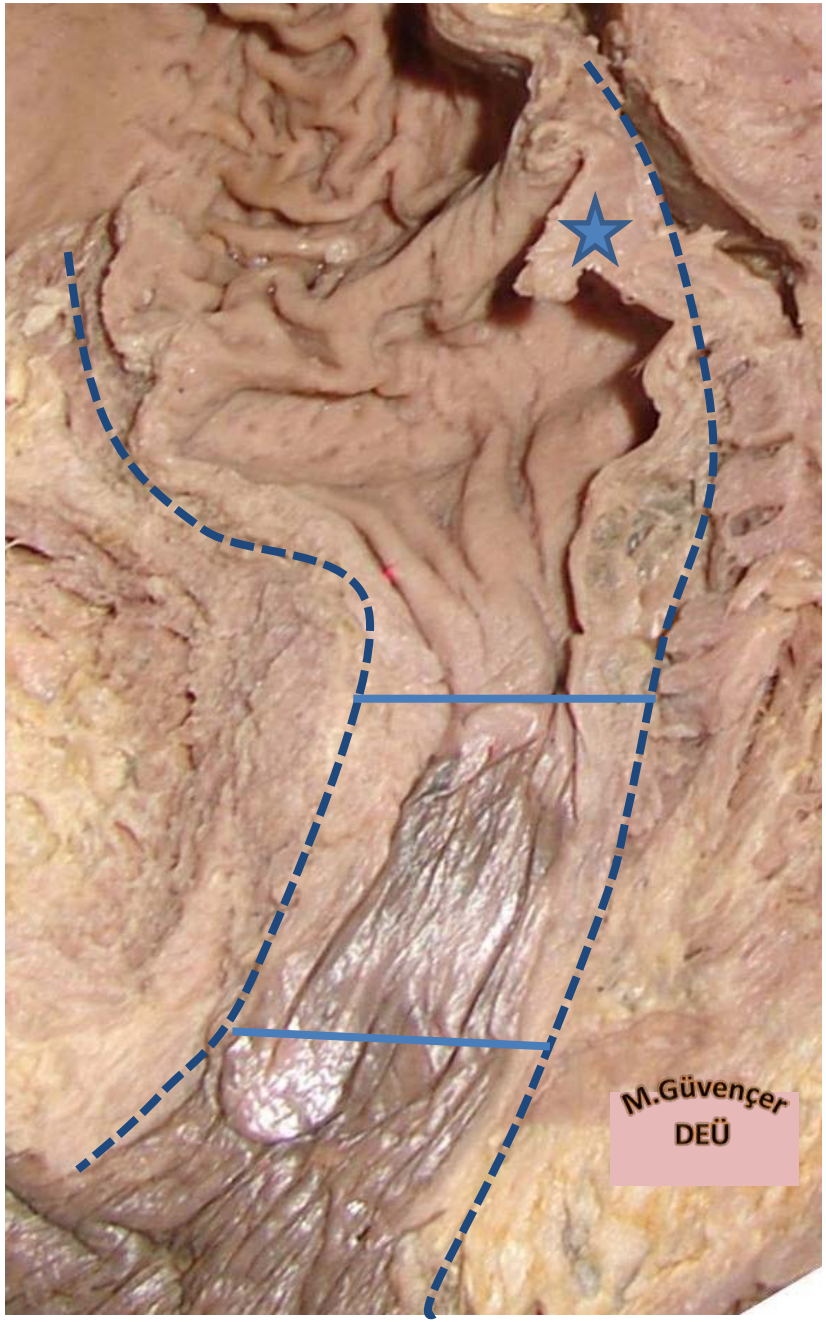

promontoryum
a.sakralis mediana
Sempatik zincir
a.iliaka interna
a.sakralis lateralis
M.Güvençer
DEÜ


a.iliaka kommunis sinistra
v.iliaka kommunis sinistra
İnferior hipogastrik pleksus
Sempatik zincir
a.sakralis mediana
L5-S1 diskus intervertebralis
Sakrum
4 2 2013
M.Güvençer
DEÜ

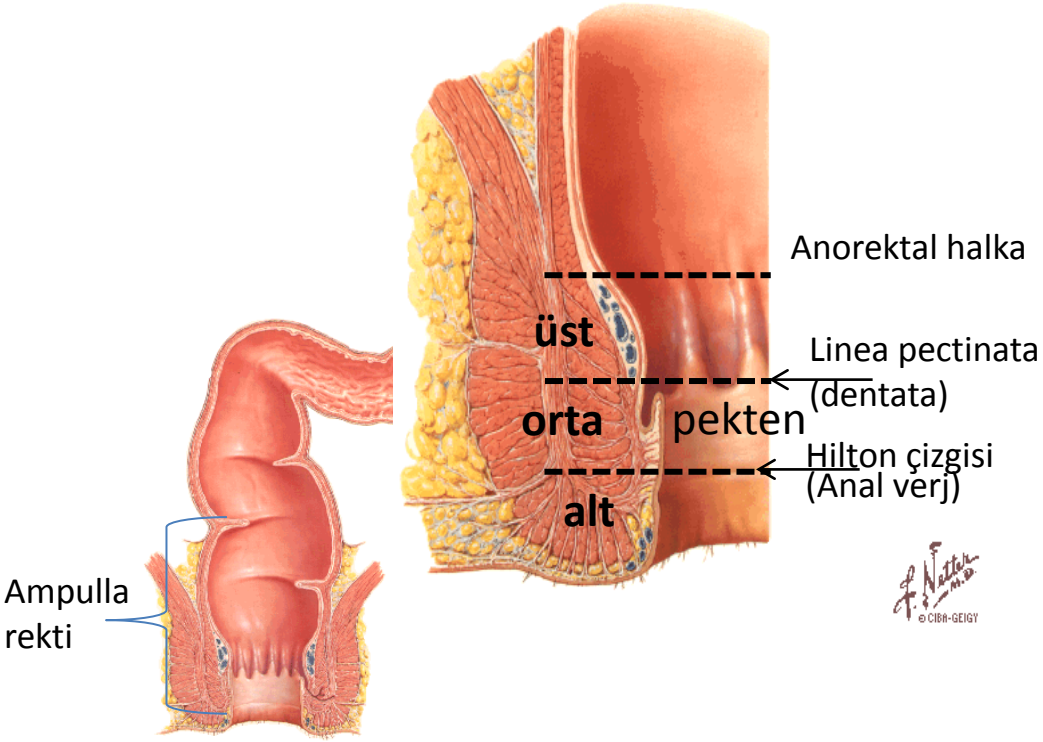
Anal Kanal


Anorectal Ring
Cerrahi Anal Kanal
Dentate Line
Anatomik
Anal Kanal
Anal Verge
M. Retzer

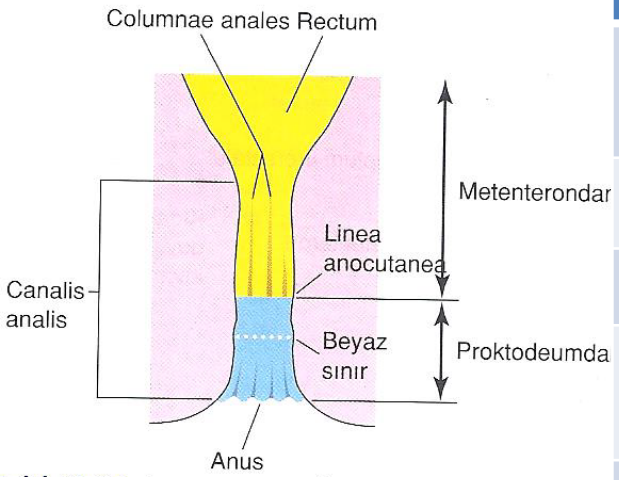
Rektum ve Anal Kanalın iç yüzeyi



- **Plika transversi rekti (**Houston valvleri) (plikaları)
- Morgagni kripti
- Morgagni kolonları
- İç hemoroidal pleksus
- Anal bezler
- Pekten analis: transisyonel mukoza



Linea dentata (anokutanea)'nın üst ve altı arasındaki farklar

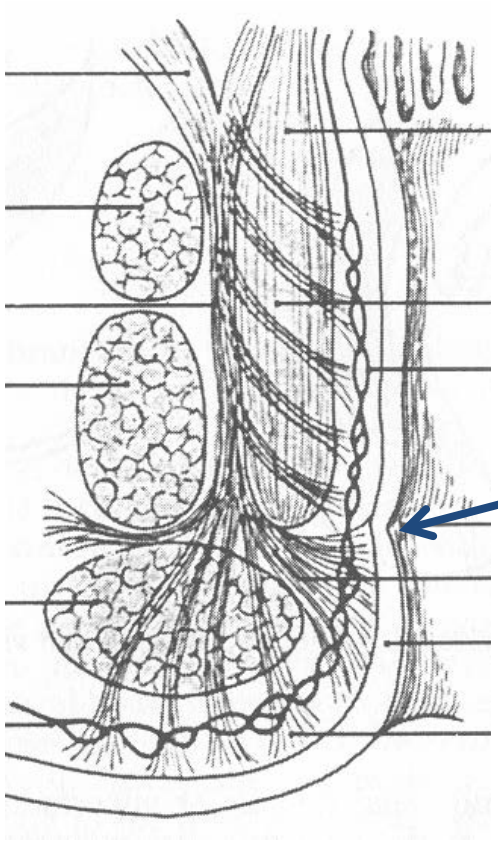


Moore&Persaud İnsan Embriyolojisi

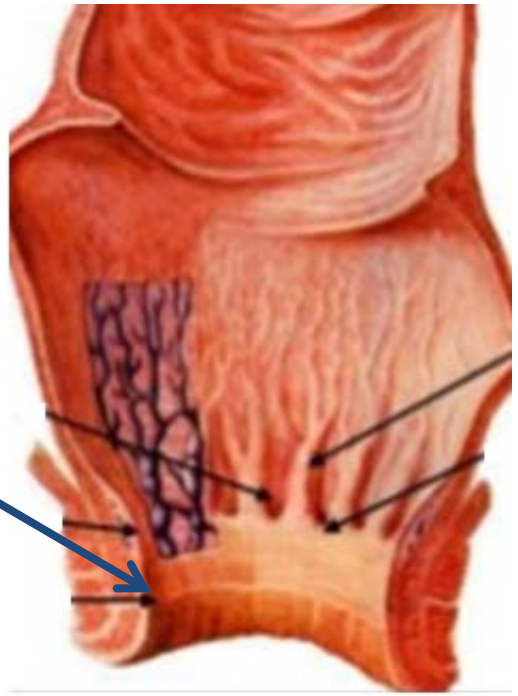
	Linea pectinata'nın üstü	Linea pectinata'nın altı
Embriyolojik köken	Metenteron Endoderm	Proktodeum Ektoderm
Epitel	Basit kolumnar	Çok katlı yassı
Arteriel kanlanma	a.rektalis superior	a.rektalis inferior
Venöz drenaj	v.rektalis superior (portal)	v.rektalis inferior (sistemik)
Lenfatik drenaj	Pelvis içi	İnguinal bölgeye
İnnervasyon	Otonomik lifler	n.rektalis inferior

Anal verj

Hilton’un beyaz çizgisi

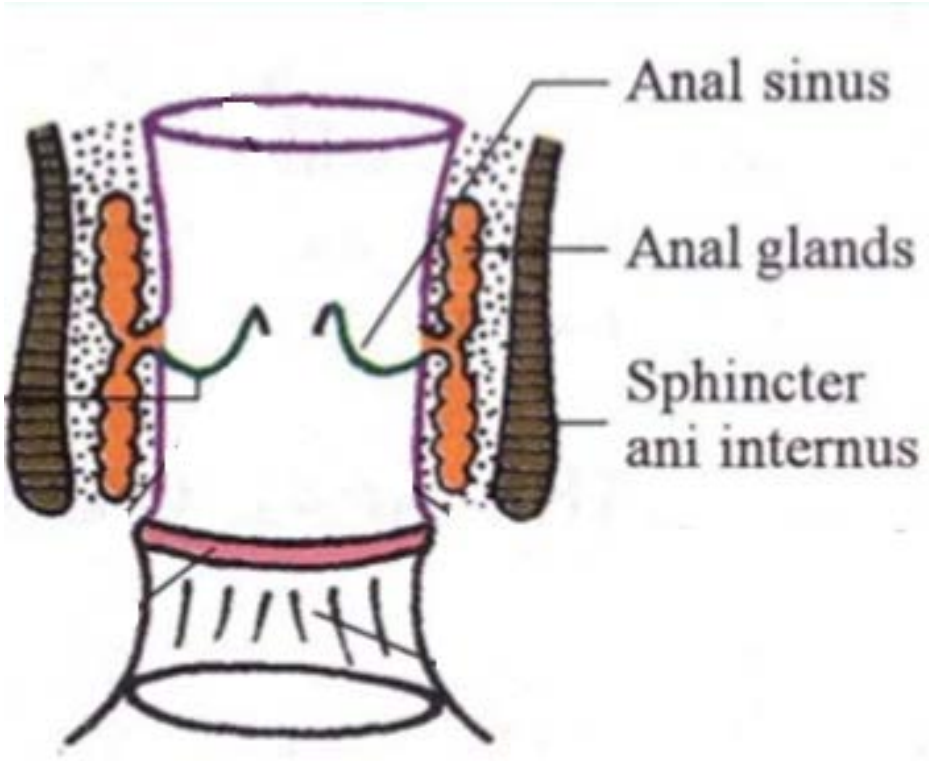


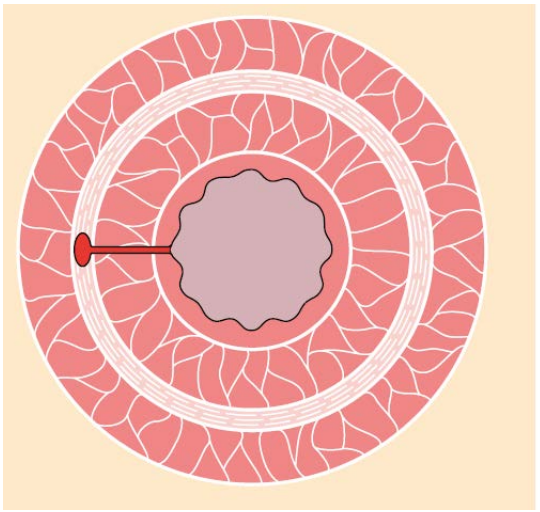
Anal verj



- İnternal sfinkterin alt sınırıdır.
- İskioanal abseler, anal kanala, bu çizgide ya da altında açılır.

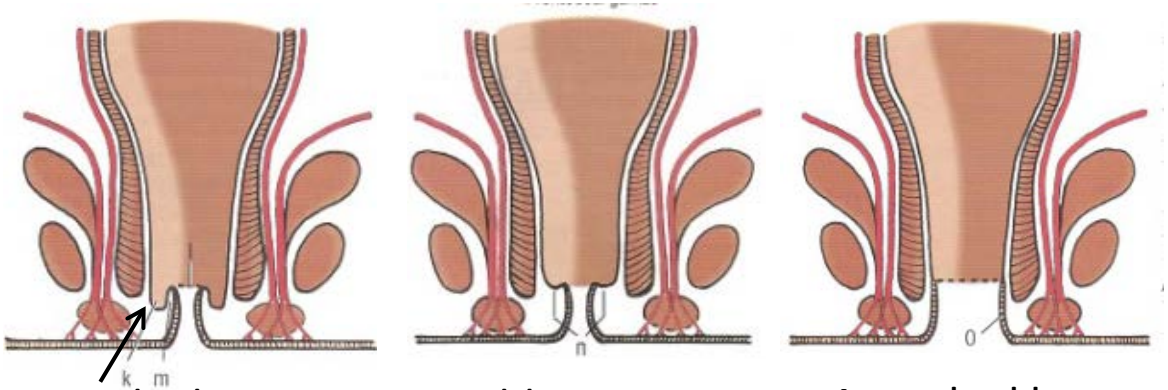
Anal bezler



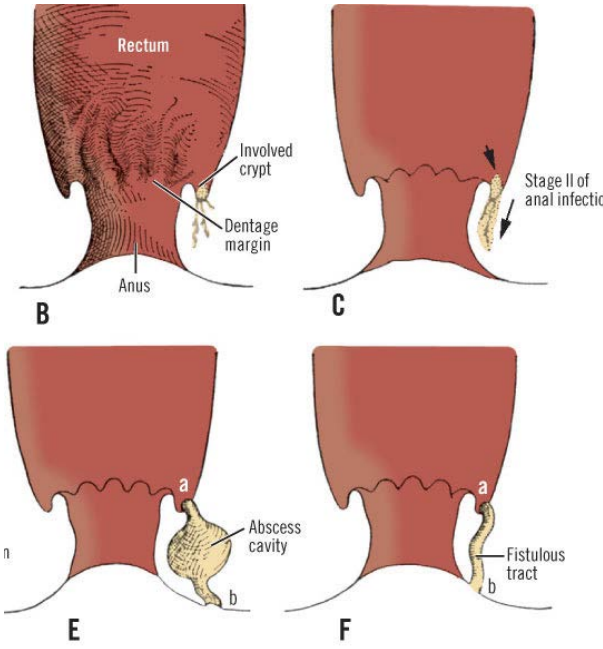


Anal bezlerin kriptaya açılan duktusu tıkandığında, bezde infeksiyon oluşur. (**abse, fistül)**

Anorektal Sinus, Anorektal Bant



Anorektal sinus Obliterasyon Anorektal bant



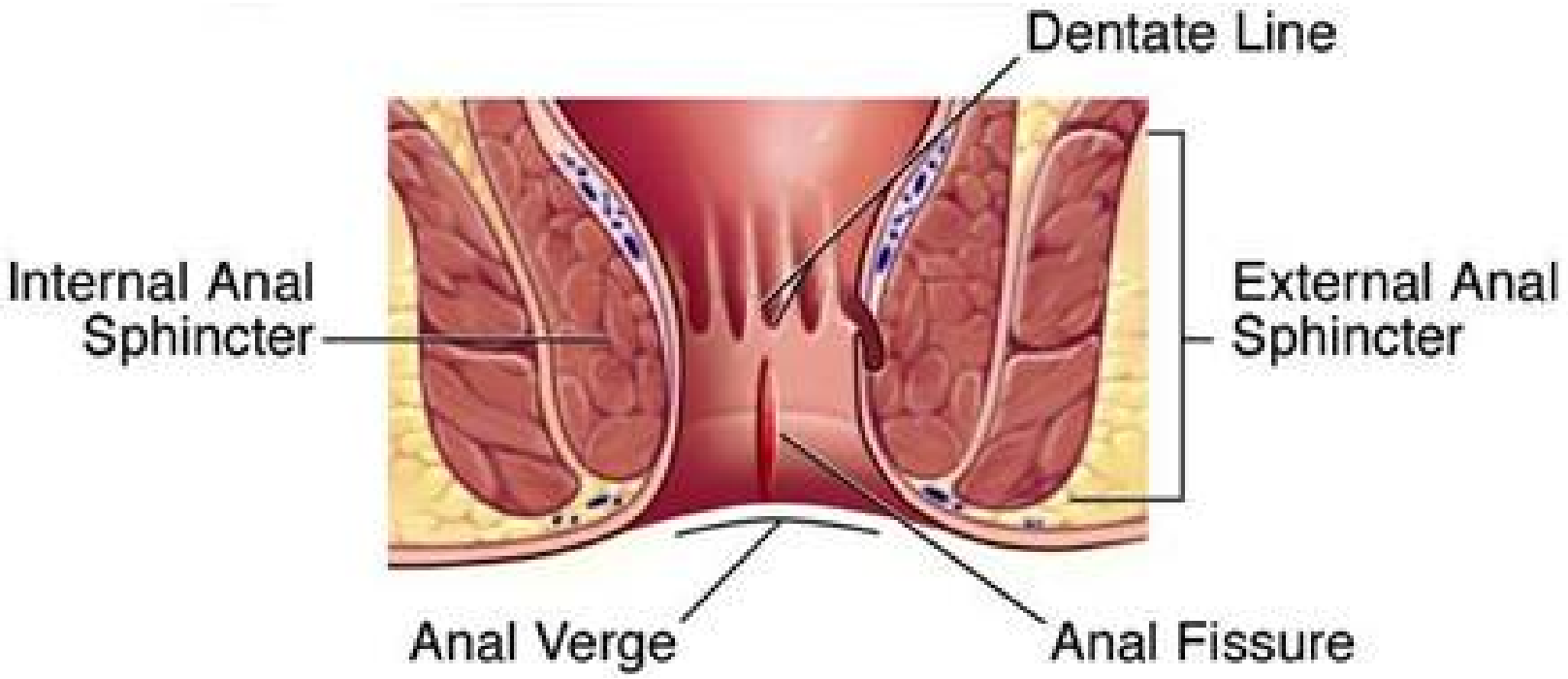
Surgical Anatomy, Skandalakis

- **Anorektal sinüs**ün devamlılığı ya da **anorektal bant,**

perirektal abse, fistül, fissür, prüritis ani, hemoroid ve kist gibi pek çok idiopatik rektal patogenezin açıklanmasında yardımcı olabilir.

Anal fissür

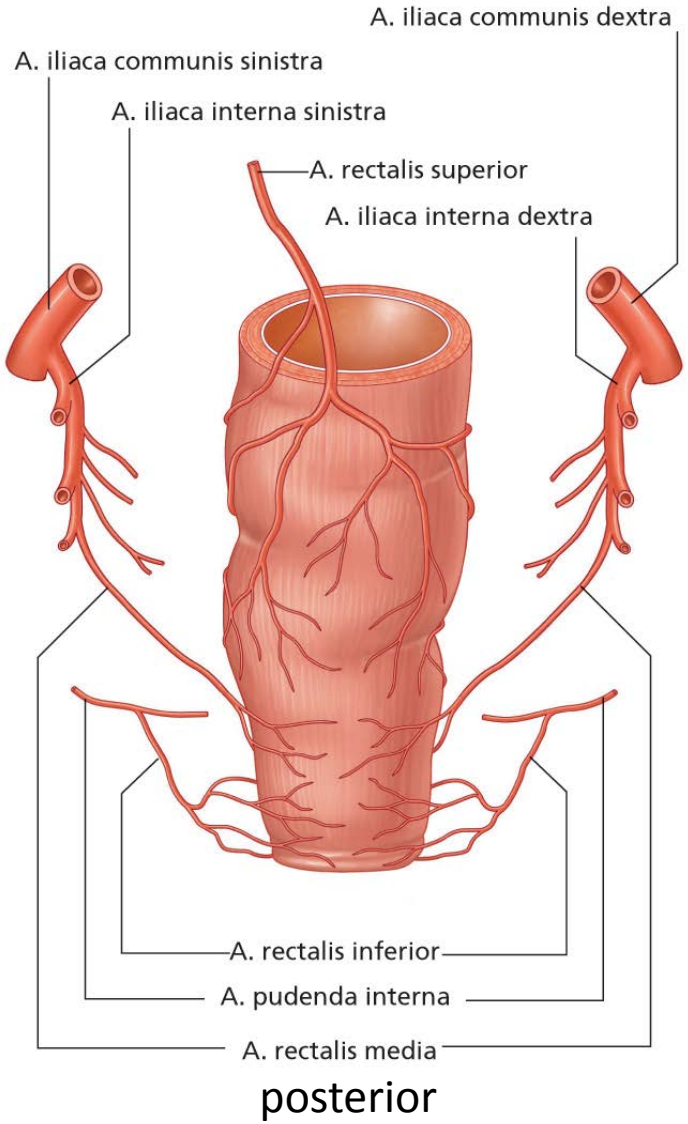
- Anal kanalın posteriorunun;
  - yüzeyi daha zayıf
  - Kanlanması azdır.
- Embriyolojik anorektal sinus kalıntılarının yer alması durumunda
- çoğunlukla linea dentata-anal verj arasında olur.



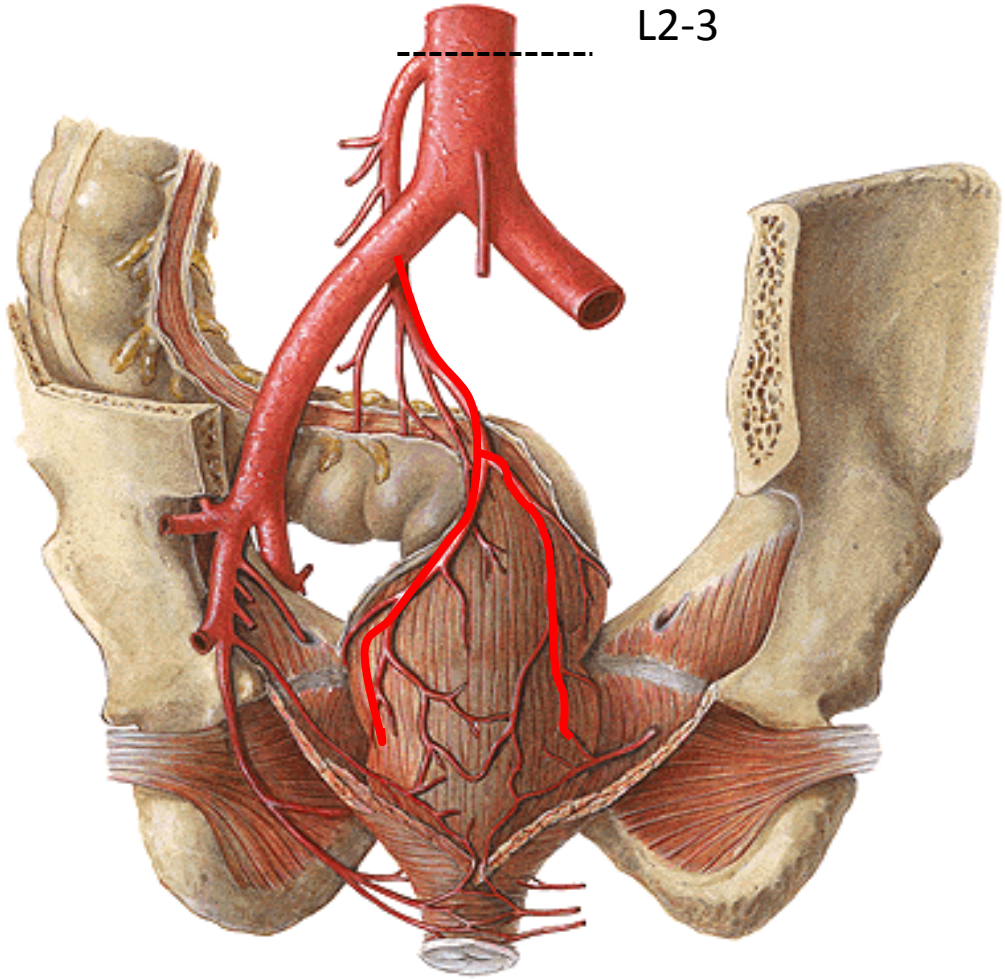
Anorektal Bölgenin Kanlanması

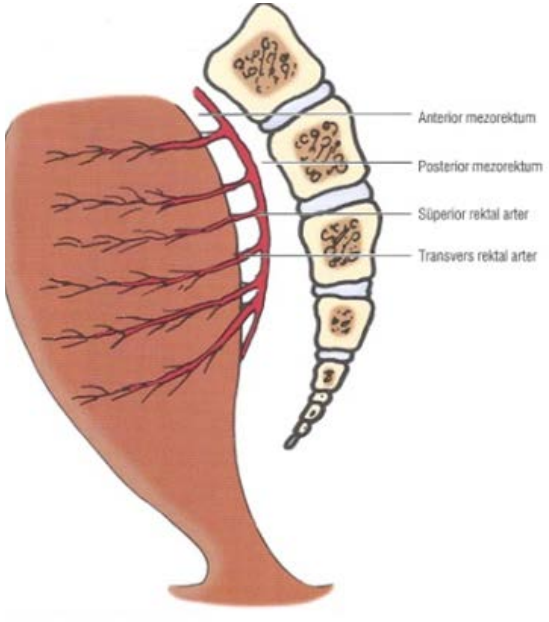
- **A.rektalis superior**
- **A.rektalis media**
- **A.rektalis inferior**

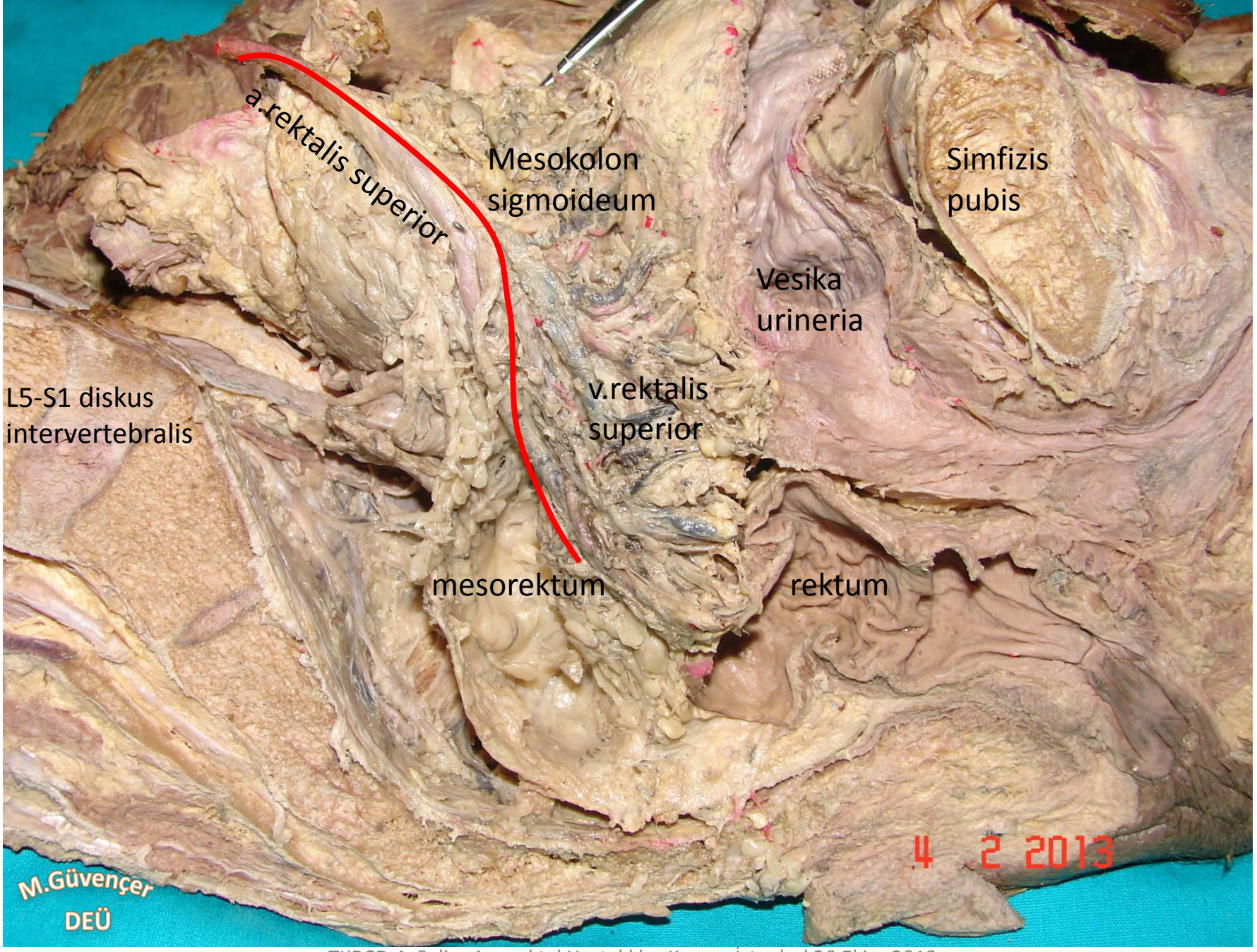
- A.sakralis mediana

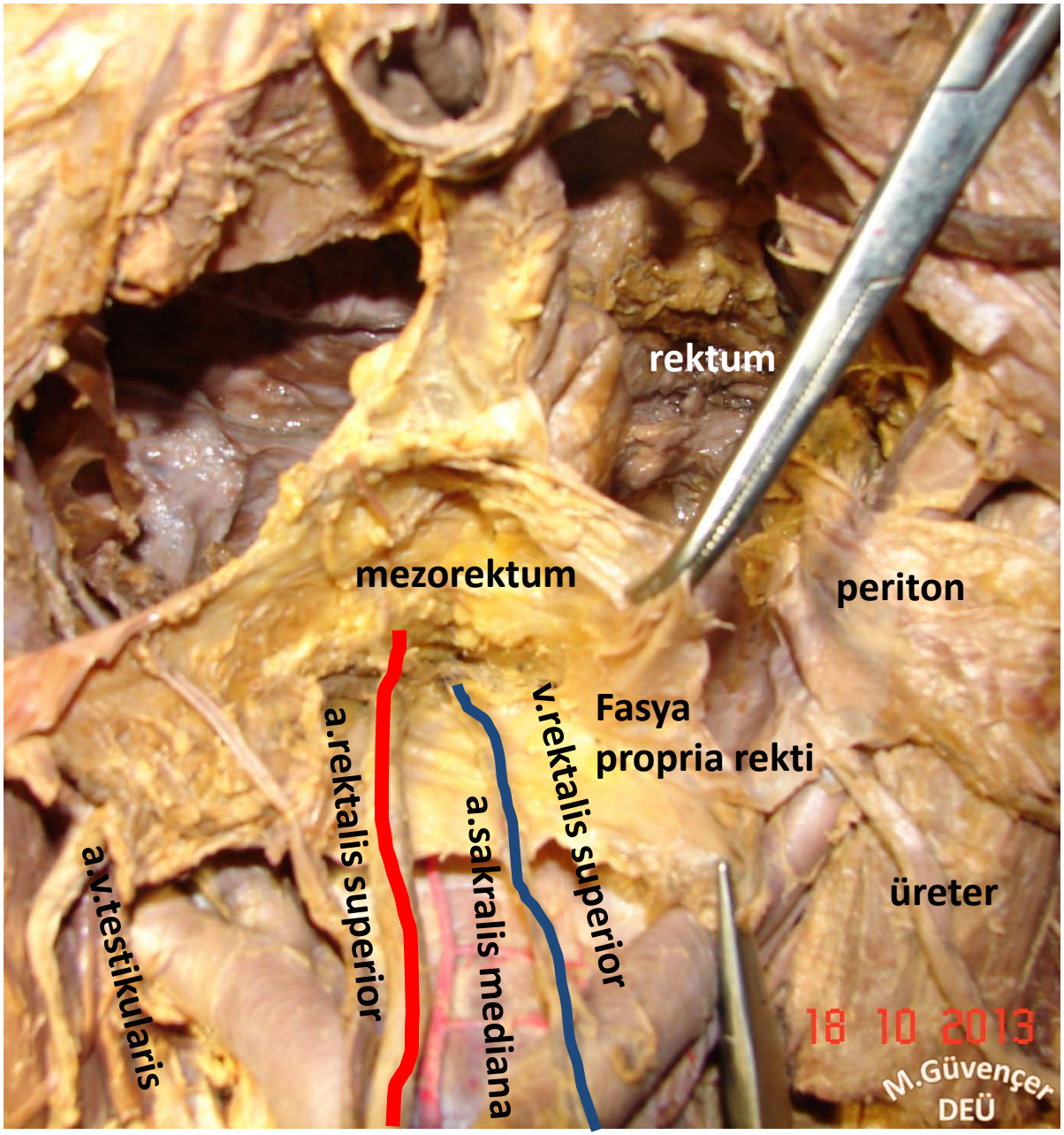


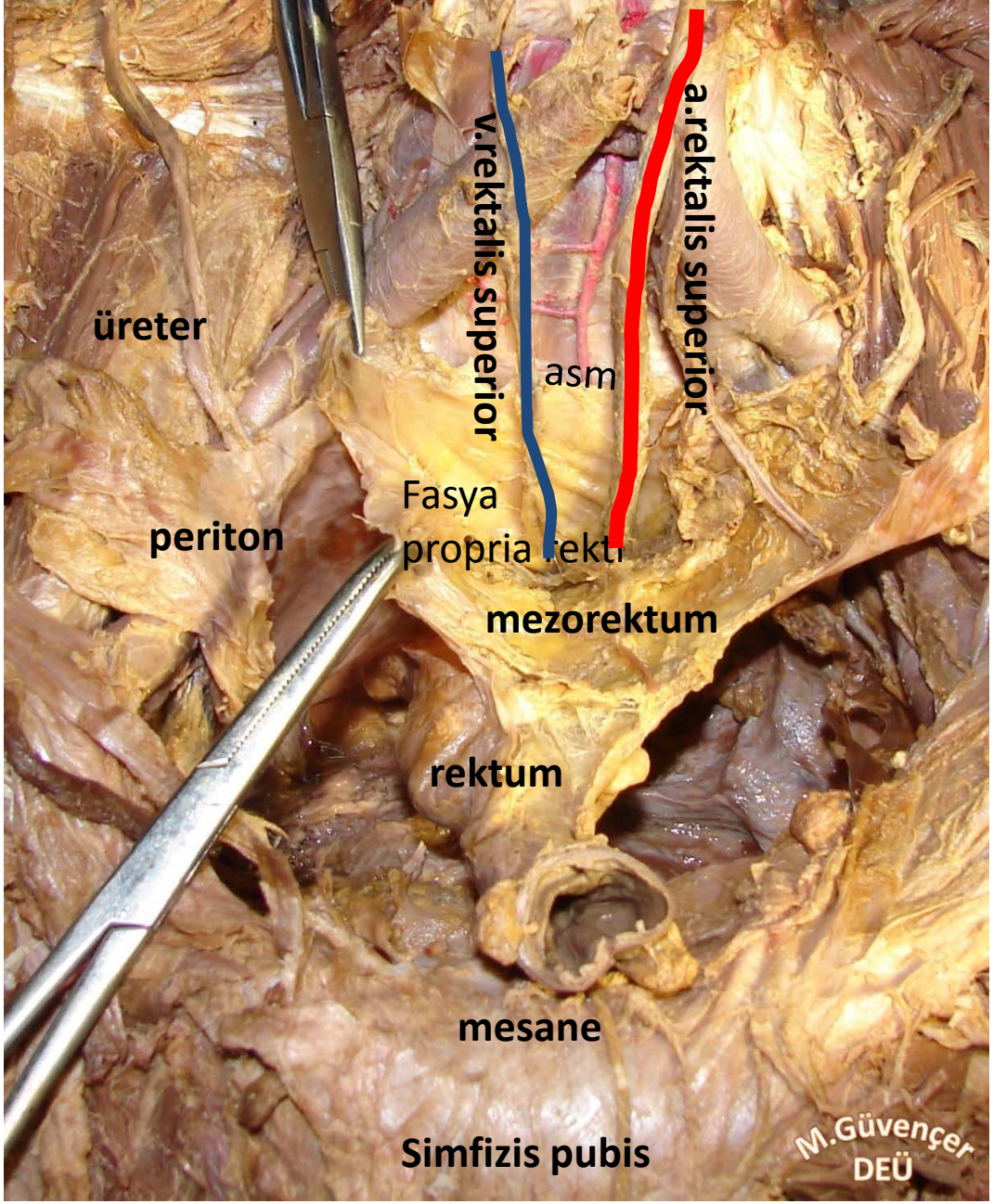
a.rektalis superior
(superior hemoroidal arter)



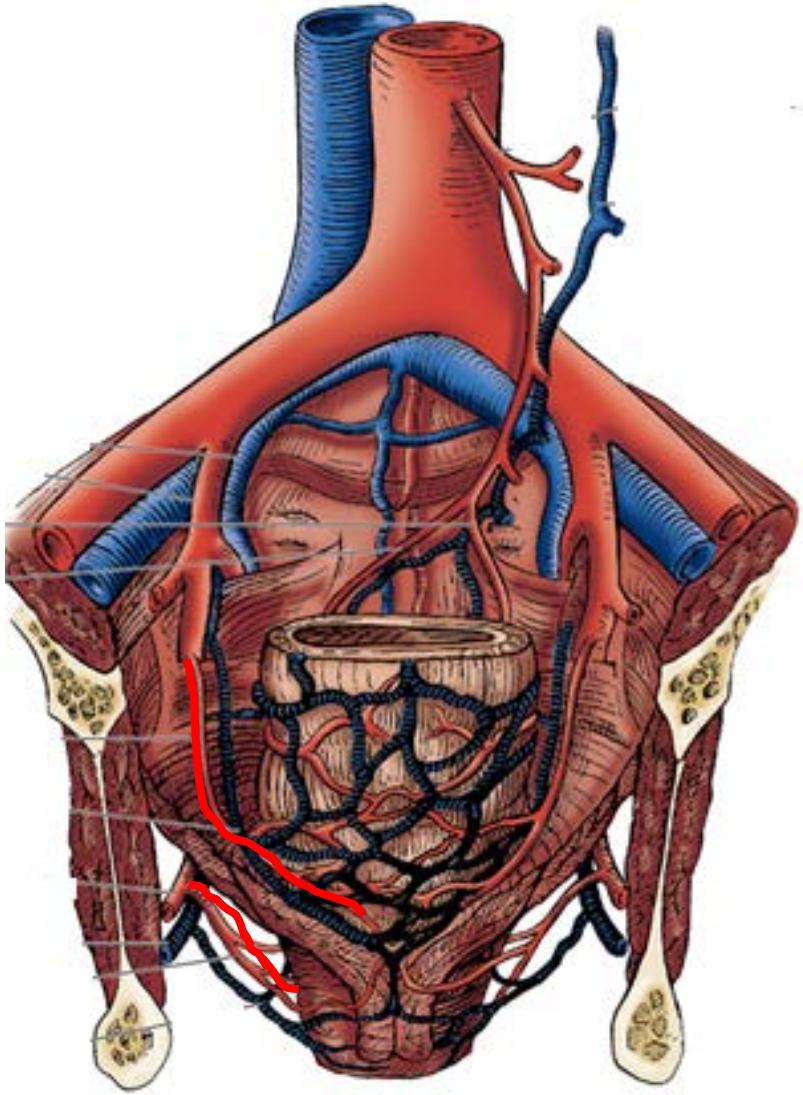



a.rektalis superior
Mesokolon sigmoideum
Simfizis pubis
Vesika urineria
L5-S1 diskus intervertebralis
v.rektalis superior
mesorektum
rektum
4 2 2013
M.Güvençer
DEÜ

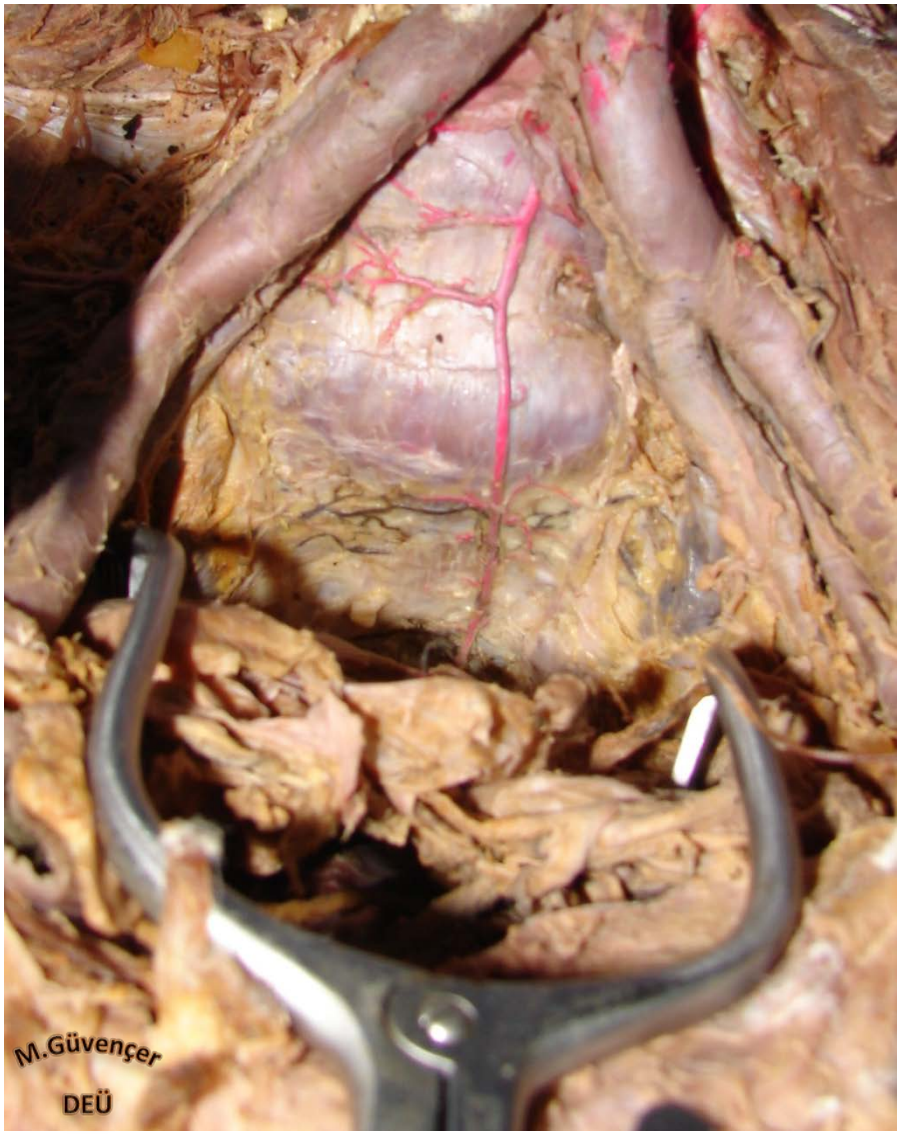

rektum
mezorektum
periton
Fasya
propria rekti
a.rektalis superior
v.rektalis superior
a.sakralis mediana
a.v.testikularis
üreter
18 10 2013
M.Güvençer
DEÜ


v.rektalis superior
a.rektalis superior
üreter
asm
Fasya
propria rekti
periton
mezorektum
rektum
mesane
Simfizis pubis
M.Güvençer
DEÜ

a.rektalis media ve inferior

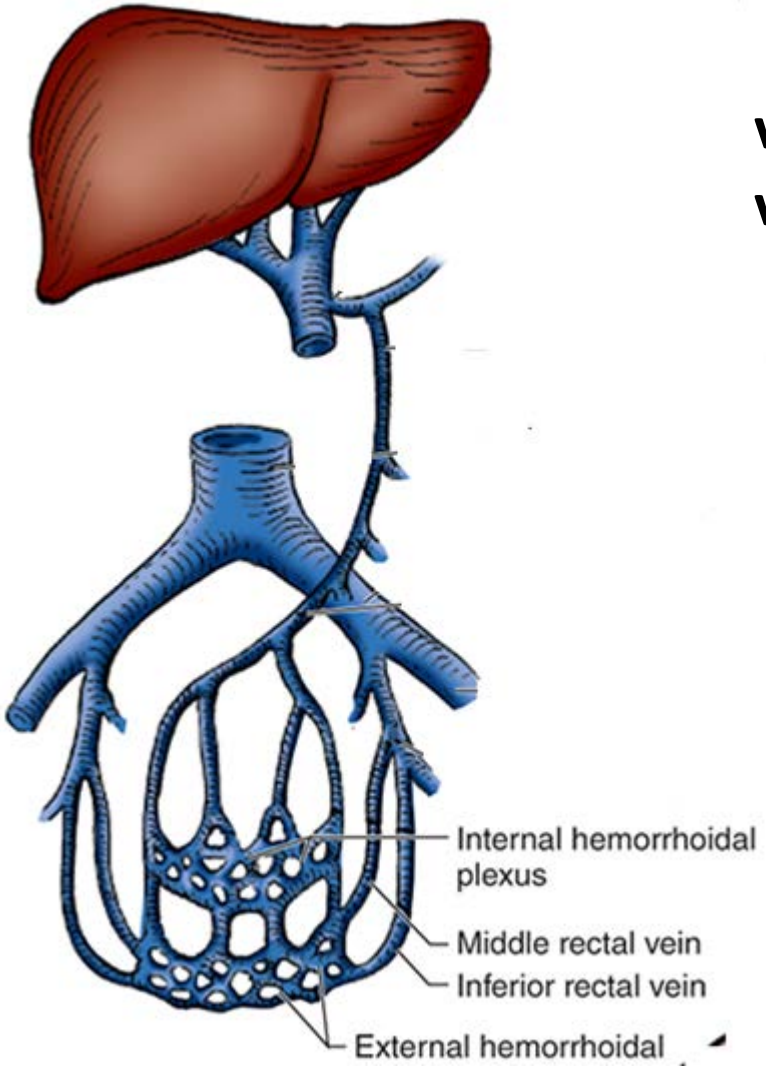


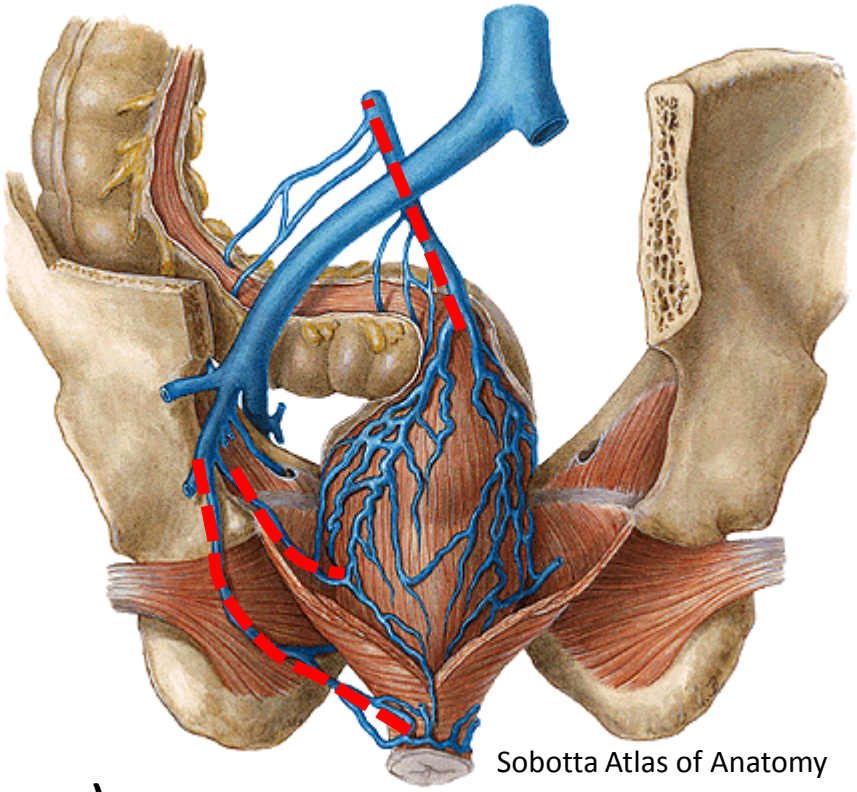
a.sakralis mediana



VENLER

v.rektalis superior
v.rektalis media
v.rektalis inferior





Sobotta Atlas of Anatomy

posterior

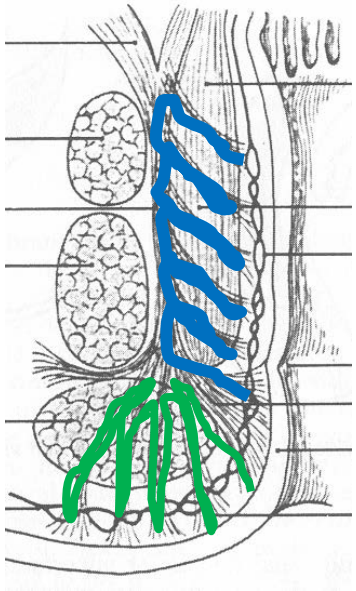
v.rektalis superior-v.rektalis media **(portokaval anastomoz)**

Hemoroidal pleksuslar

- **İç Hemoroidal Pleksus**

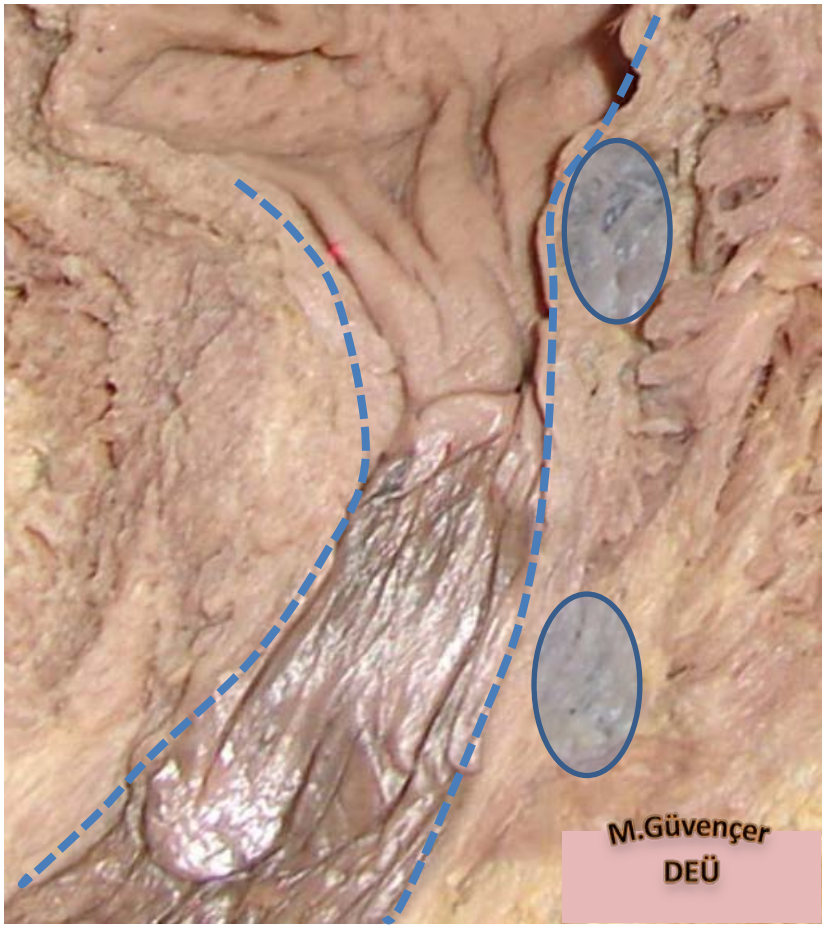
(korpus kavernosum hemoroidalis)

- **Dış Hemoroidal Pleksus**

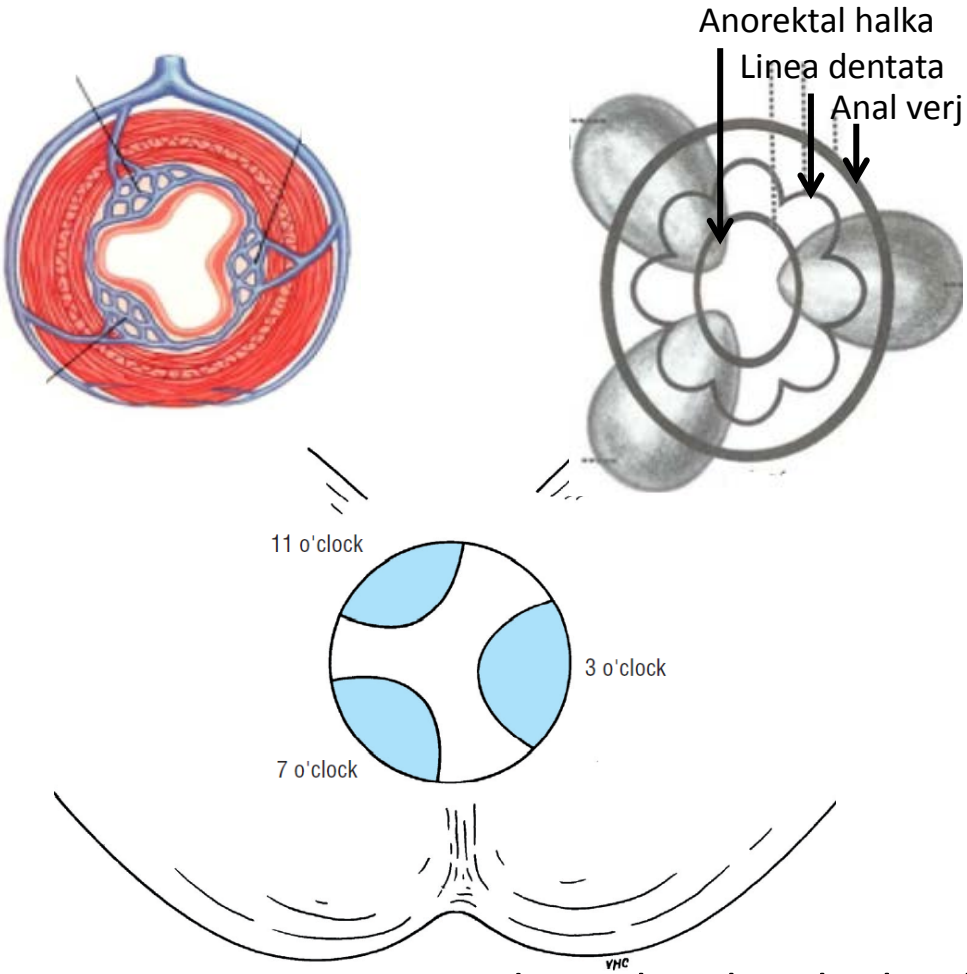


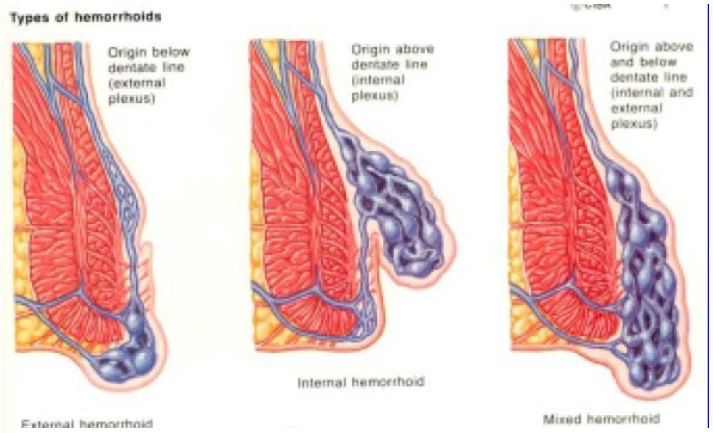
Treitz Ligamenti

Parks ligamenti



Hemoroidal Hastalık





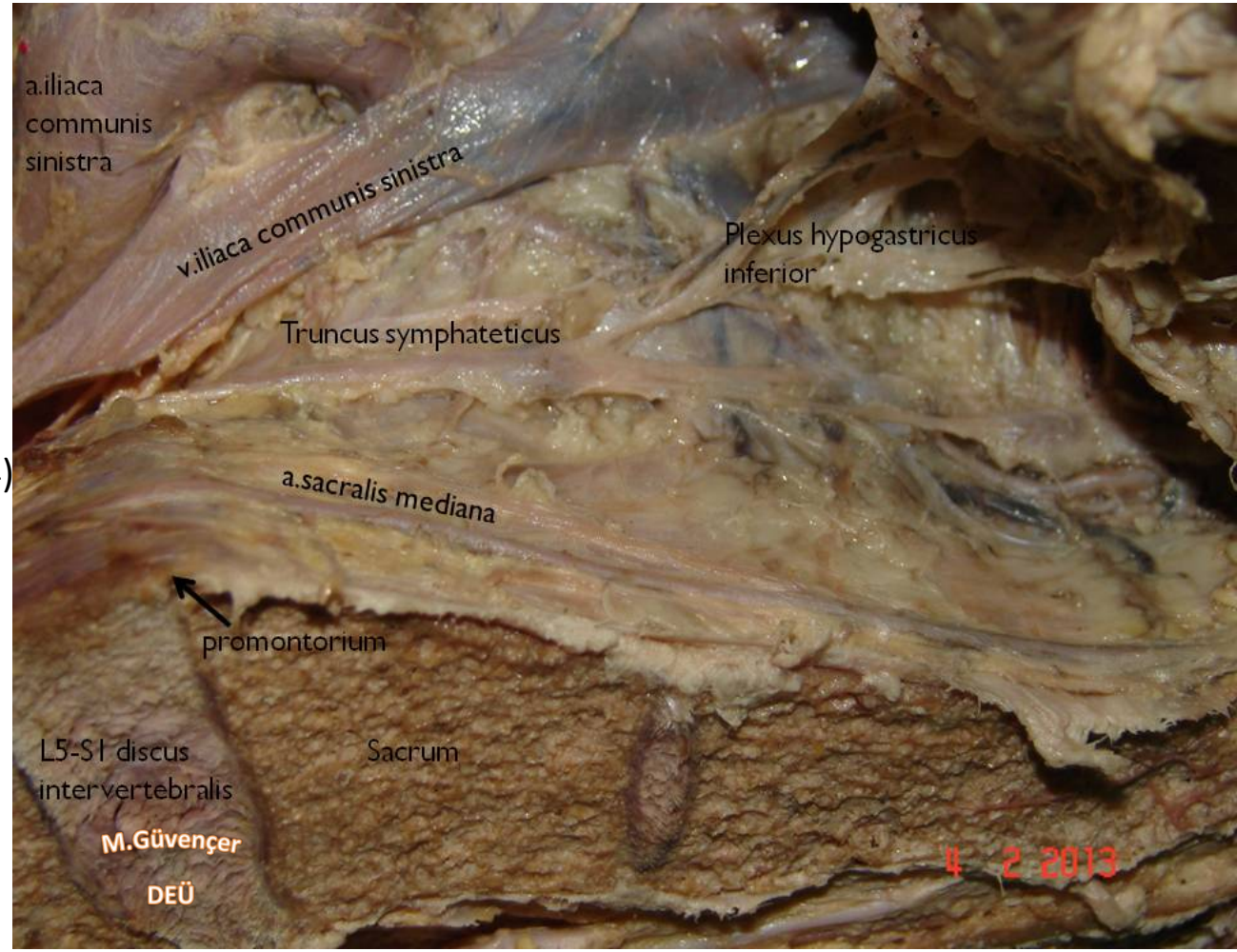
Eksternal İnternal Miks

Fry&Kodner (1985) CIBA

Litotomi pozisyonunda proktoskopik olarak internal hemoroidlerin konumu

Anorektal Bölgenin İnnervasyonu

- Otonomik innervasyon
  - Hipogastrik pleksus
  - Pelvik splanknik sinirler
  - Nervi erigentes (Sakral 2-4)
- N.pudendus (S2-4)
  - N.rektalis inferior
  - R.perinealis



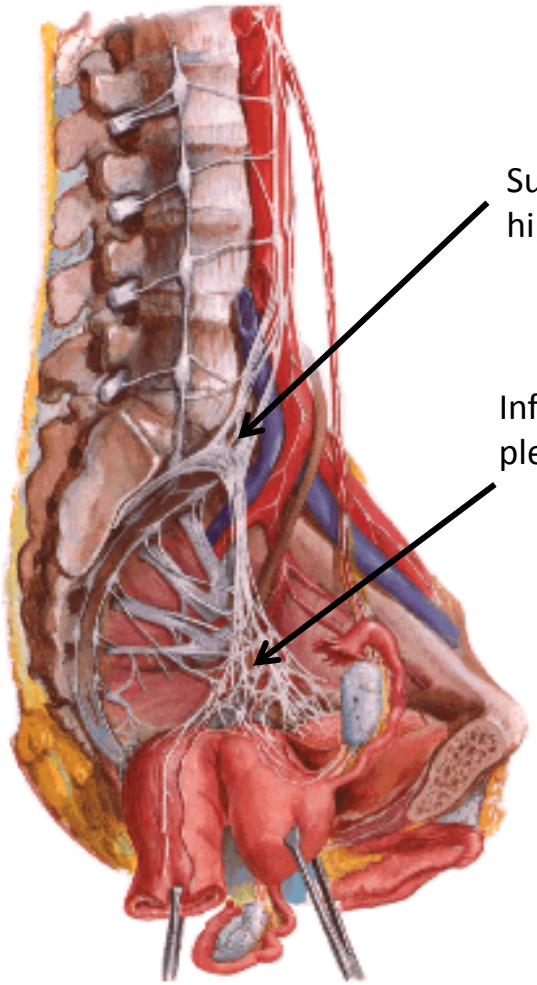
Superior hipogastrik pleksus

İnferior hipogastrik pleksus

Pelvik pleksus

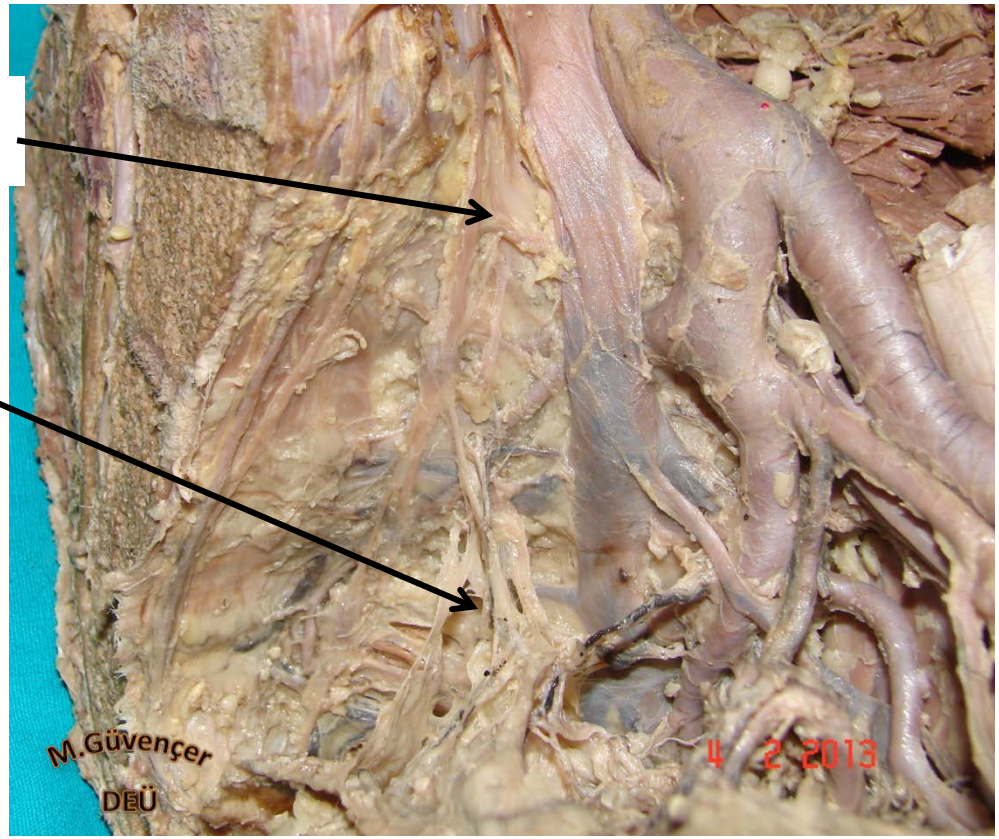
n.erigentesler

Cerrahi işlem sırasında zarar görmesi sonucu: üriner ve genital işlev kaybı olabilir.

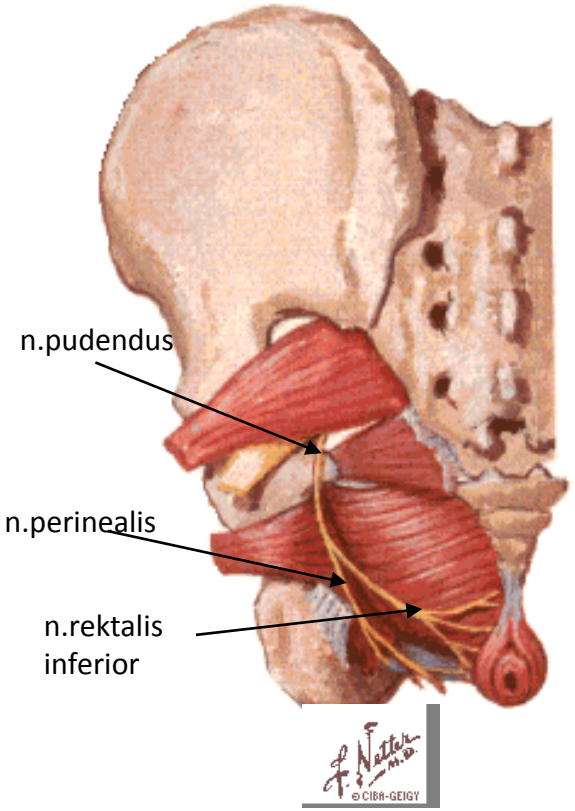


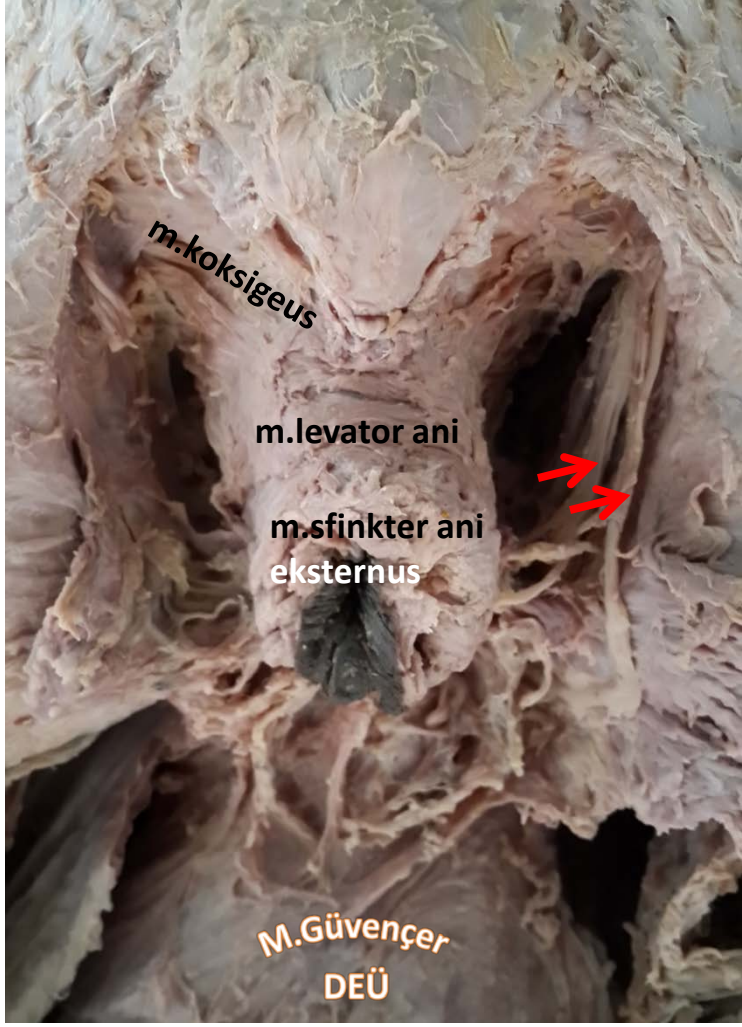
Superior hipogastrik pleksus

Inferior hipogastrik pleksus



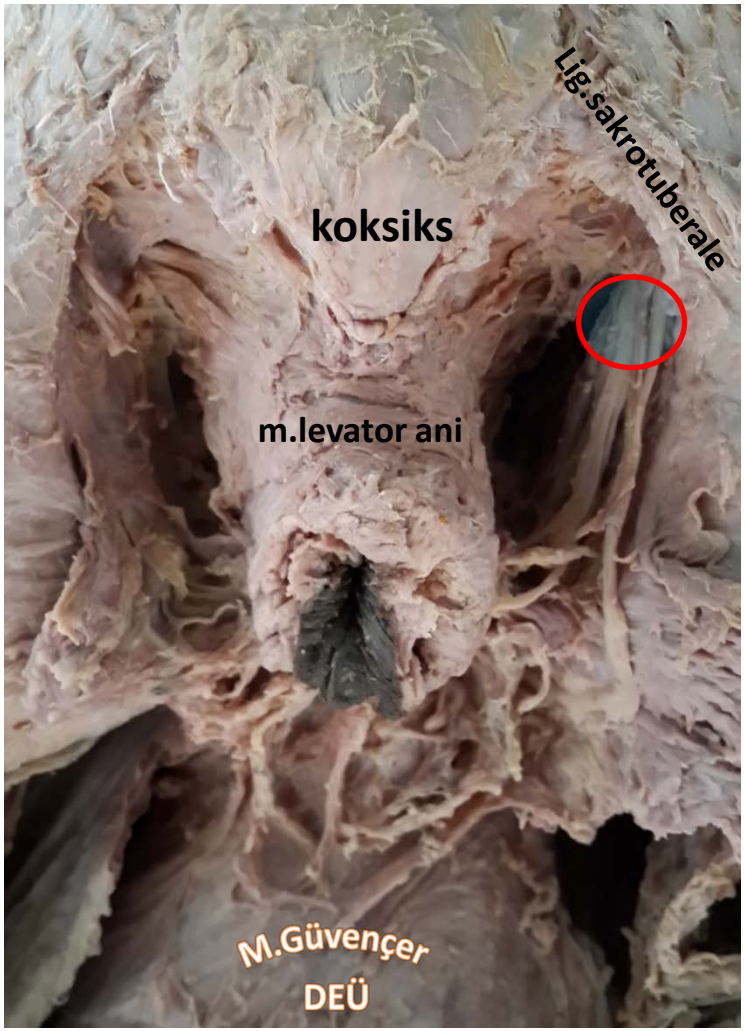
n.pudendus

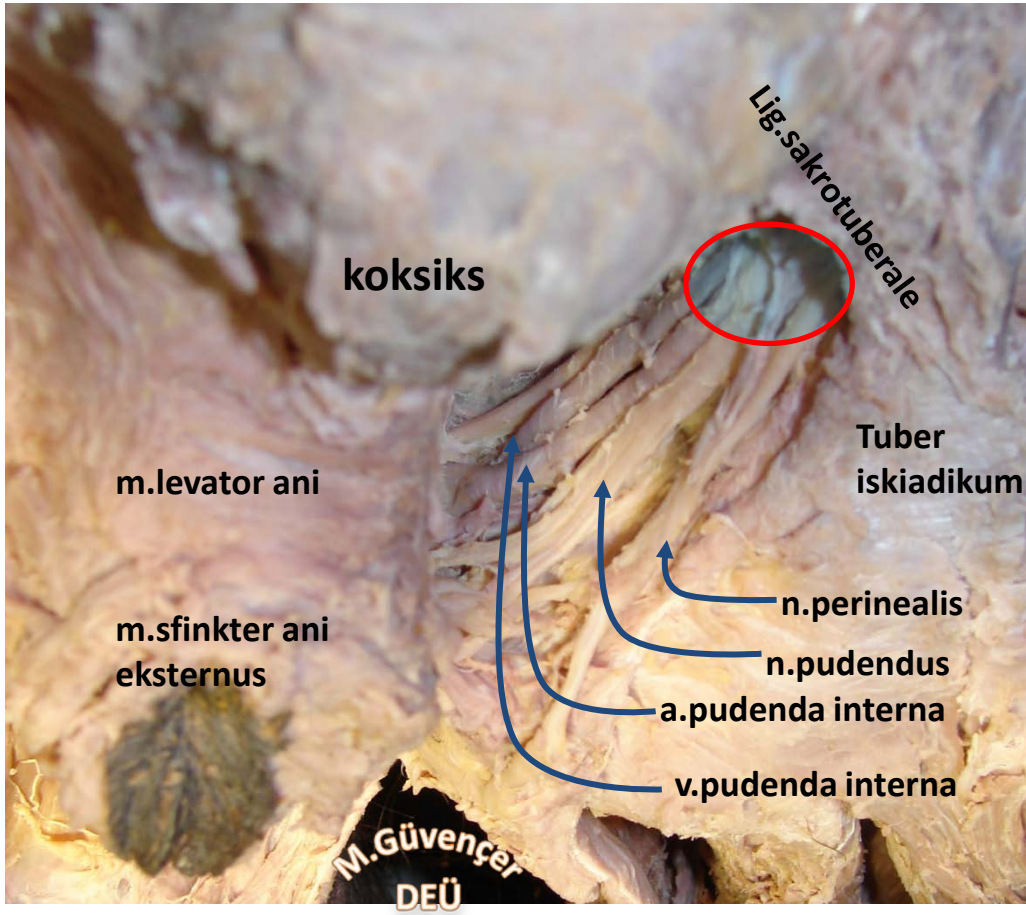




Foramen infrapiriforme ve **Alcock kanalı**'ndan geçer.

- **Muskuler dallar:** m.levator ani, m.koksigeus ve m.sfinkter ani eksternus'a

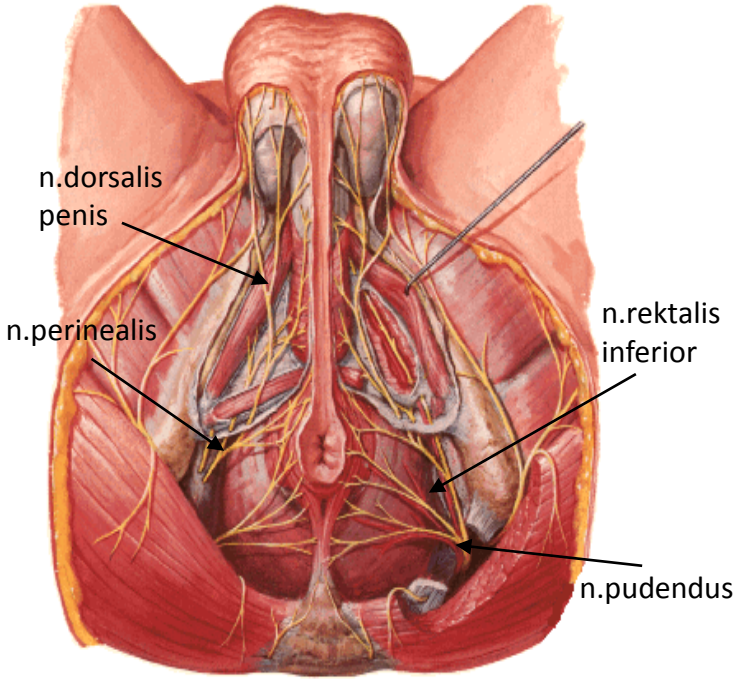


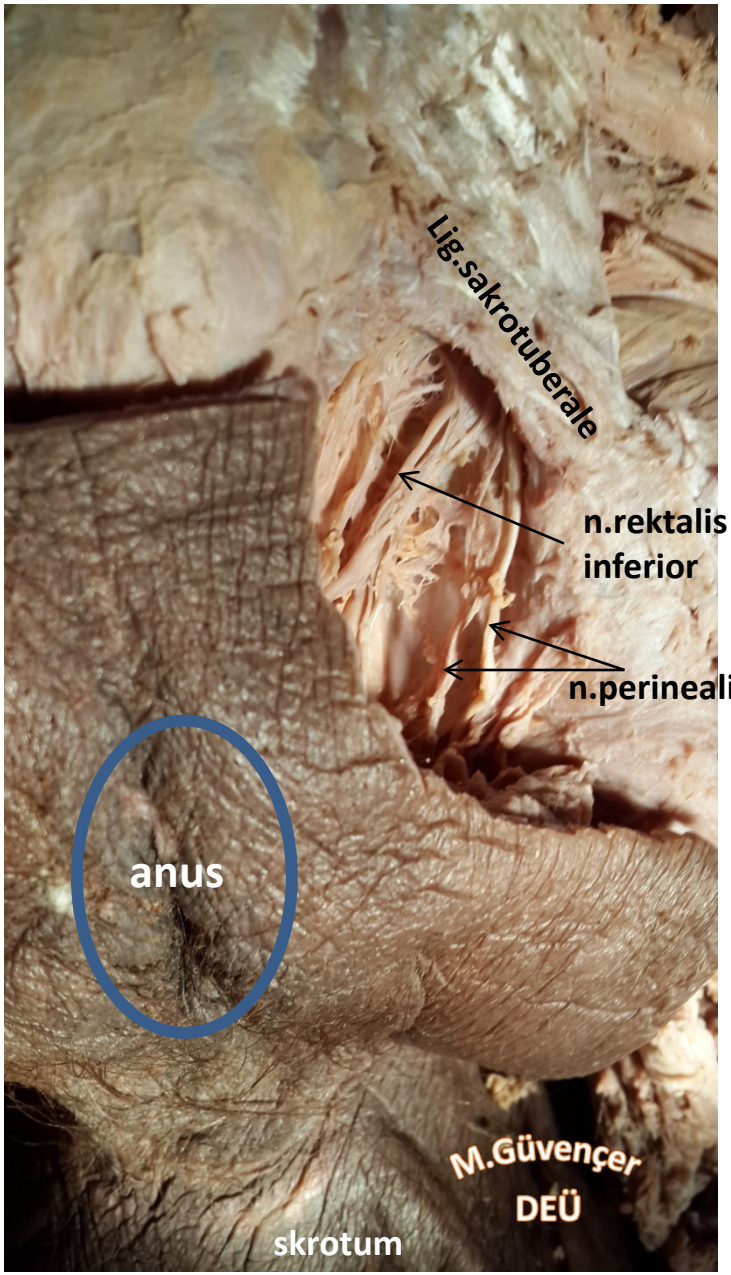


Kanalis Pudendalis (Alcock Kanalı)

- Perineal bölge innervasyonu

  - **N.pudendus duyu dalları:**
    - n.perinealis:
    - n.rektalis inferior:
    - n.dorsalis penis

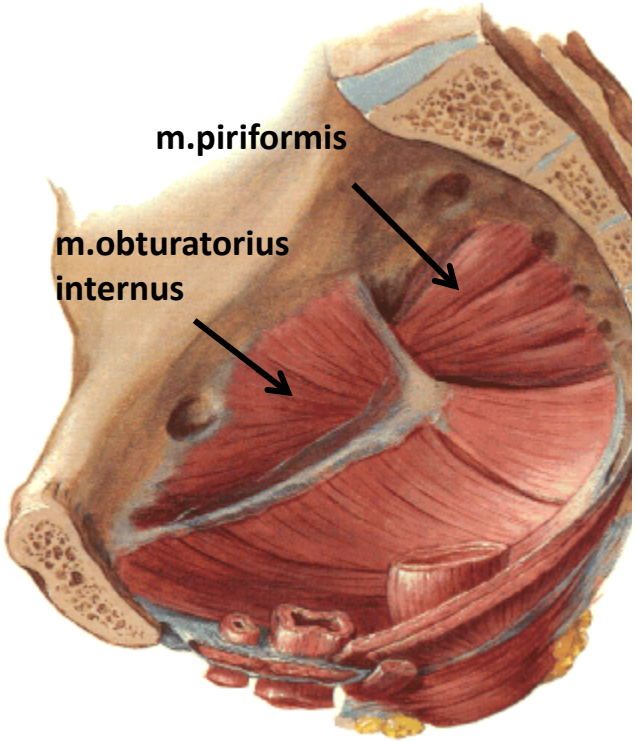


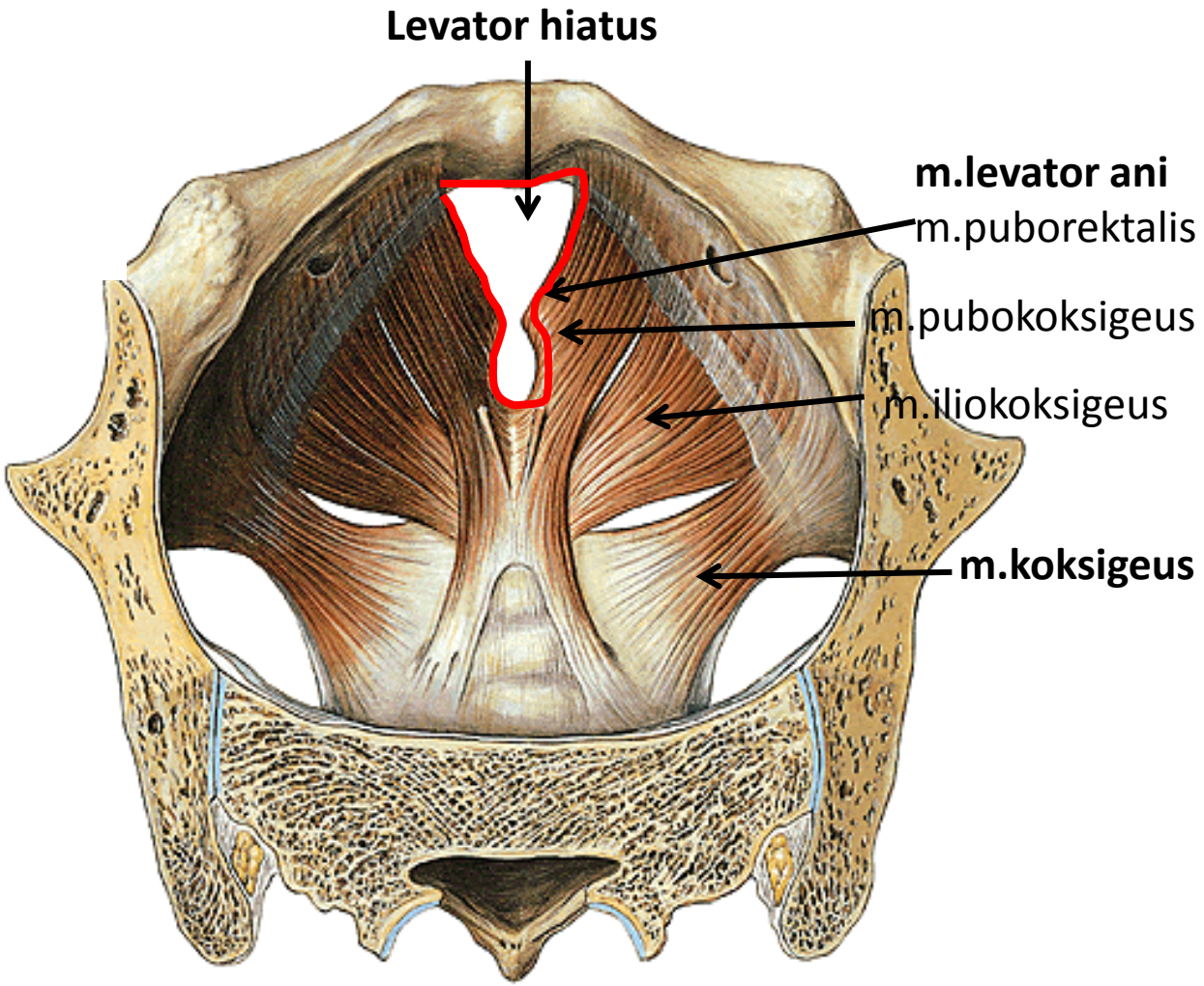


Diafragma pelvis

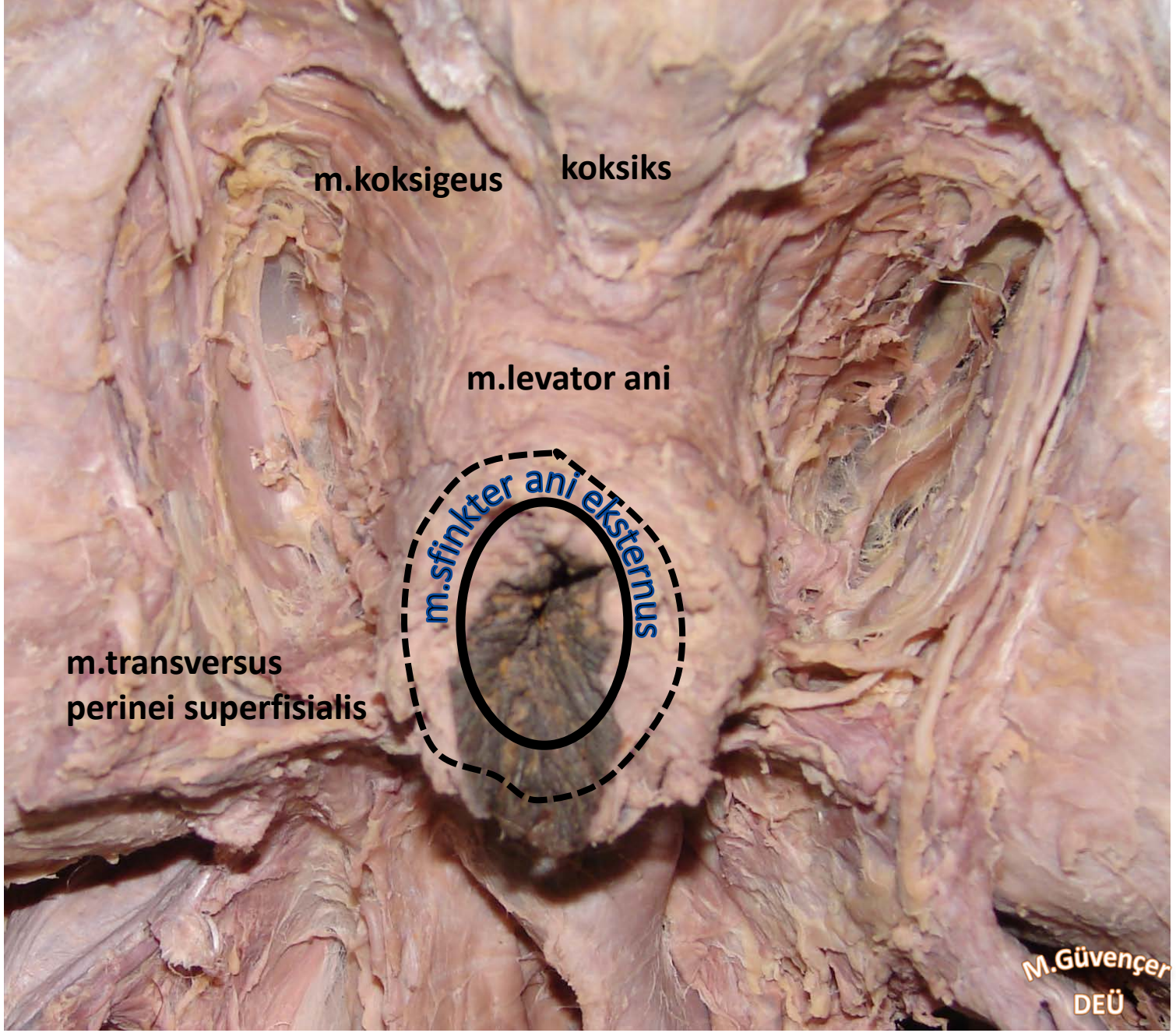
- **M.levator ani**
- **M.koksigeus**

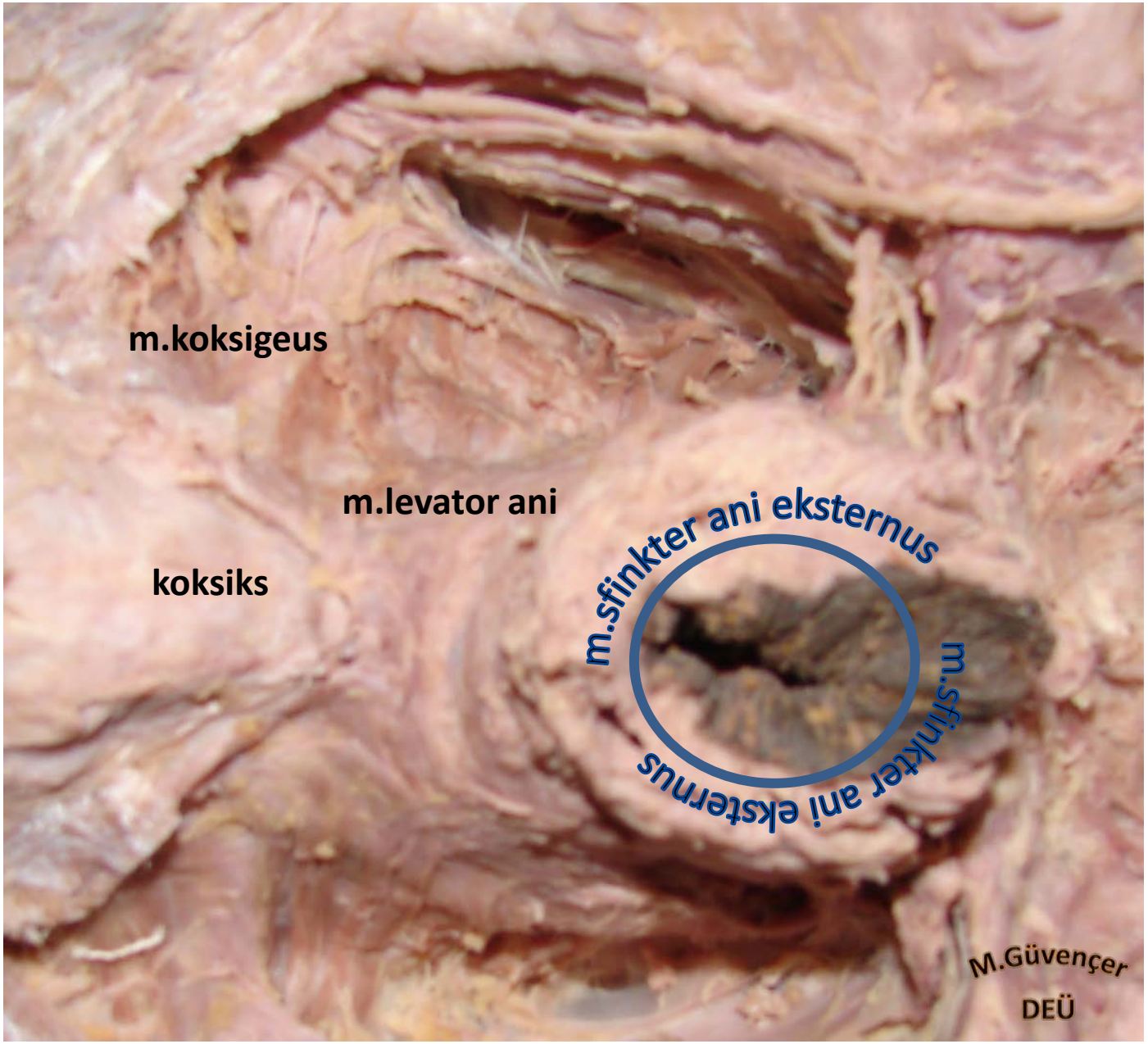
- Diafragma pelvis çevresinde:
  - m.piriformis
  - m.obturatorius internus

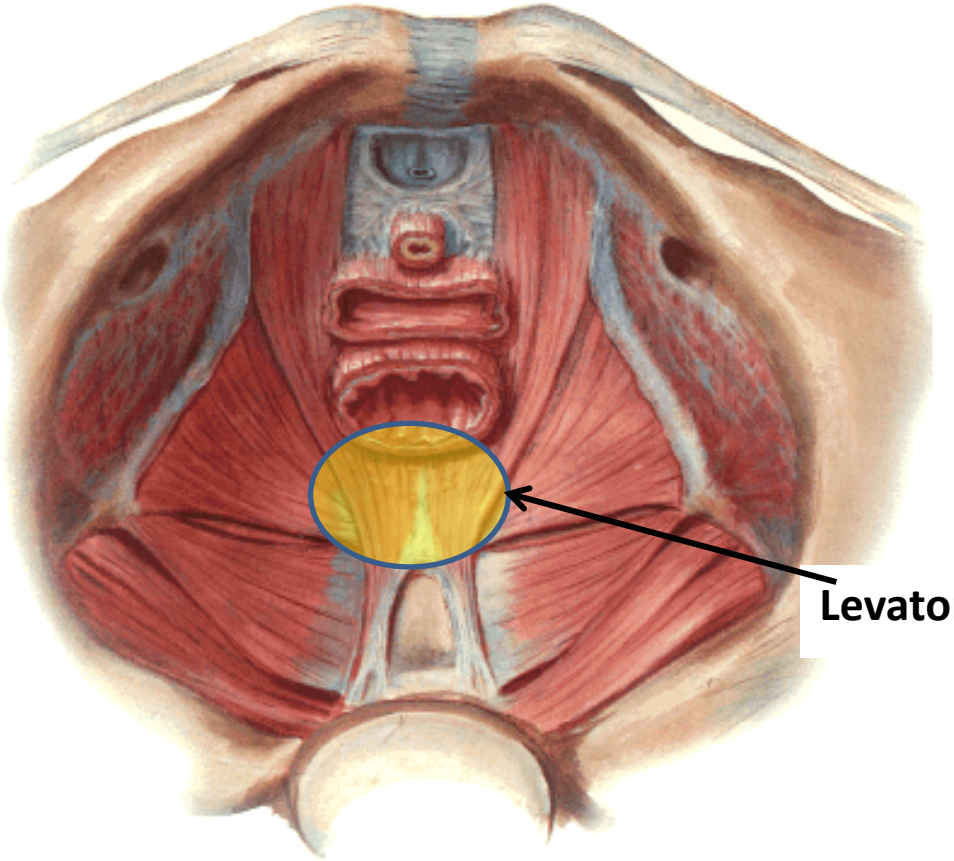


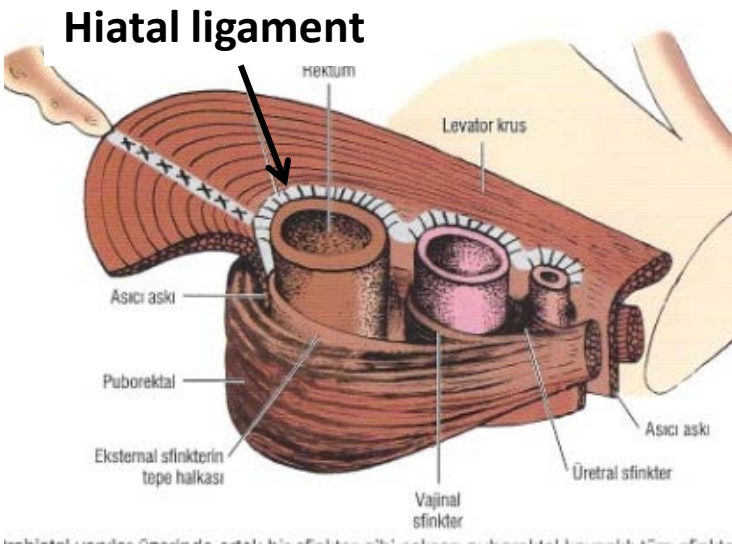


Sobotta atlas of anatomy


m.koksigeus
koksiks
m.levator ani
m.sfinkter ani eksternus
m.transversus
perinei superfisialis
M.Güvençer
DEÜ


m.koksigeus
m.levator ani
koksiks
m.sfinkter ani eksternus
m.sfinkter ani eksternus
M.Güvençer
DEÜ

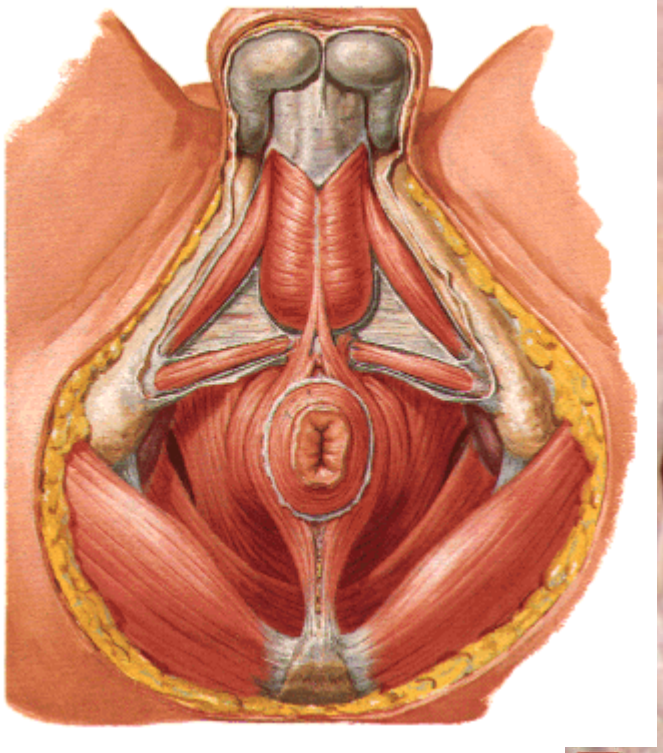


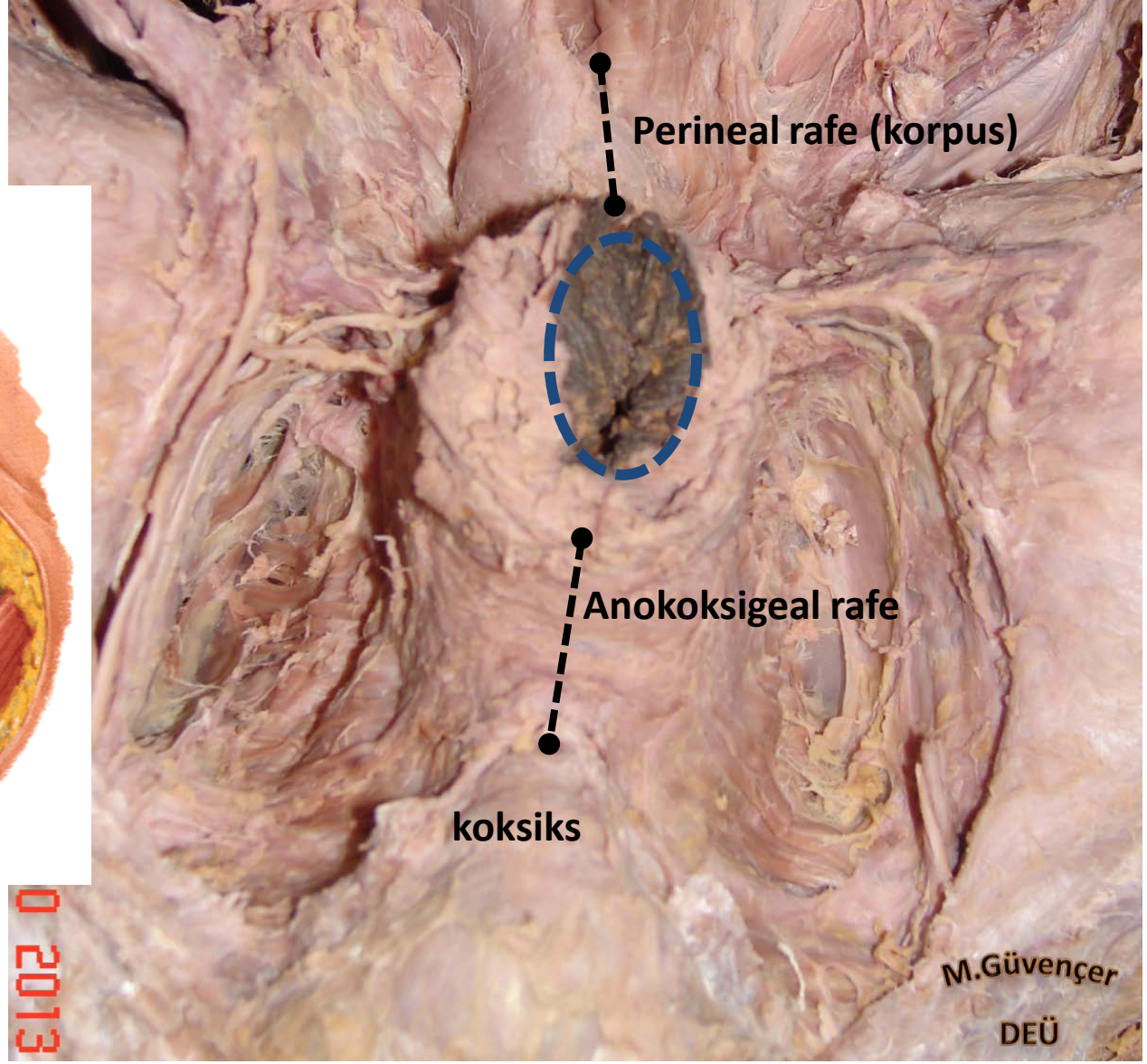


Skandalakis, Surgical Anatomy

Levator plak:
Fekal kontinansın sağlanması
Uterus, rektum ve üst vajenin yerinde tutulması

kasların tutunma yerlerindeki gevşeme ya da hasarlanma (epizyotomi vs.), **üriner** ya da **fekal inkontinens** ile **prolapsus**a sebep olur.

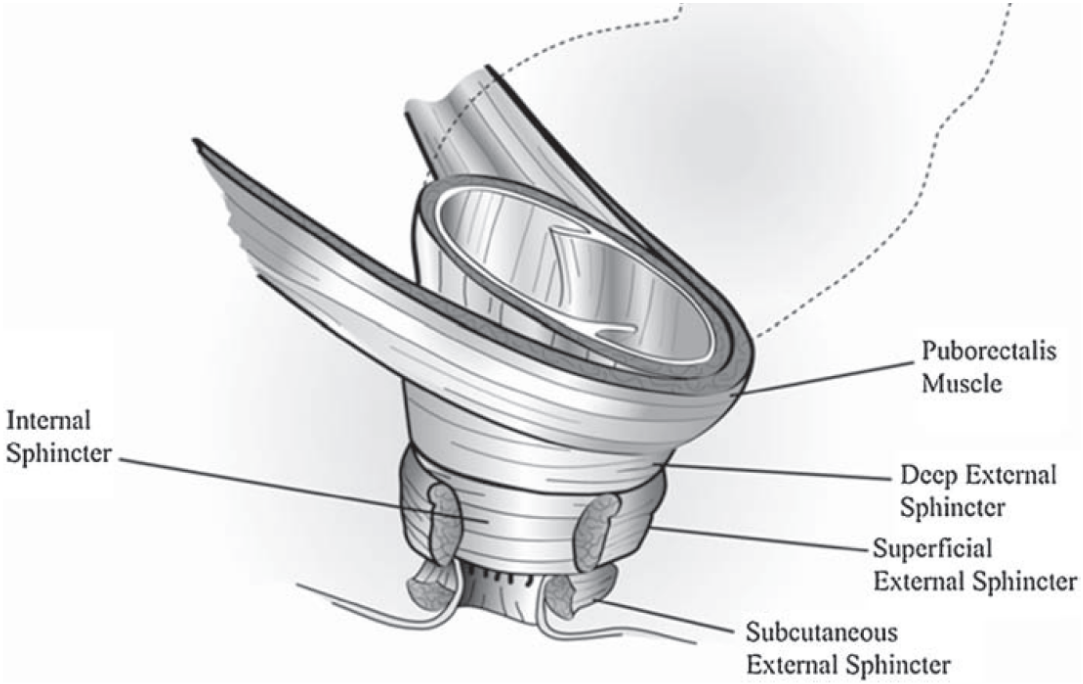



Perineal rafe (korpus)
Anokoksigeal rafe
koksiks
M.Güvençer
DEÜ

Ano-rektal halka: anal kenardan 4 cm yukarıda

M.sfinkter ani eksterna
M.puborektalis
M.sfinkter ani interna proksimali
Kontinensi sağlar.

Anorektal halka, ön ise zayıftır.





m.sfinkter ani eksternus:

*çizgili kas

*n.pudendus

*3 bölümden oluşur

yüzeyel: lümeni arkaya çeker.

derin: lümeni öne iter.

subkutanöz: lümeni öne iter.

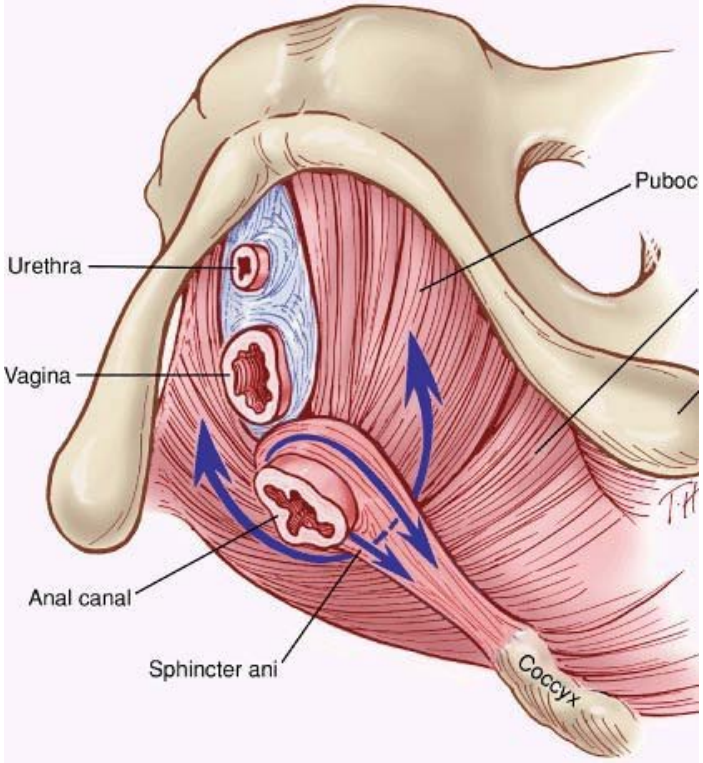
m.sfinkter ani internus:

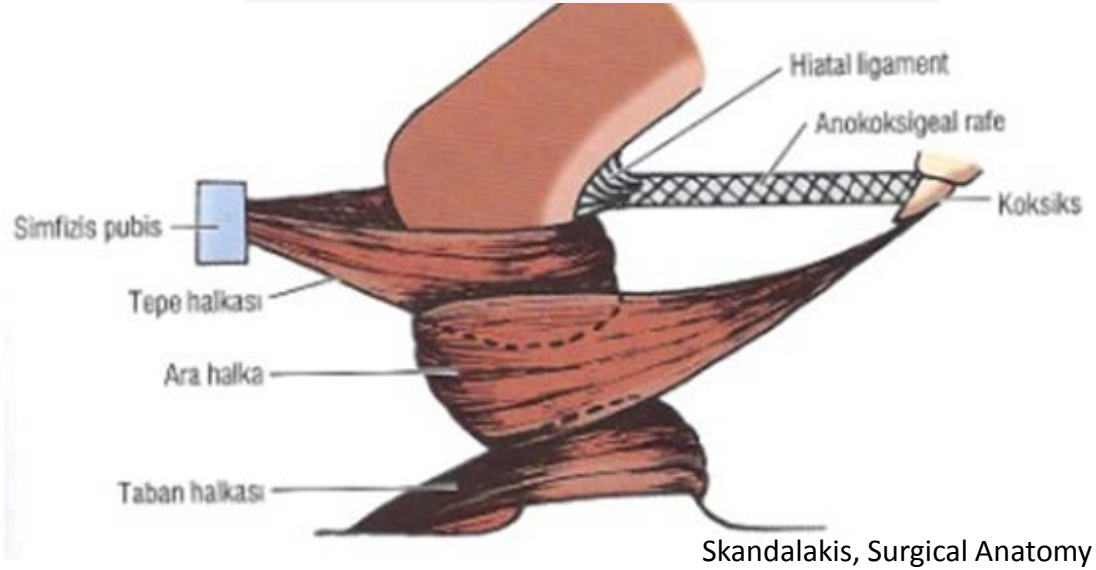
*düz kas

*sempatik lifler

longitudinal kas:

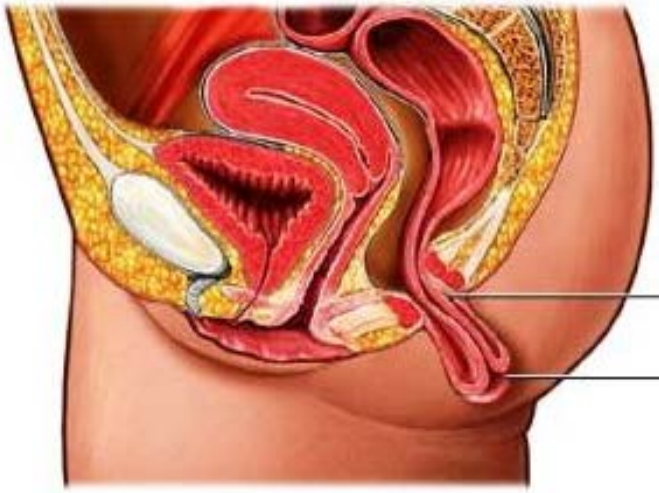
*korrigator kutis ani





Skandalakis, Surgical Anatomy

Rektumun pelvis içindeki konumunu sağlayan faktörler



- Sakrum konkavitesi
- Periton (özellikle üst 1/3'te)
- Lateral ligamentler
- Mezorektum
- Diafragma pelvisi oluşturan kasların tonusu

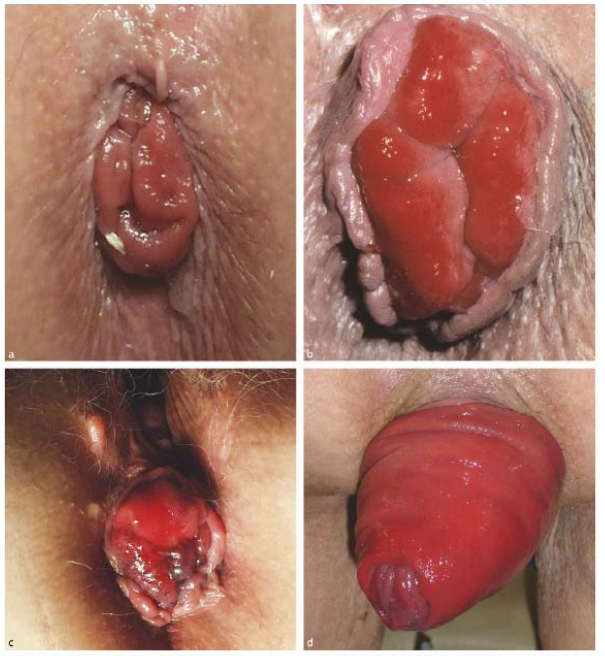
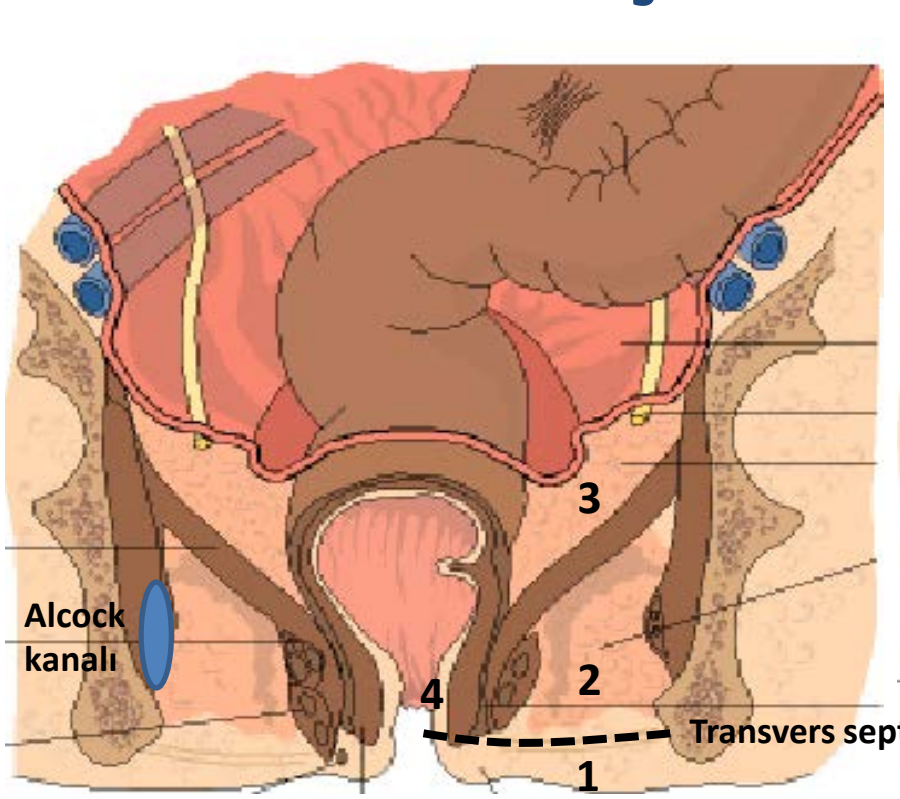
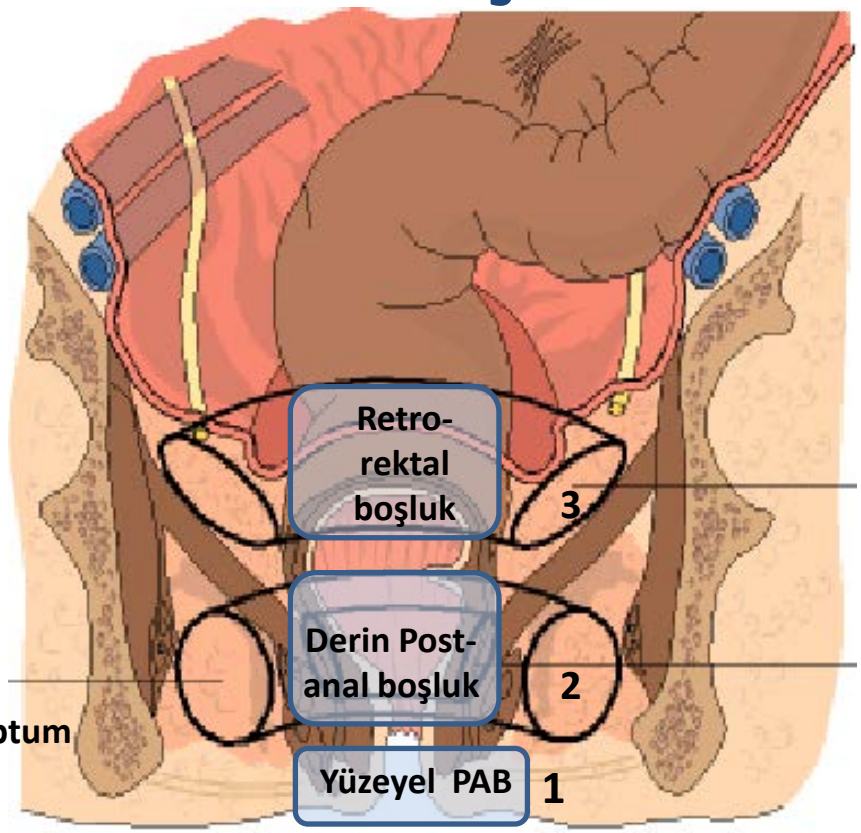


Fig. 38.2a–d Differential diagnosis. **a** Circular mucosal prolapse. **b** Internal hemorrhoidal prolapse. **c** Anterior mucosal prolapse and prolapsing hemorrhoids. **d** Total rectal prolapse

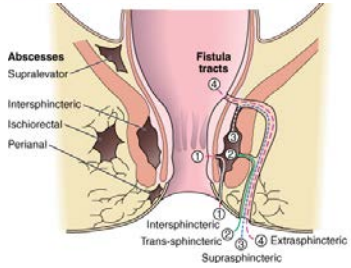
Rektumu konumunda tutan etkilerin azalması ya da değişiklikleri, **rektal prolapsus**'a yol açabilir.

Anal Kanal Çevresindeki Boşluklar





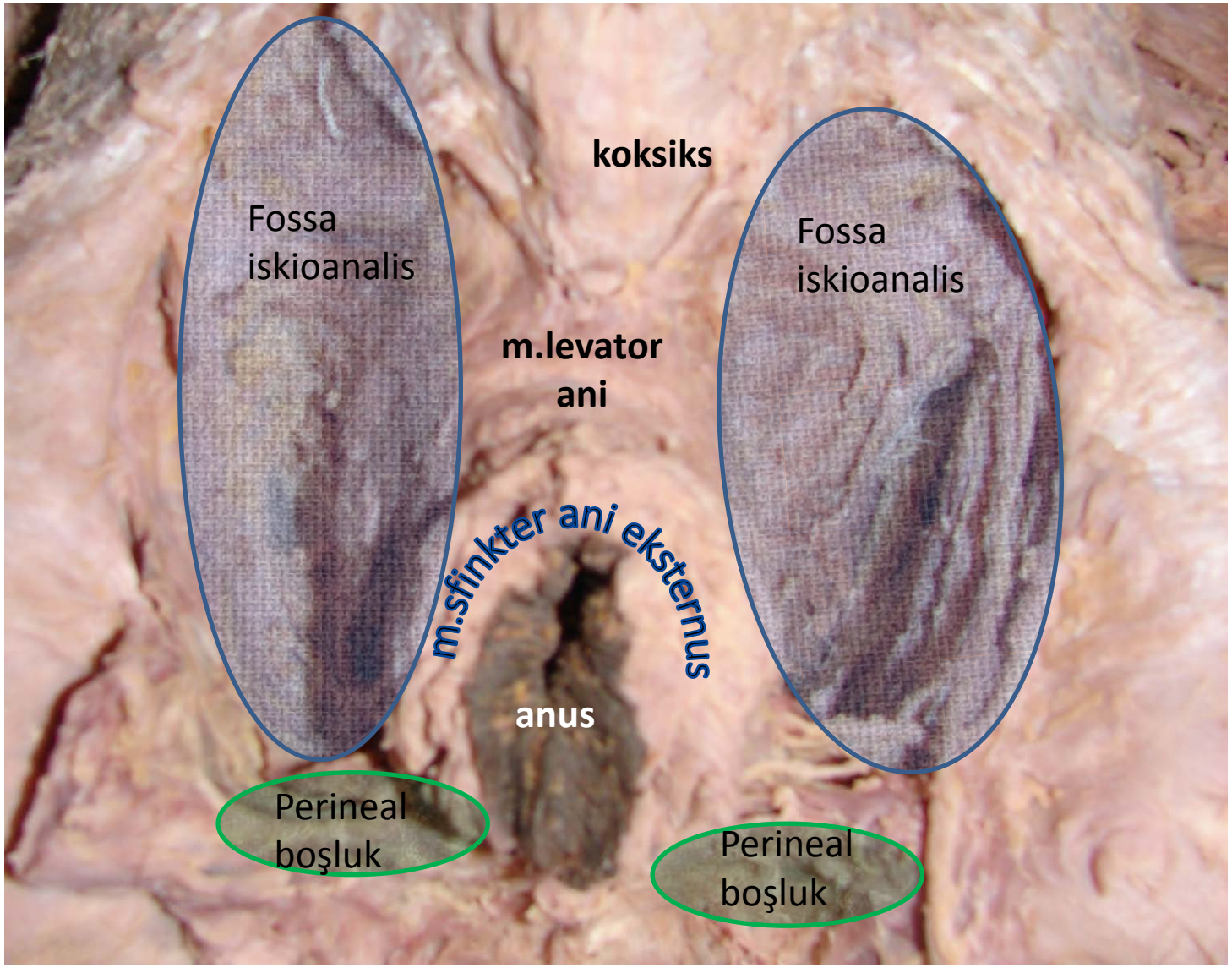
1- perianal boşluk
2-iskio-rektal boşluk
3-pelvi-rektal (supralevator) boşluk
4-submuköz alan
5-retro-rektal boşluk
6-post-anal boşluk



Anal kanal etrafındaki boşluklar, abse, fistül, hemoroid ve hematom yerleşimleri için önem taşır.

TKRCD 4. Selim Anorektal Hastalıklar Kursu, İstanbul 26 Ekim 2013
Dr.Mustafa Güvençer

Fossa iskioanalis



DOKUZ EYLÜL ÜNİVERSİTESİ

İZMİR-1982

TEŞEKKÜRLER

İzmir
the frontier city of Turkey