RADYOLOJİ KIŞ OKULU 2019

4 -10 Şubat 2019

Mirage Park Otel, Antalya

TRD 1924

PERİANAL FİSTÜL VE APSEDE GÖRÜNTÜLEME

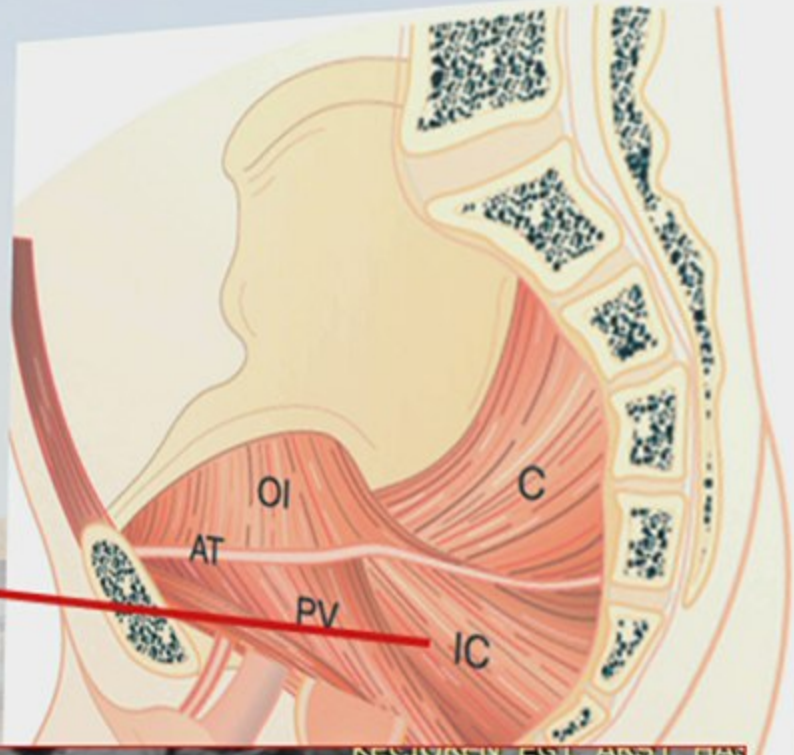
Dr Selma UYSAL RAMADAN

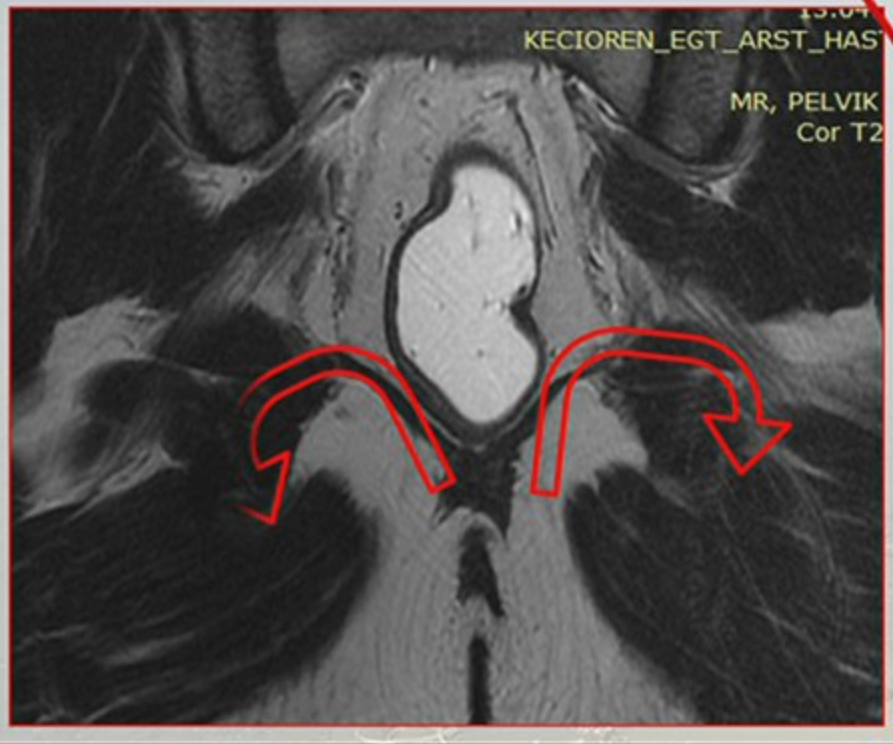
- ANATOMİ
- GÖRÜNTÜLEME YÖNTEMLERİ
- TANIMLAMALAR
- SINIFLAMASI
- ÖRNEKLER

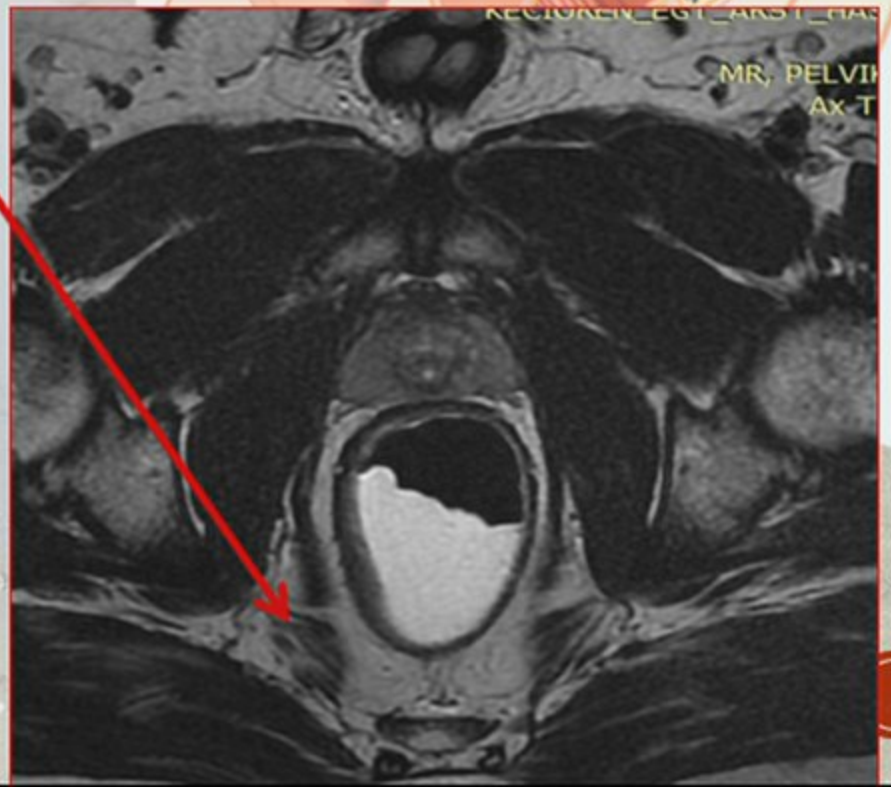
ANATOMİ

LEVATOR ANİ KASI

- İliokoksigeus



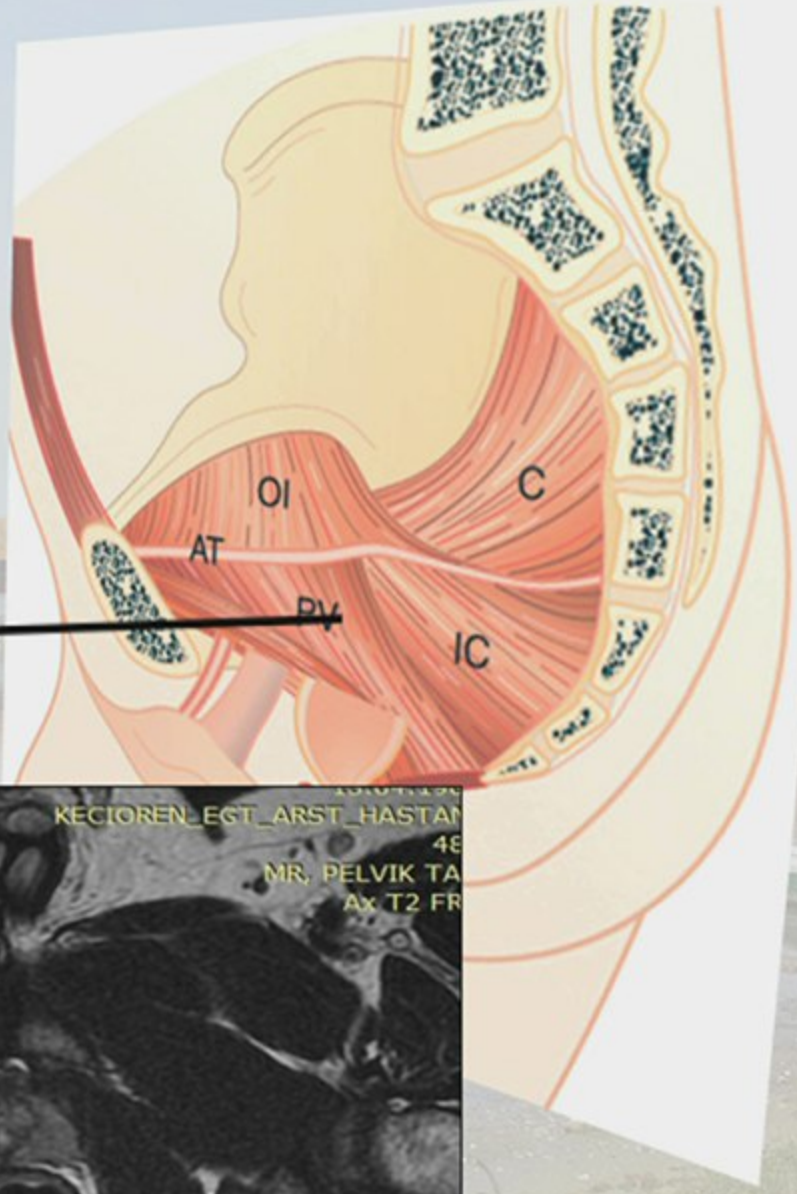


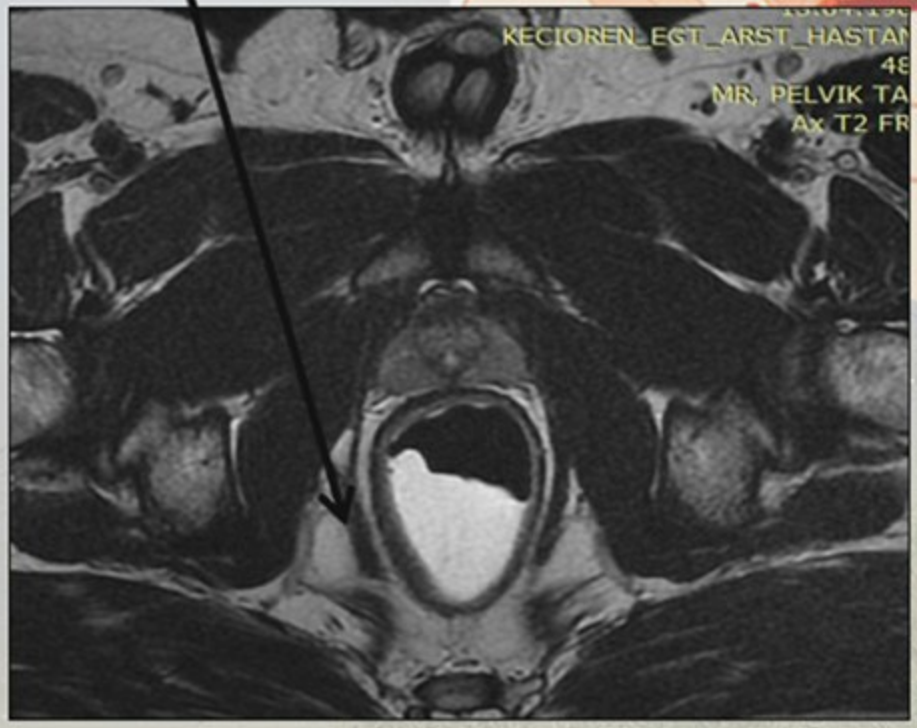


ANATOMİ

LEVATOR ANİ KASI

- İliokoksigeus
- Pubokoksigeus

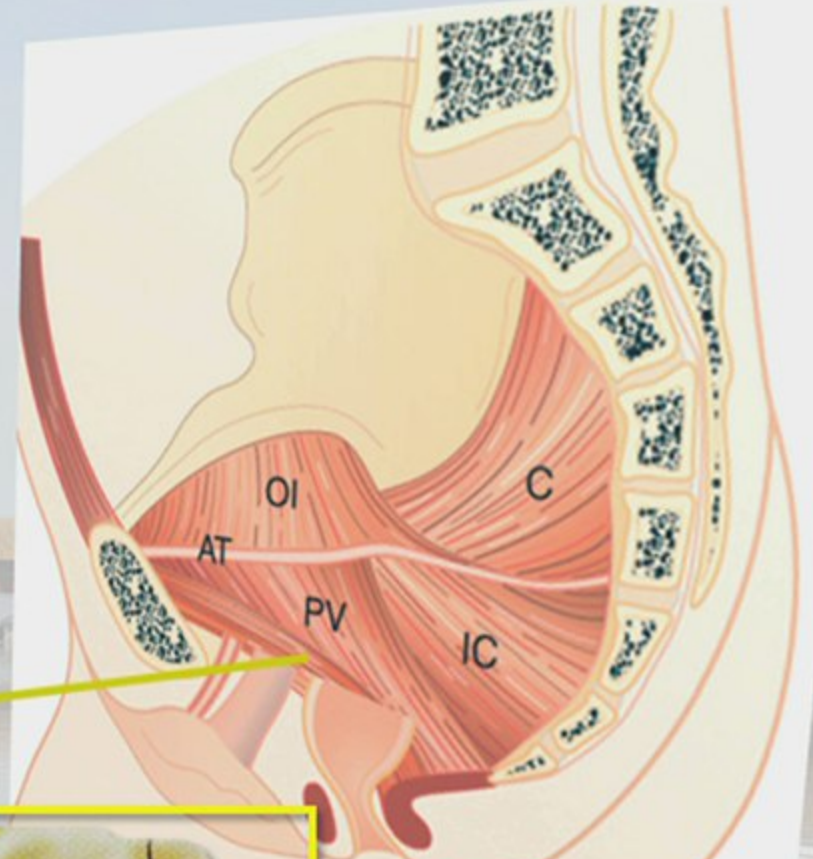


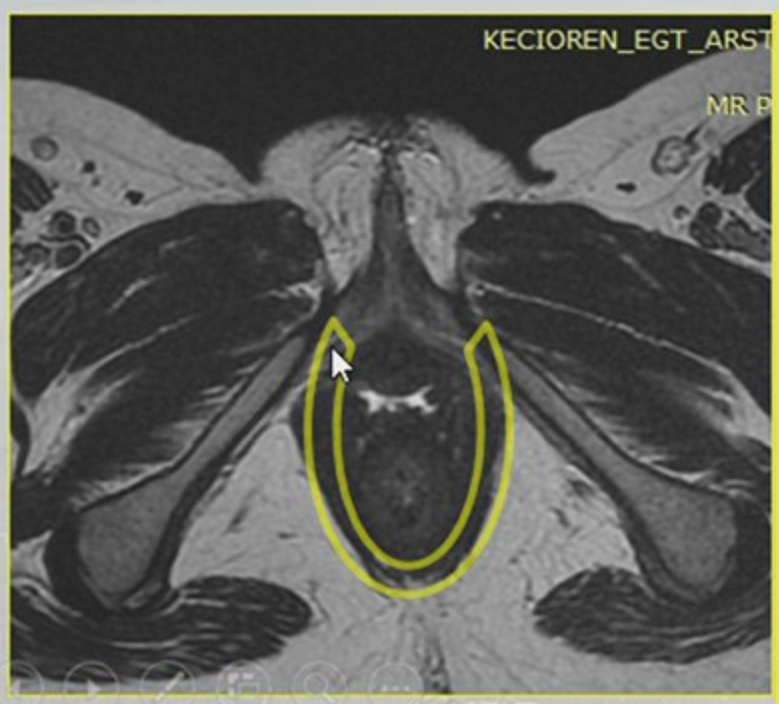


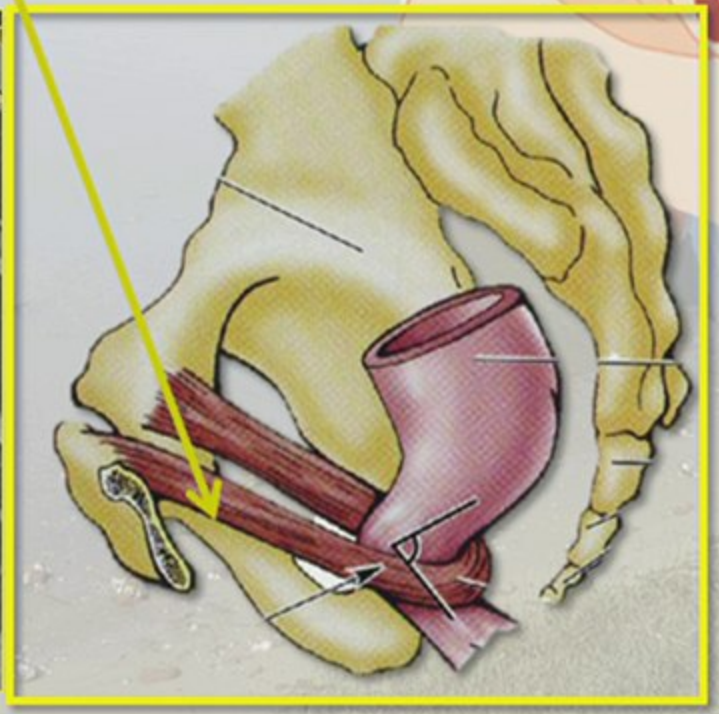
ANATOMİ

LEVATOR ANİ KASI

- İliokoksigeus
- Pubokoksigeus
- Puborektalis







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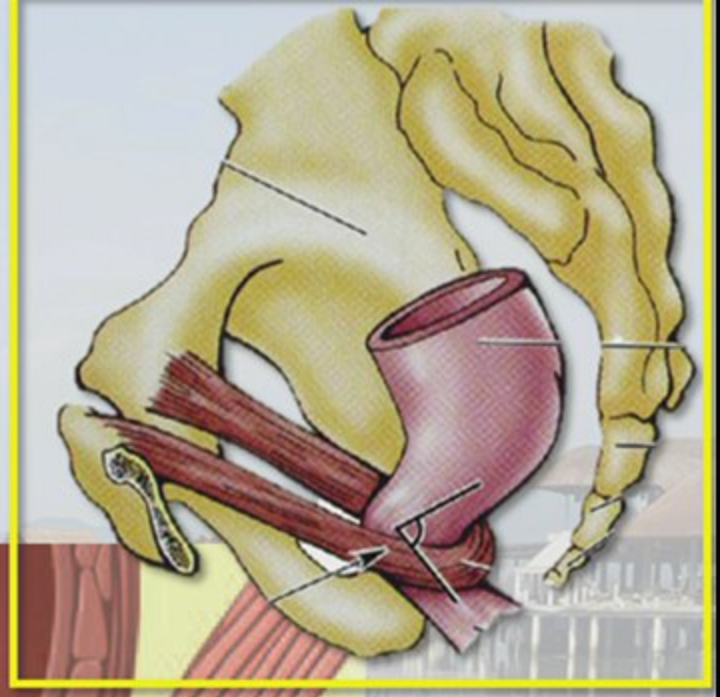
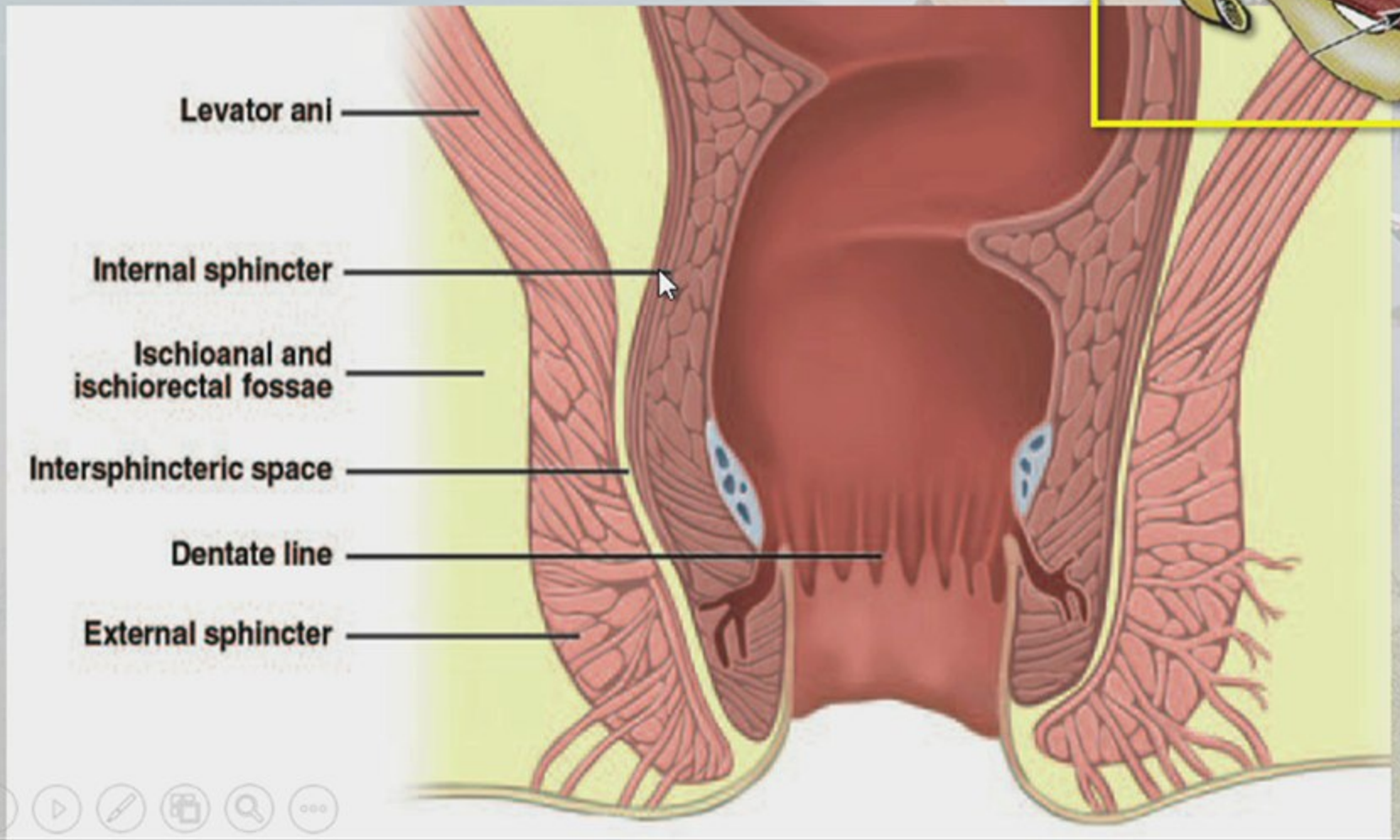


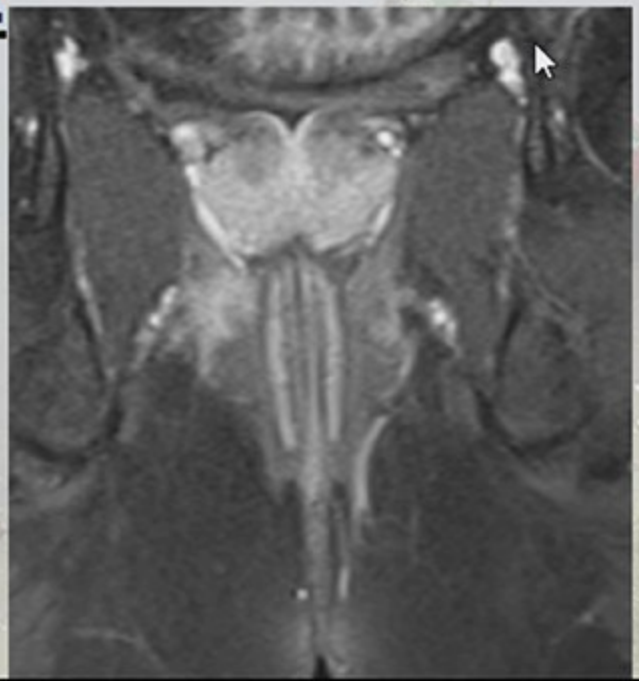

Levator ani
Internal sphincter
Ischioanal and ischiorectal fossae
Intersphincteric space
Dentate line
External sphincter

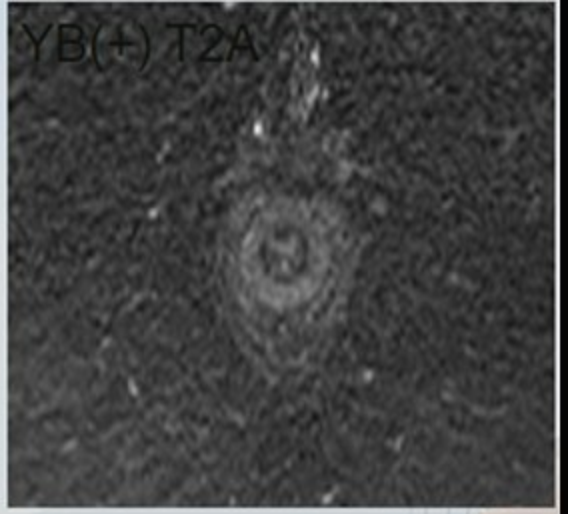
ANAL KANAL

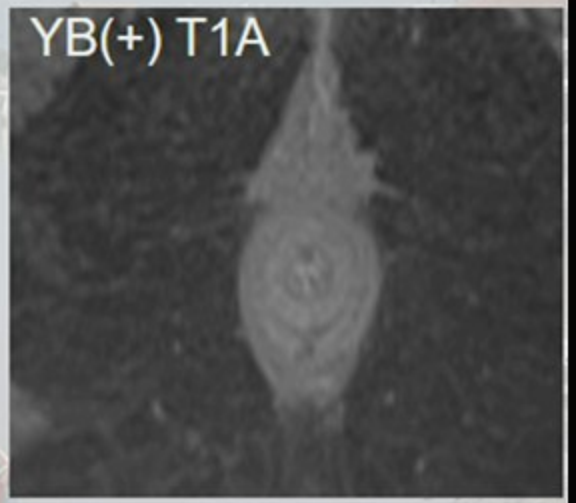
EAS (istemli kontinans):

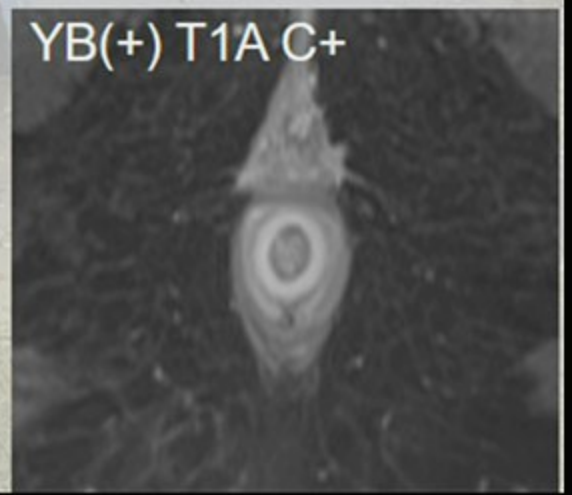
IAS (istemsiz kontinans):

İntersfinkterik mesafe:









ANAL KANAL

EAS (istemli kontinans):

Tüm sekanslarda hipointens

IAS (istemsiz kontinans):

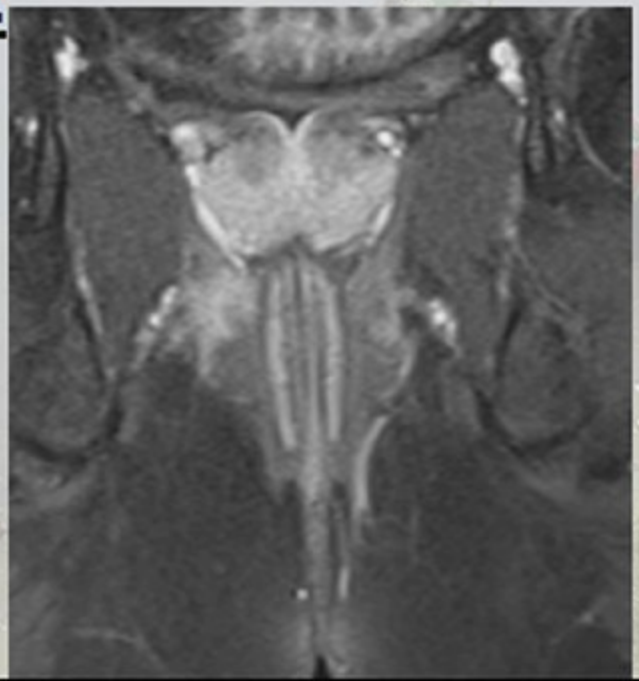
T1a ve T2a izo-hipointens

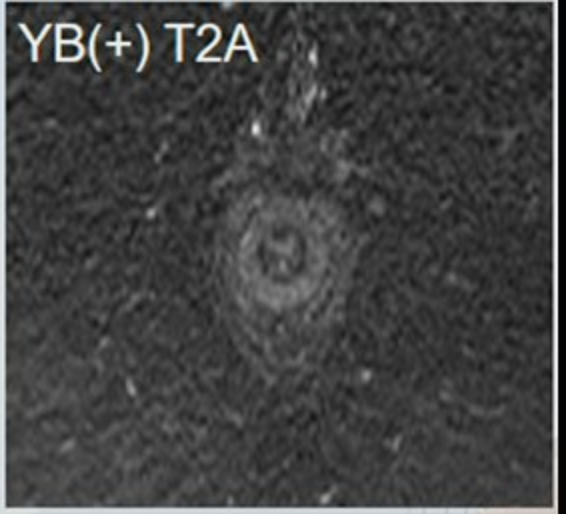
YB (+) T2a hafif hiperintens

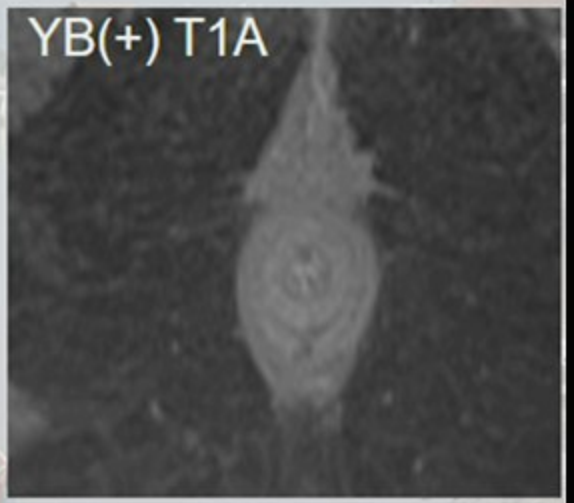
iv Gd belirgin kontrastlanır

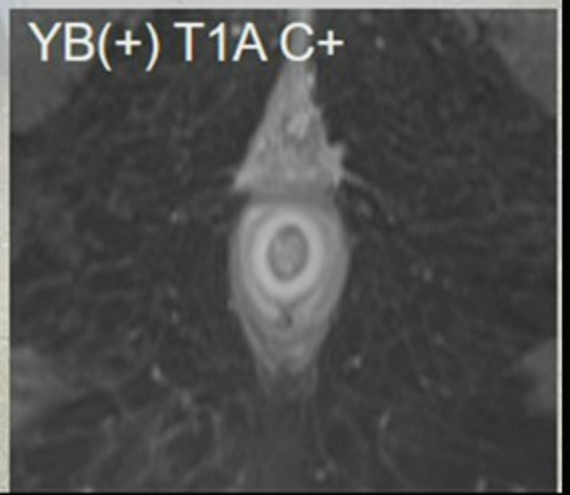
İntersfinkterik mesafe:

Yağ

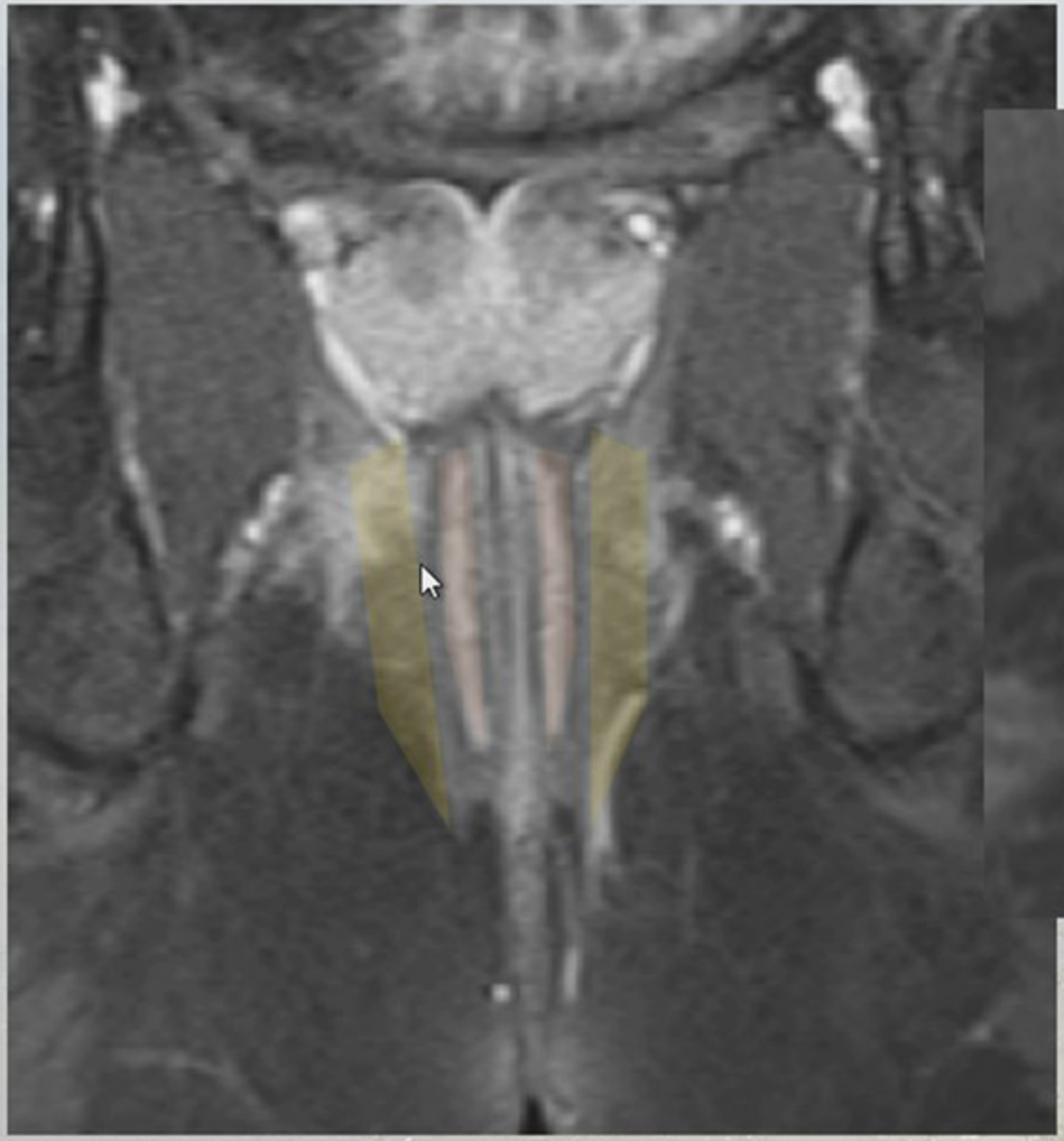


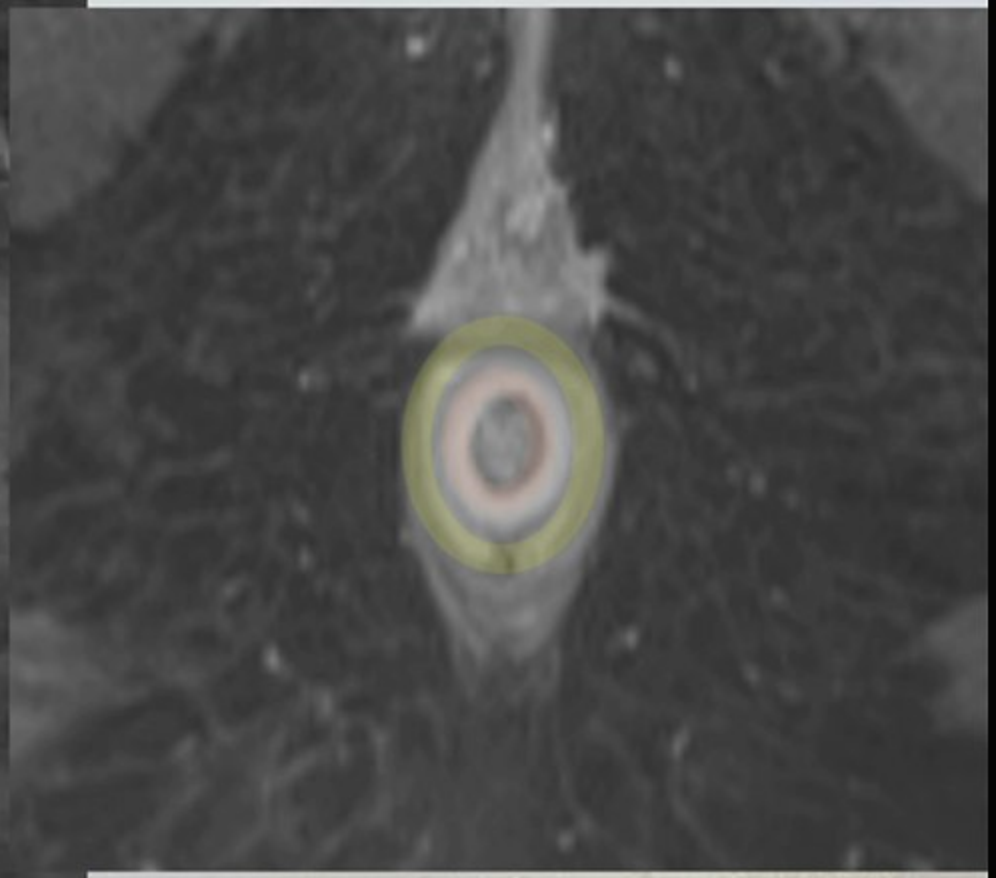






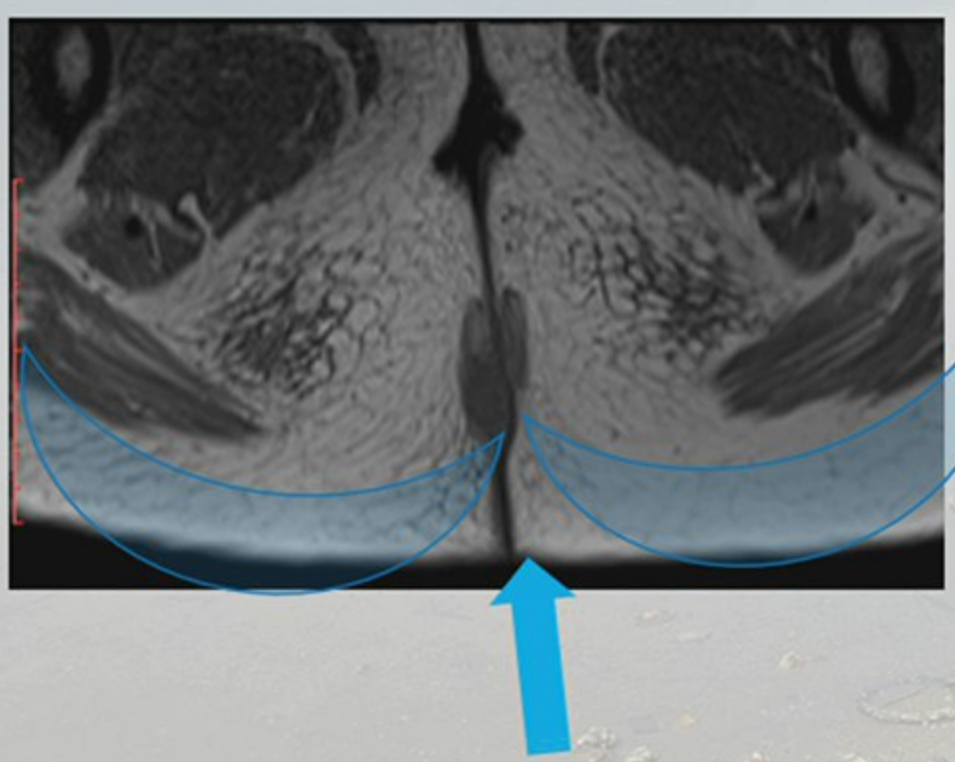
ANAL KANAL

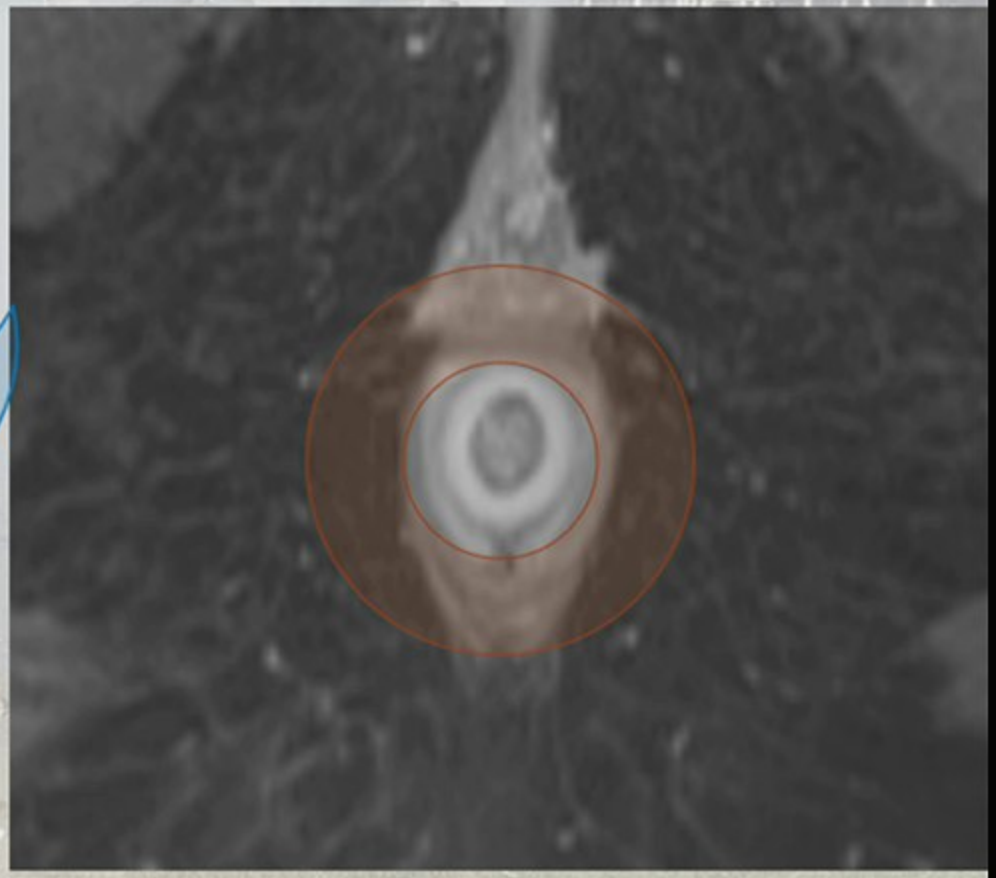




TANIMLAMALAR

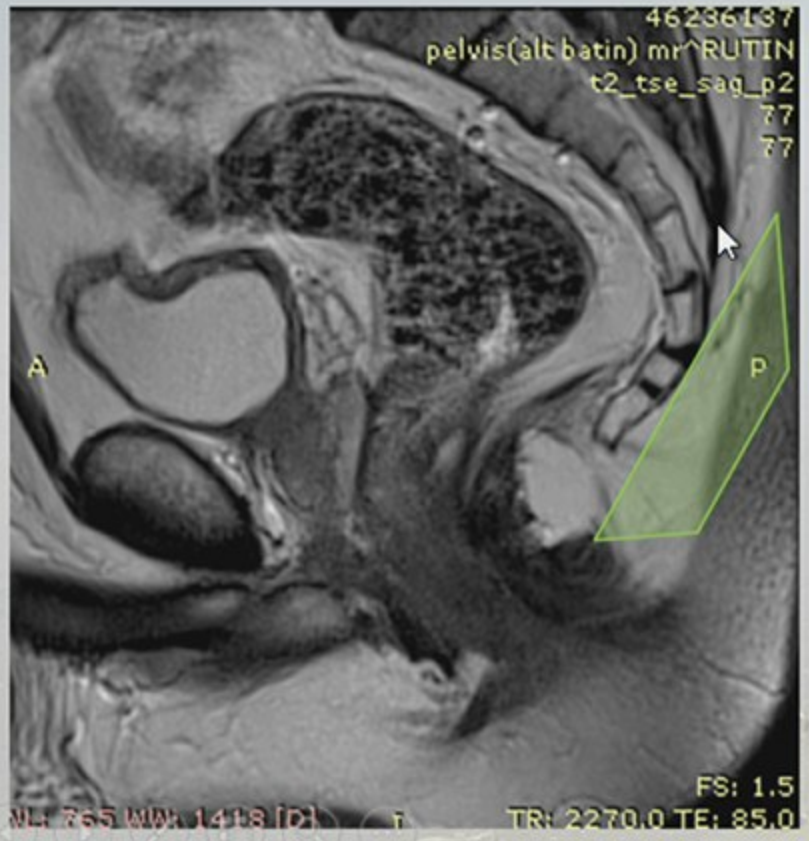
- Perianal bölge: anal açıklığın çevresindeki 2cm'lik yüzeyel alan
- Natal kleft: anal orifis 2cm'den fazla arkasındaki kalçaların arasındaki orta hat dokuları
- Gluteal bölge: gluteal kasların üstünü örten cilt altı yağlı doku

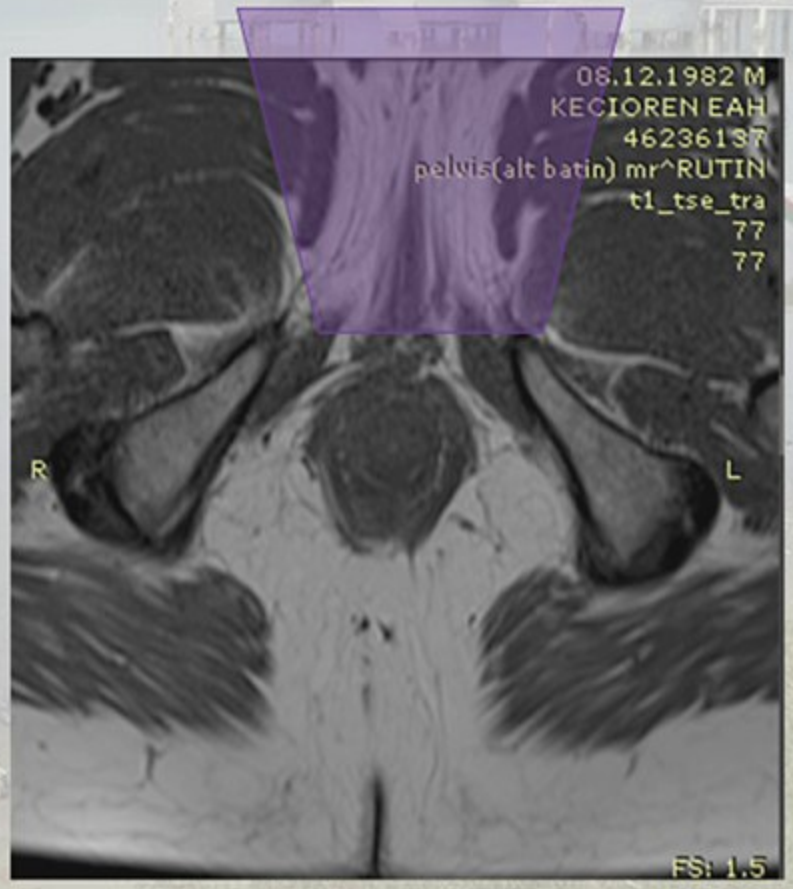




TANIMLAMALAR

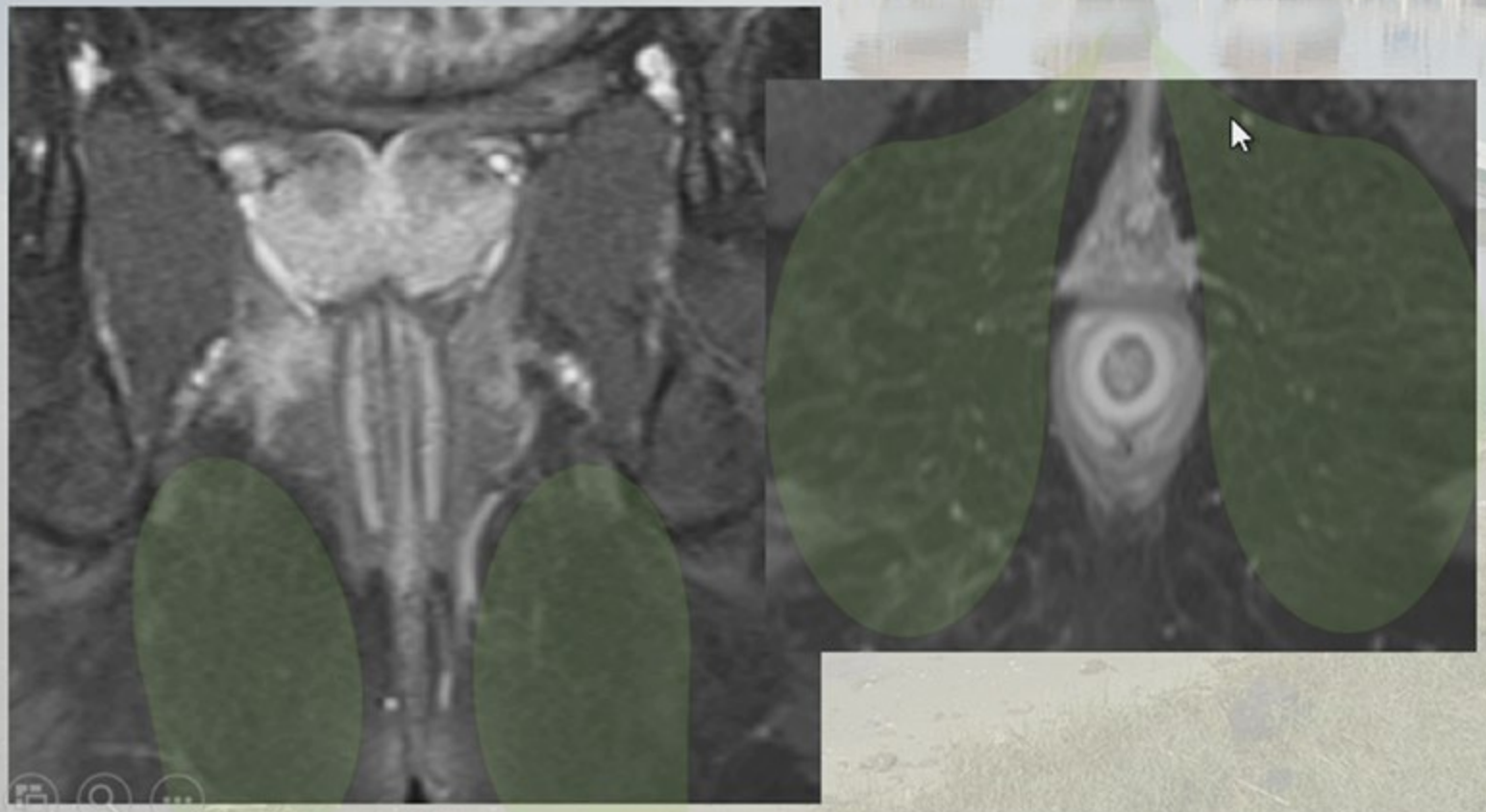
- Koksigeal/sakral bölge: sakrum/koksiks üstündeki cilt altı yağlı doku
- Anterior perianal bölge: anal orifis 2cm'den daha fazla önündeki yüzeyel doku(skrotum ve vulva)





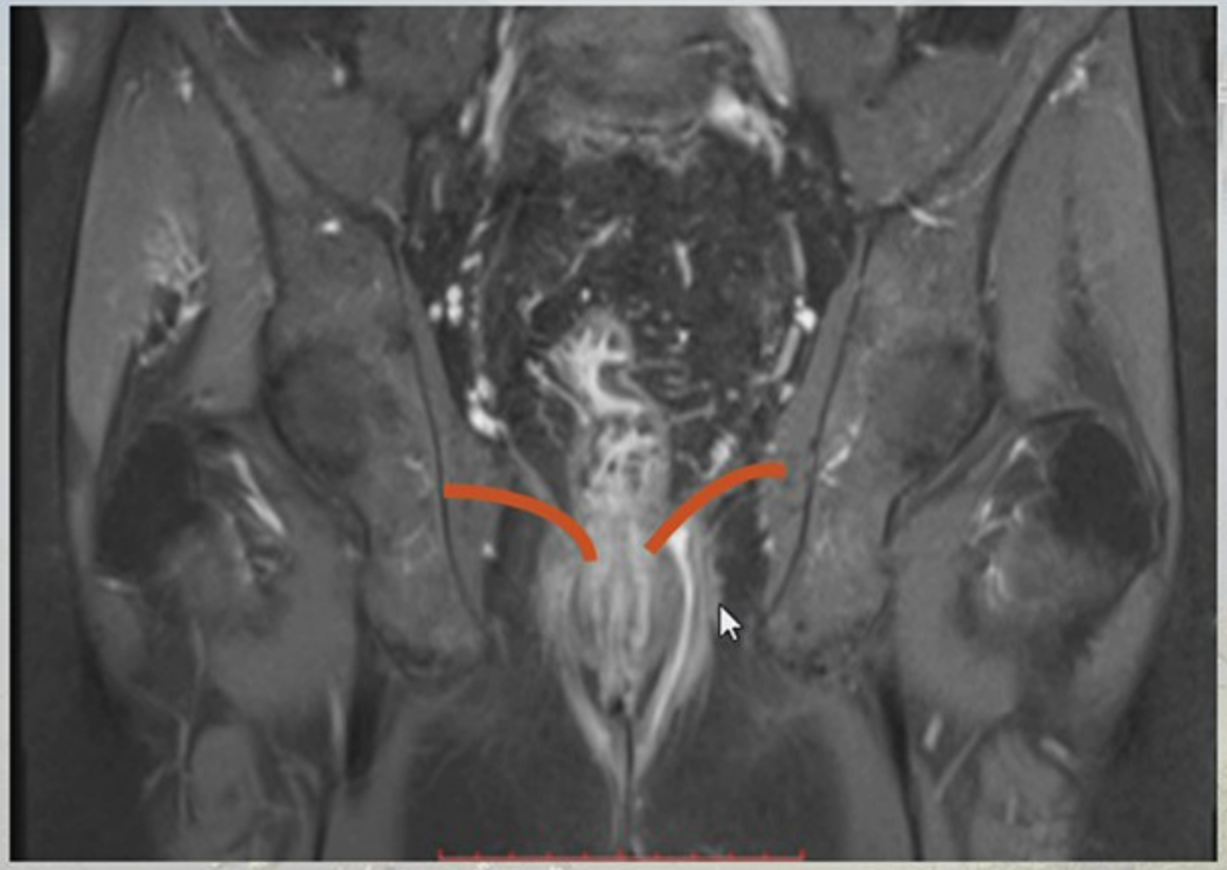
TANIMLAMALAR

- İskio-anal fossa: levator plate altında, anal sfinkter çevresinde, altta cilde kadar devamlılığı olan, lateralde obtrator internus kası ile sınırlı

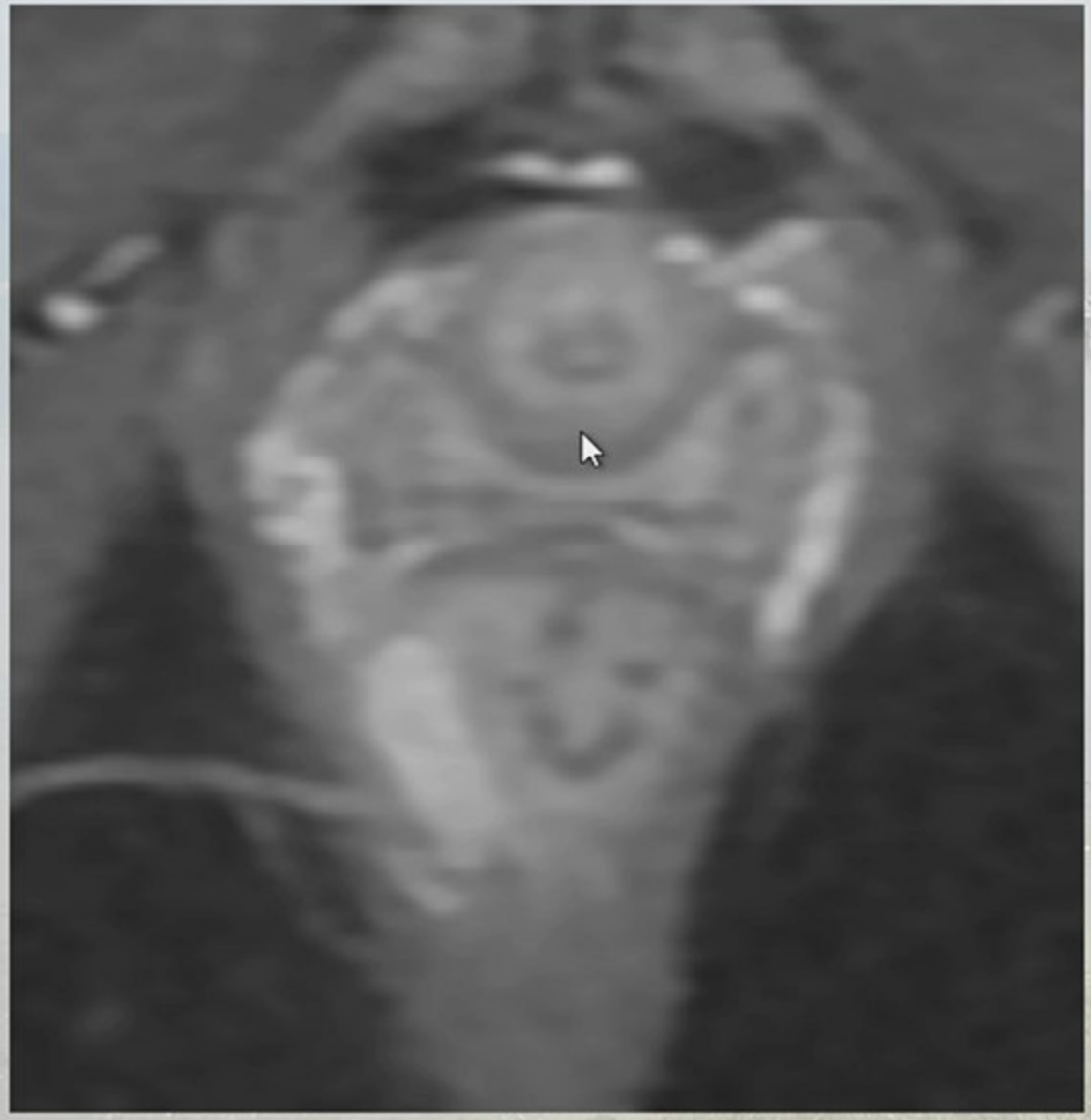


TANIMLAMALAR

- Supralevator alan: Levator plate üstündeki pelvik alanda perirektal tissue

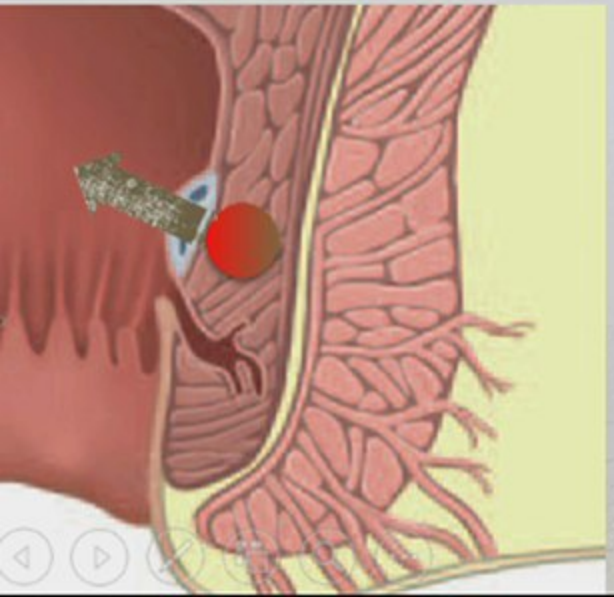


PERİANAL FİSTÜL VE APSE



PERİANAL FİSTÜL VE APSE

- Anal sfinkter ile ilişkili fistüllerdir.
- Anal kanal ve çevresini etkileyen enflamatuvar hastalıktır.
- Kendiliğinden lümene boşalabilir veya cerrahi müdahale gerektirebilir.
- Yetersiz boşalması ➛ yan dalların oluşması ve intersfinkterik alana uzanıma neden olur ➛ fistül



PERİANAL FİSTÜL VE APSE

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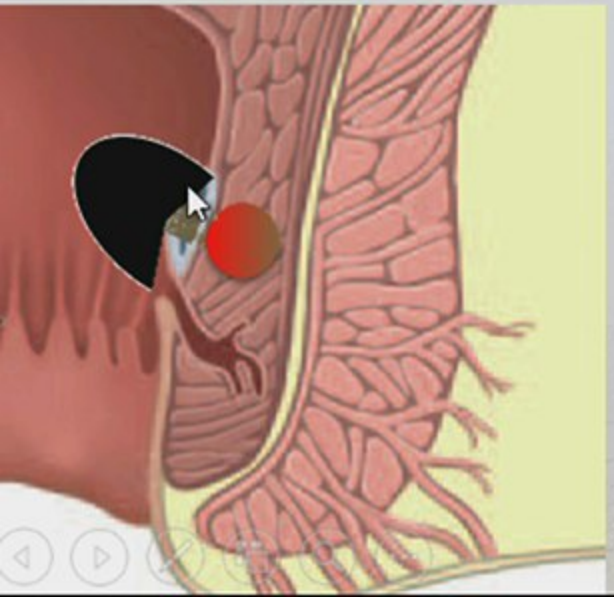


PERİANAL FİSTÜL

1. Primer (%90): kriptoglanduler teori
2. Sekonder
    - enfekte hemoroid,
    - yüzeyel cilt lezyonları,
    - Crohn,
    - tüberküloz,
    - anal kanal tümörü,
    - RT,
    - anal yırtık,
    - yabancı cisim,
    - obstetrik travma,
    - eski cerrahi (hemoroid operasyonu)

PERİANAL FİSTÜL

Cerrahi tedavi

1. Primer (%90): kriptoglanduler teori
2. Sekonder
    - enfekte hemoroid,
    - yüzeyel cilt lezyonları,
    - Crohn,
    - tüberküloz,
    - anal kanal tümörü,
    - RT,
    - anal yırtık,
    - yabancı cisim,
    - obstetrik travma,
    - eski cerrahi (hemoroid operasyonu)

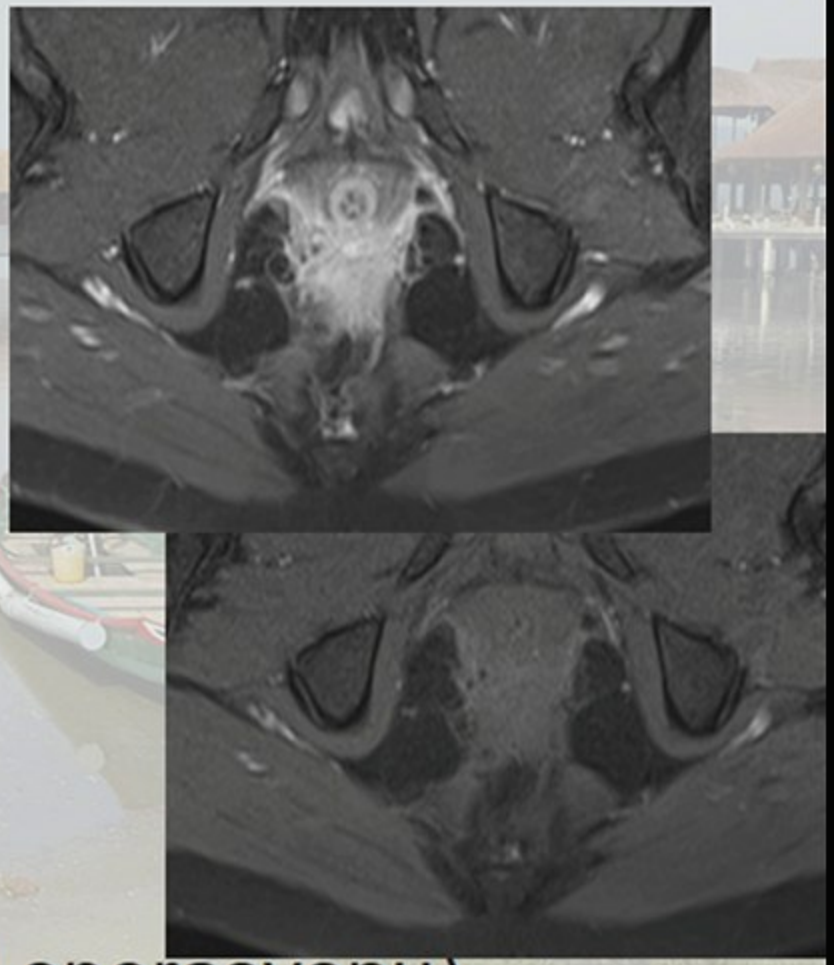
PERİANAL FİSTÜL

1. Primer (%90): kriptoglanduler teori
2. Sekonder

Cerrahi tedavi

Medikal tedavi

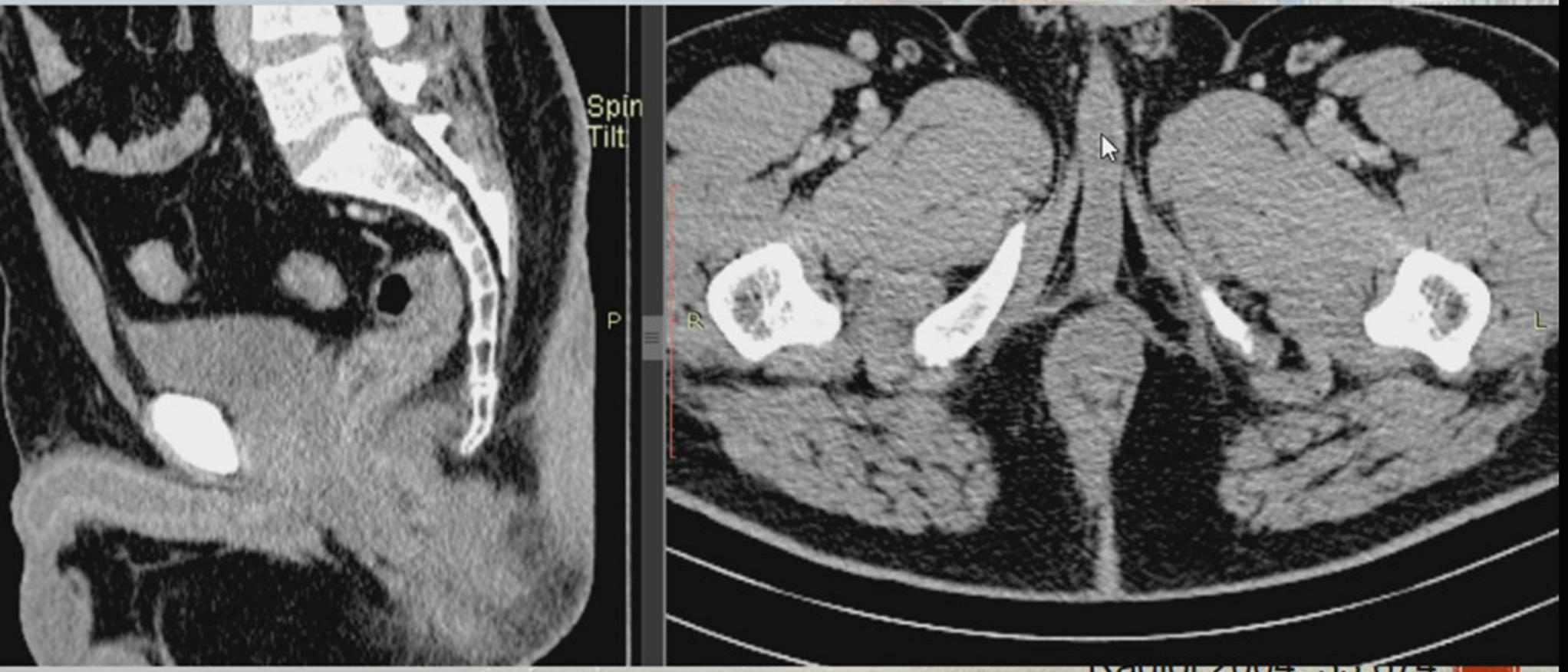
- enfekte hemoroid,
- yüzeyel cilt lezyonları,
- Crohn,
- tüberküloz,
- anal kanal tümörü,
- RT,
- anal yırtık,
- yabancı cisim,
- obstetrik travma,
- eski cerrahi (hemoroid operasyonu)



PERİANAL FİSTÜL

Görüntüleme Yöntemleri

- Fistülografi
- Endo-anal US (yakın alanda etkili)
- BT?



Radiol 2004; 33:674

PERİANAL FİSTÜL

Görüntüleme Yöntemleri

- Fistülografi
- Endo-anal US (yakın alanda etkili)
- BT?
- MR (body coil, endorektal coil)
  - FM ve cerrahi girişimlerde saptanamayan kompleks perianal fistülleri gösterir

Radiol 2004; 33:674

PERİANAL FİSTÜL

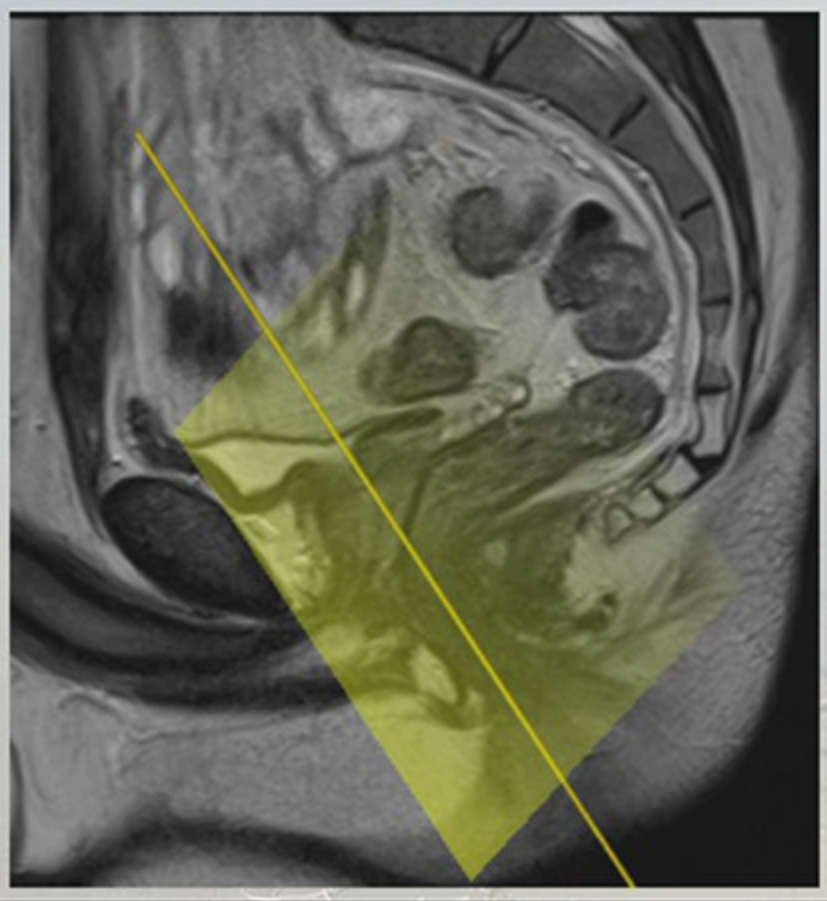
Görüntüleme Yöntemleri

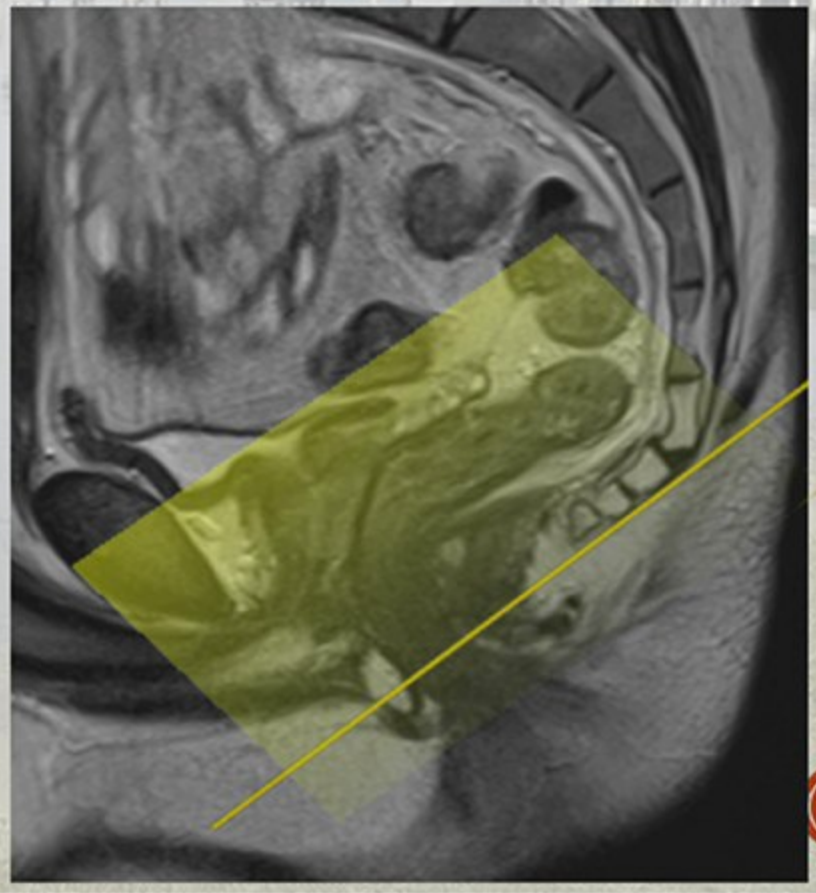
- Prim traktusu göstermede doğruluk oranları;
  - Dijital muayene %61
  - Endoanal sonografi %81
  - MR %91
- İç orifis değerlendirilmesinde doğruluk
  - Endoanal sonografi %91
  - MR %97

Radiol 2004; 33:674

PERİANAL FİSTÜL

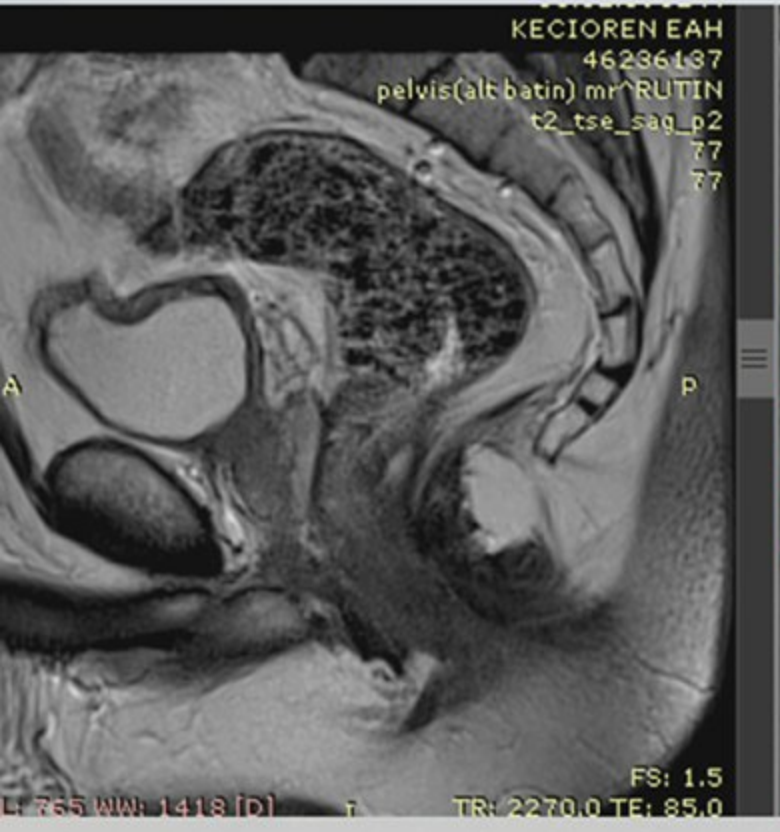
- Levator plate-perine çizgisine veya anal kanala dik ve paralel eksenlerde oblik koronal ve aksiyal
- <5mm
- Küçük FOV (20-22cm)
- Matriks: 256x256

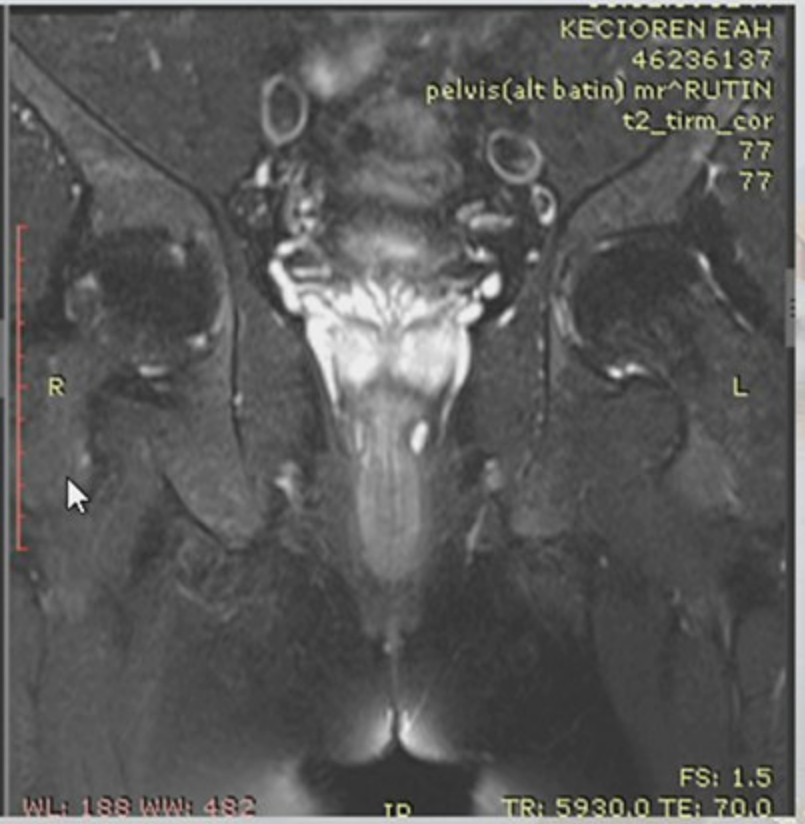




PERİANAL FİSTÜL

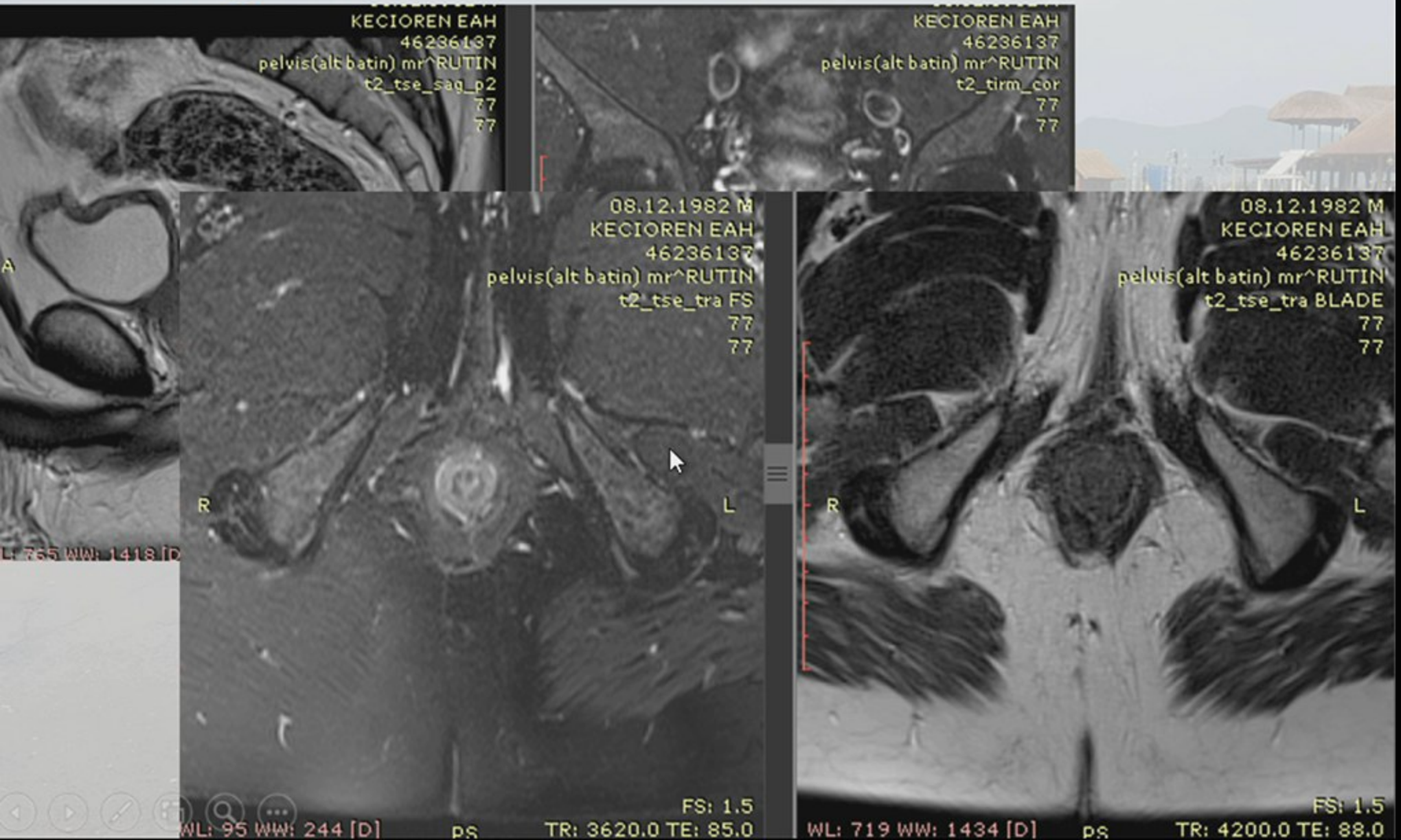
- Hangi sekanslar?





PERİANAL FİSTÜL

- Hangi sekanslar?



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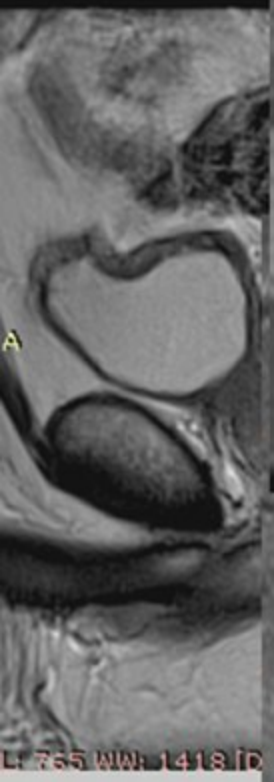
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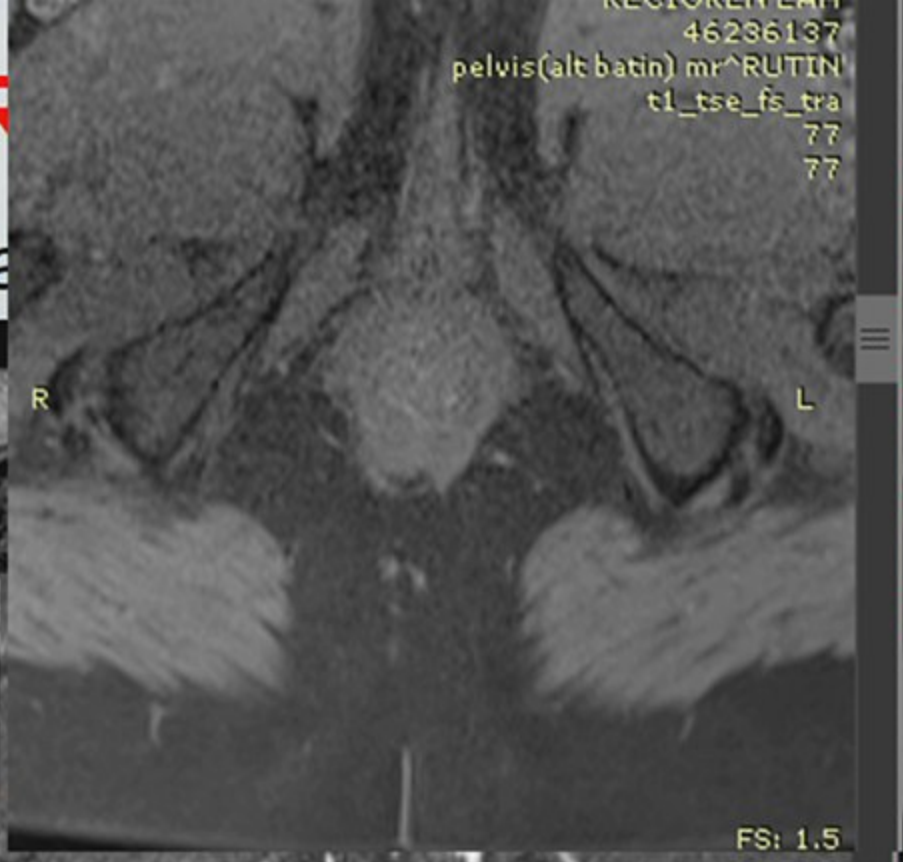
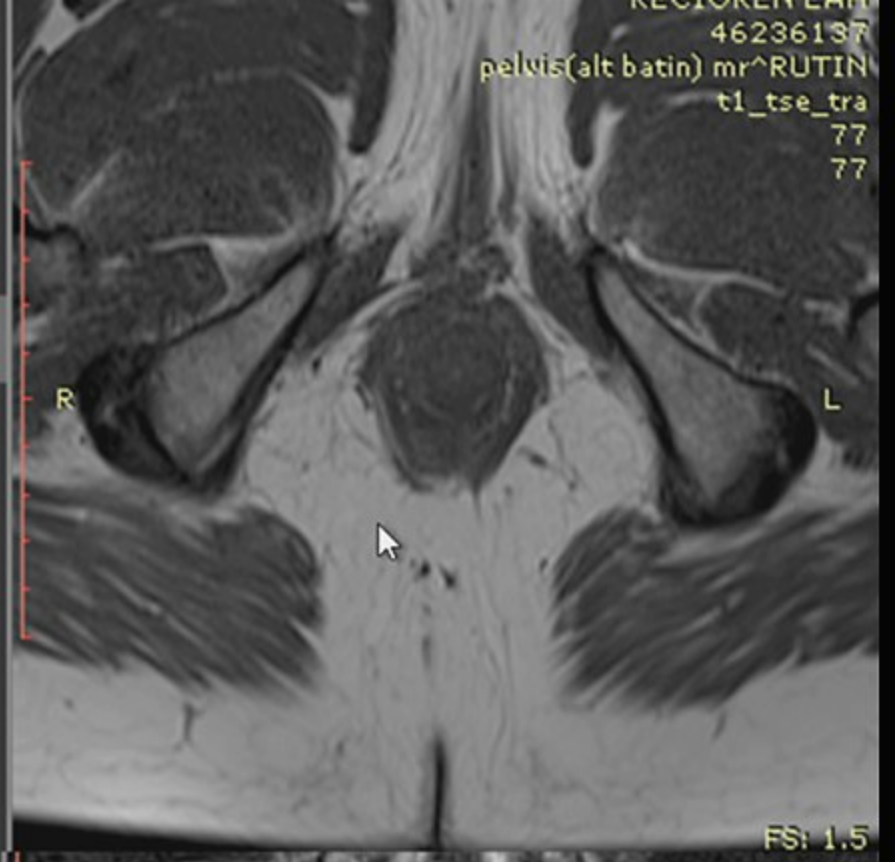
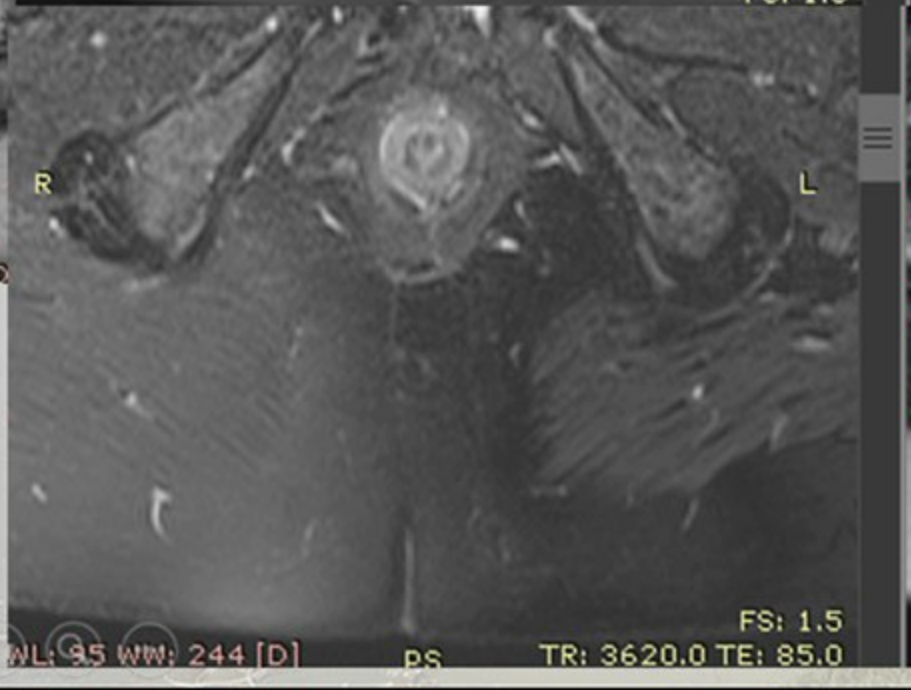
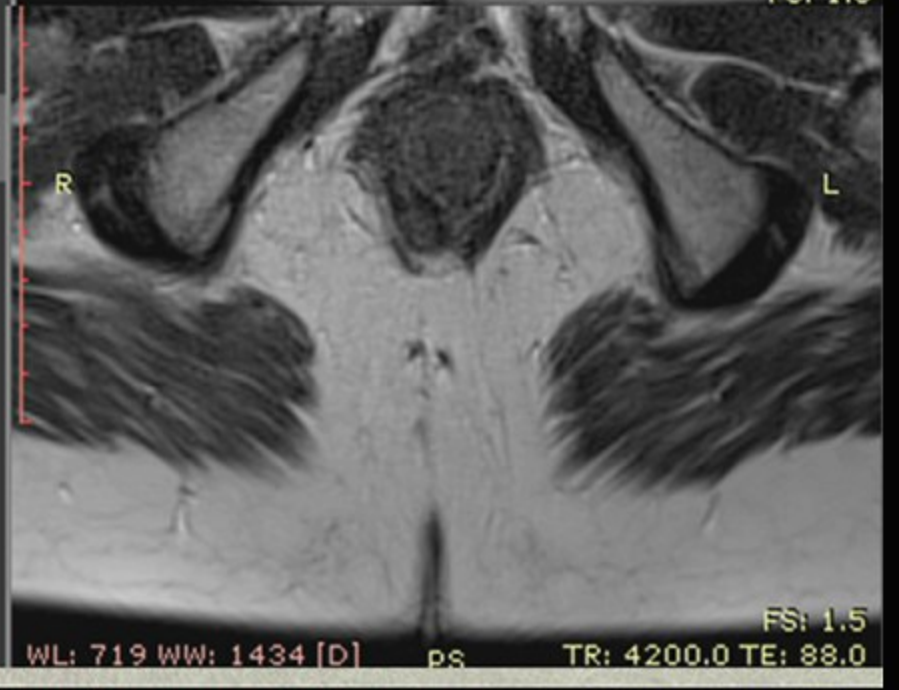

46236137
pelvis(alt batin) mr^RUTIN
t1_tse_fs_tra
77
77
R
L
FS: 1.5

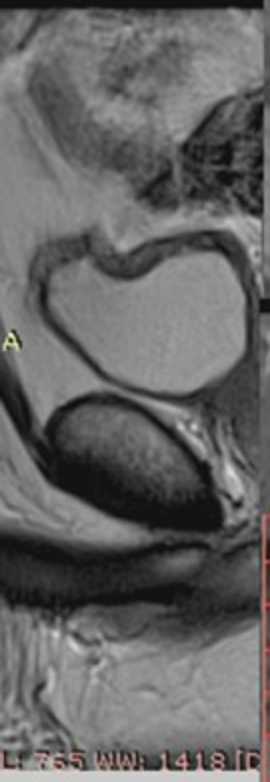

46236137
pelvis(alt batin) mr^RUTIN
t1_tse_tra
77
77
R
L
FS: 1.5

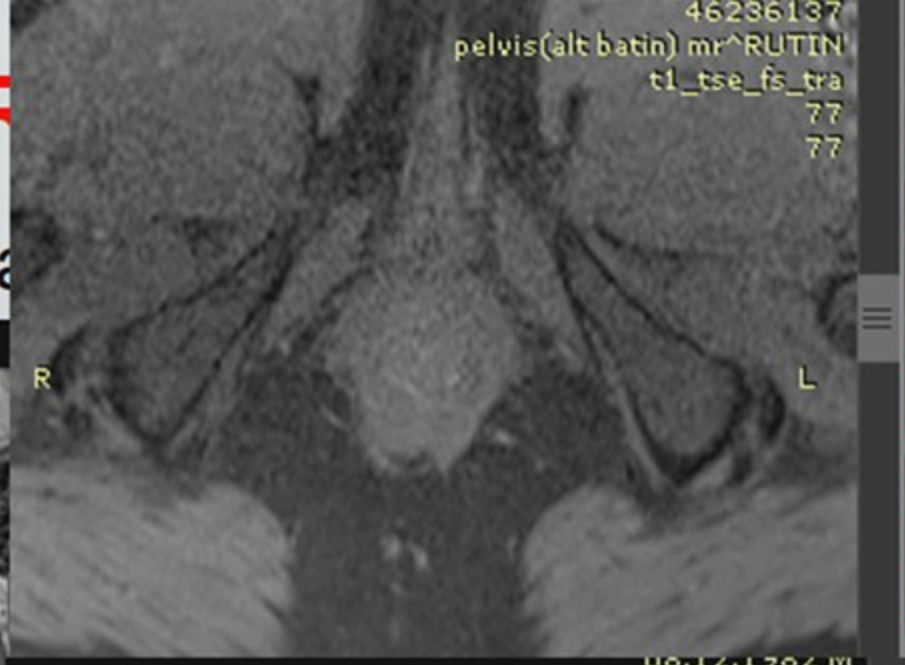

R
L
FS: 1.5
WL: 95 WW: 244 [D]
PS
TR: 3620.0 TE: 85.0


R
L
FS: 1.5
WL: 719 WW: 1434 [D]
PS
TR: 4200.0 TE: 88.0

PER

- Ha

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pelvis(alt batin) mr^RUTIN
t1_tse_fs_tra
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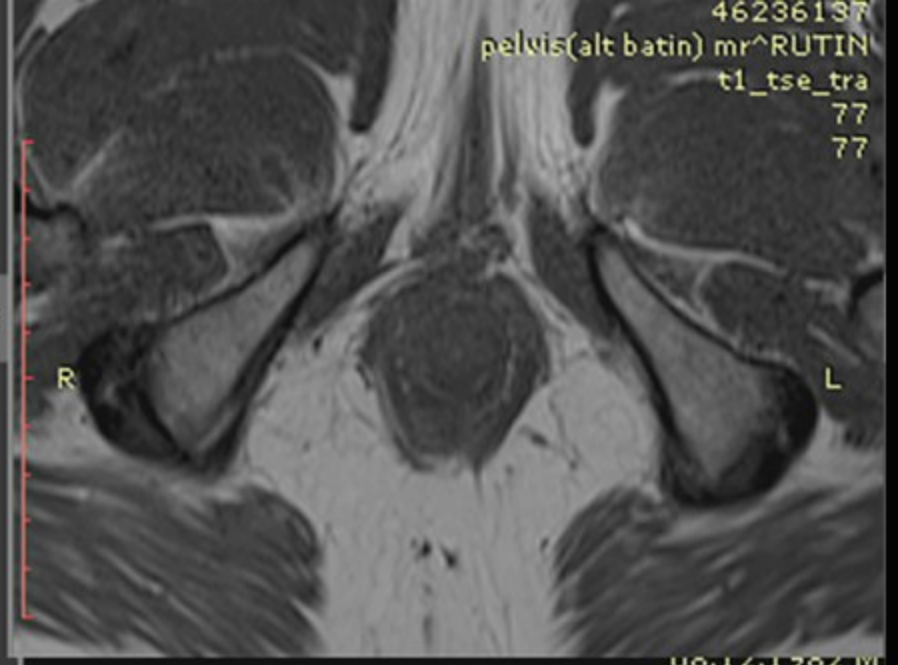
46236137
pelvis(alt batin) mr^RUTIN
t1_tse_tra
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77
R
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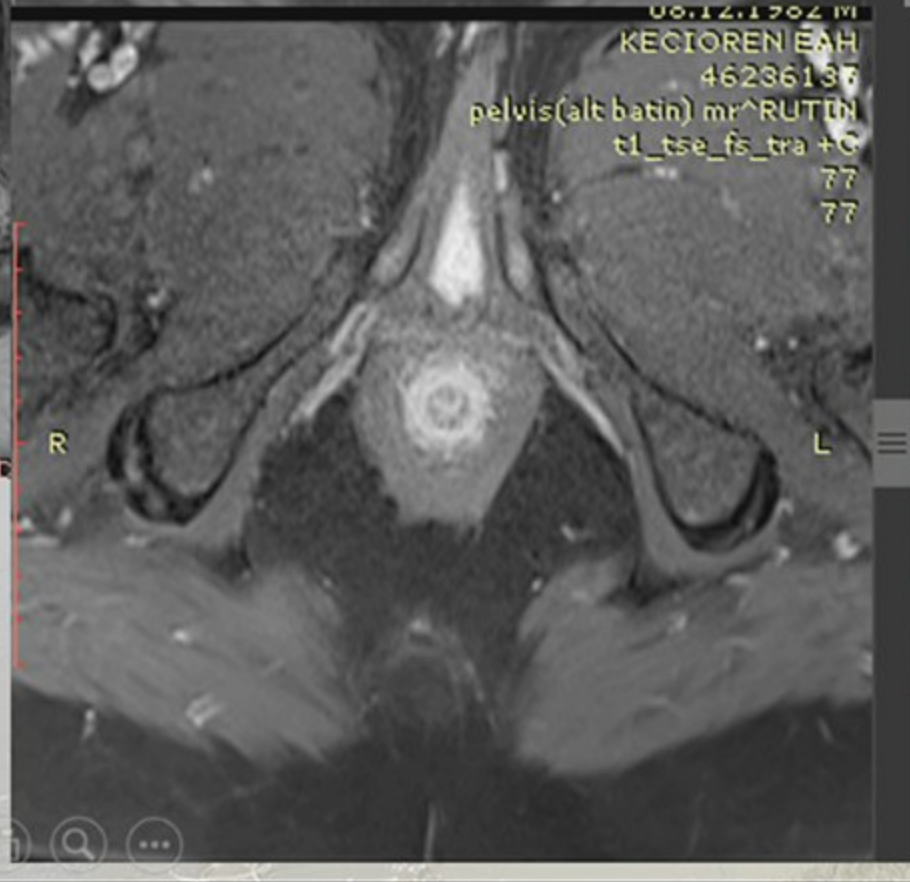
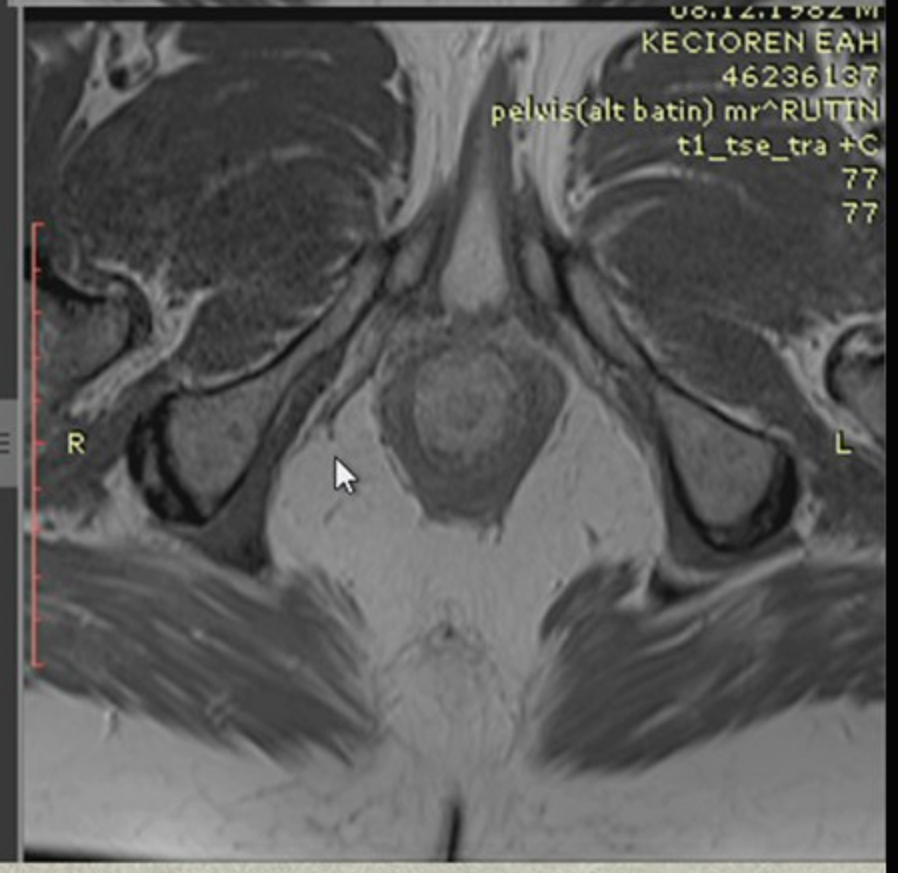

KECIOREN EAH
46236137
pelvis(alt batin) mr^RUTIN
t1_tse_fs_tra +C
77
77
R
L


KECIOREN EAH
46236137
pelvis(alt batin) mr^RUTIN
t1_tse_tra +C
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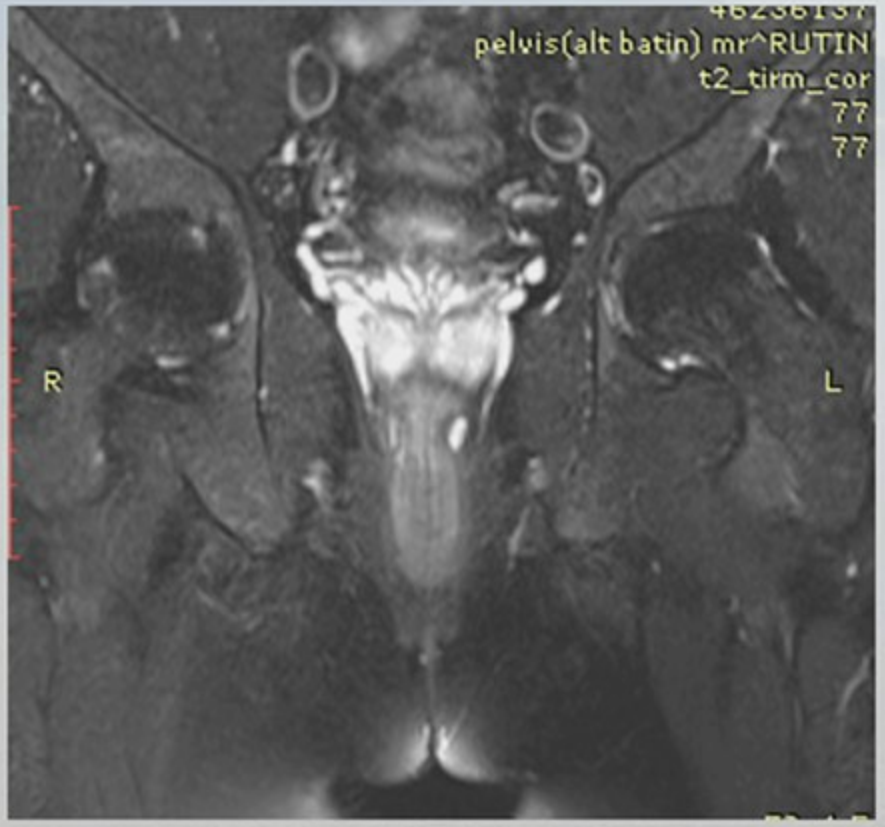
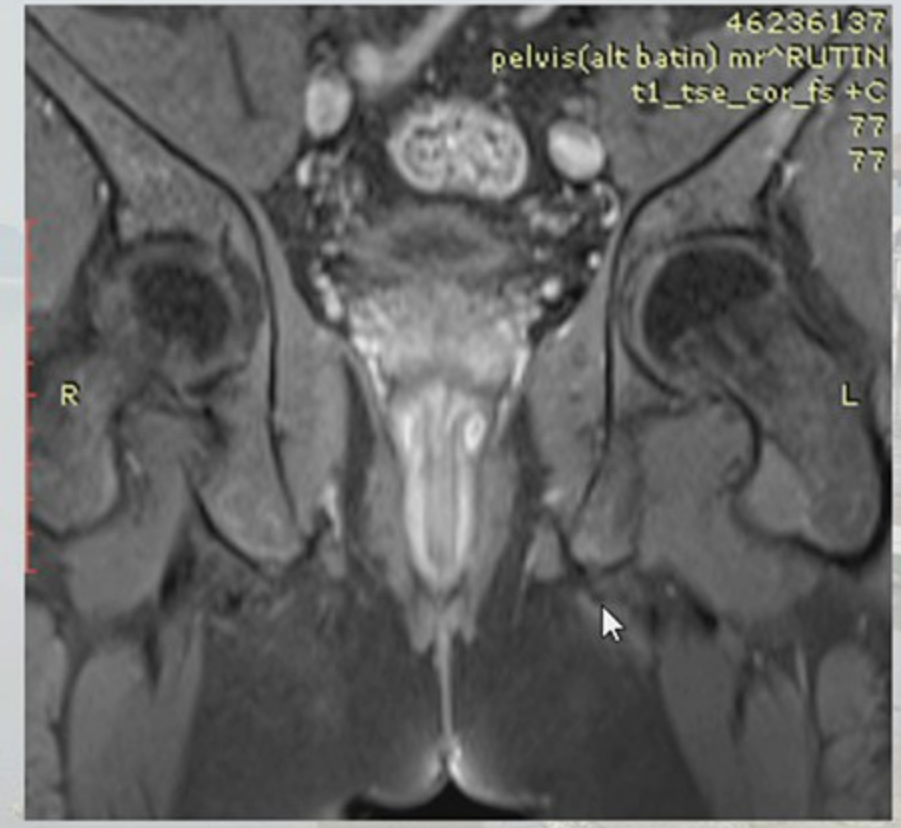
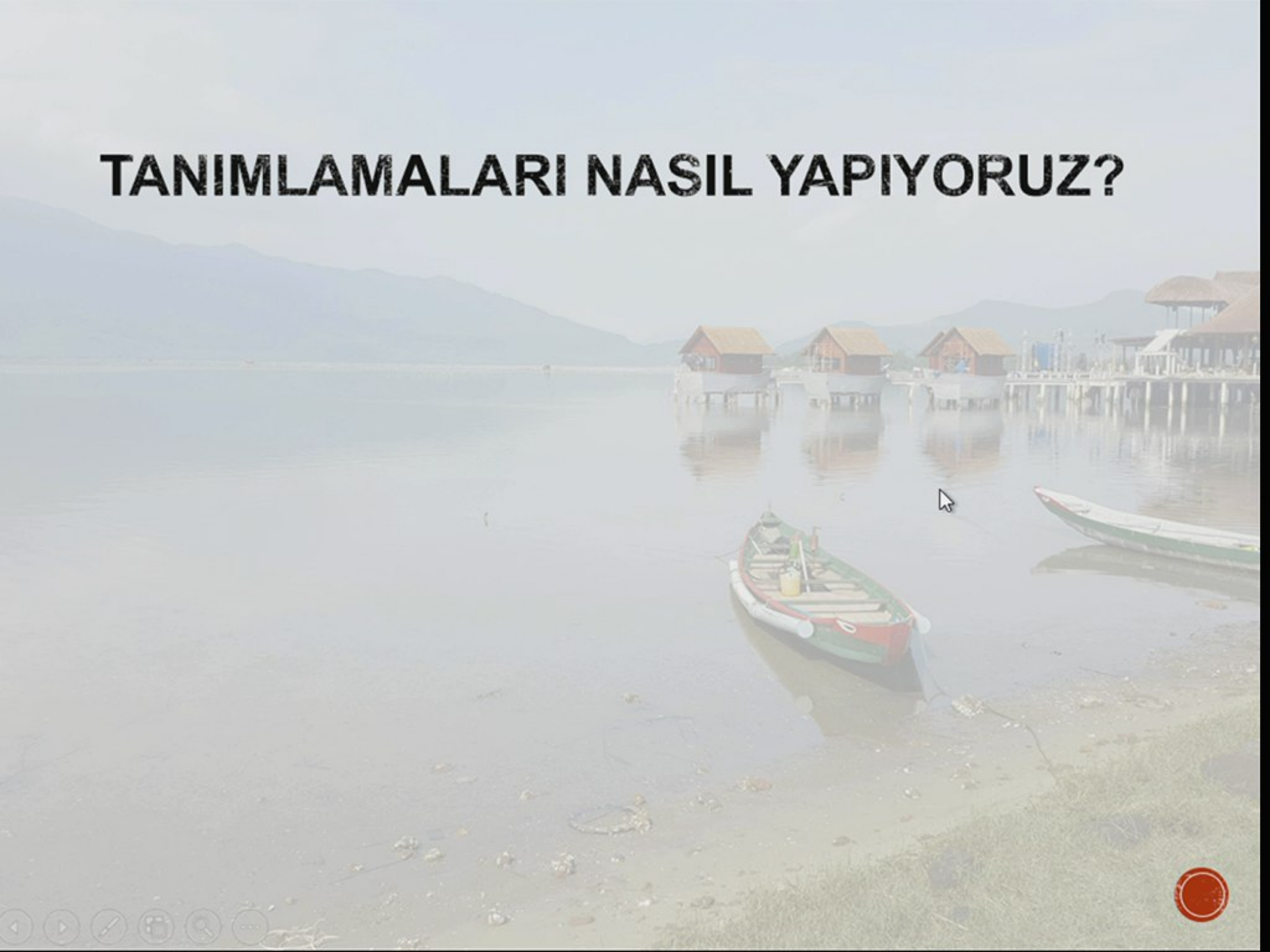
PERİANAL FİSTÜL

- Hangi sekanslar?

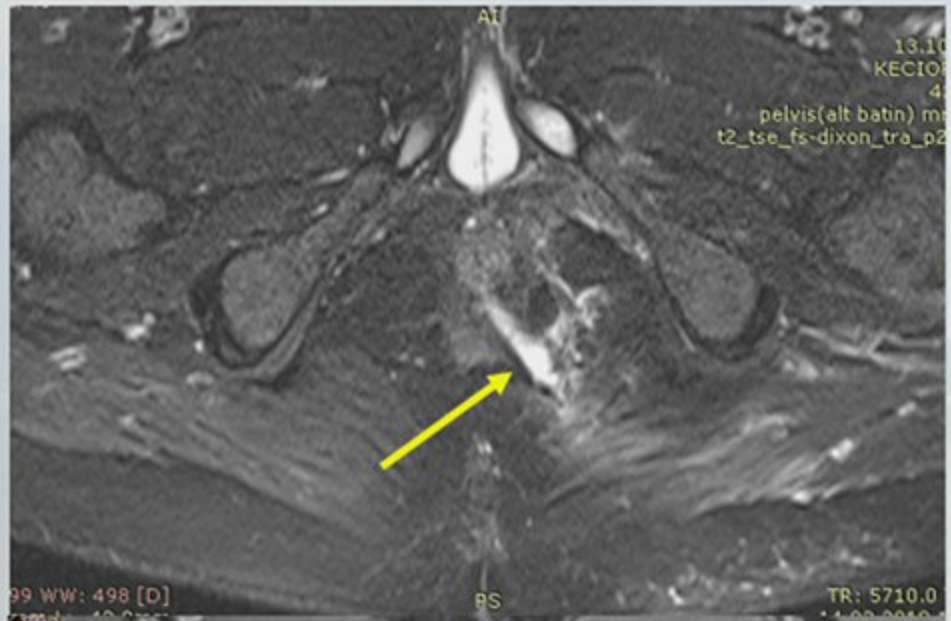


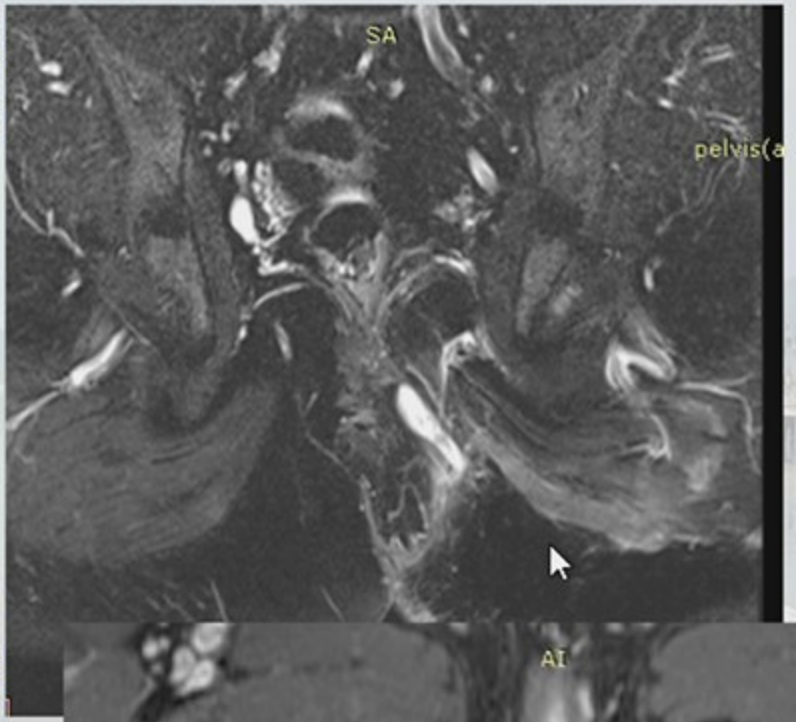


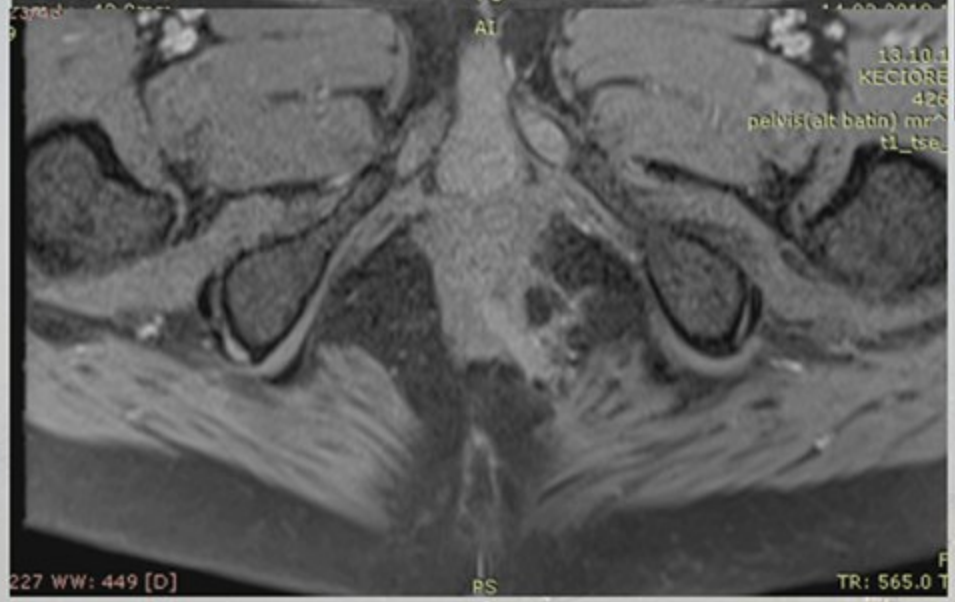
TANIMLAMALARI NASIL YAPIYORUZ?

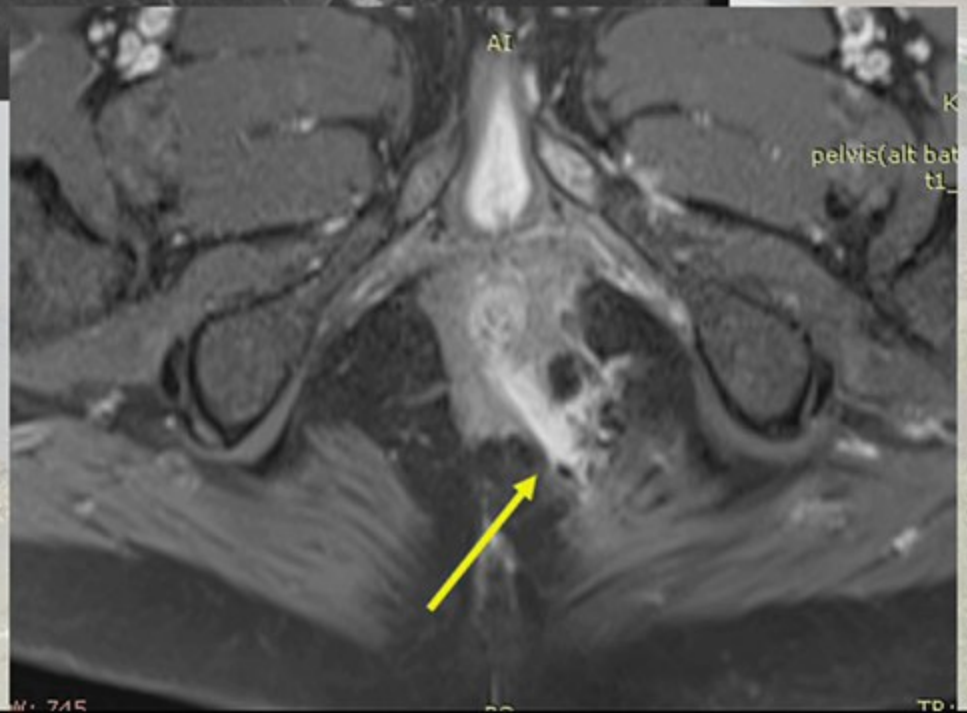


Aktif traktus ➤ T2a da hiperintens ve T1a KT(+)









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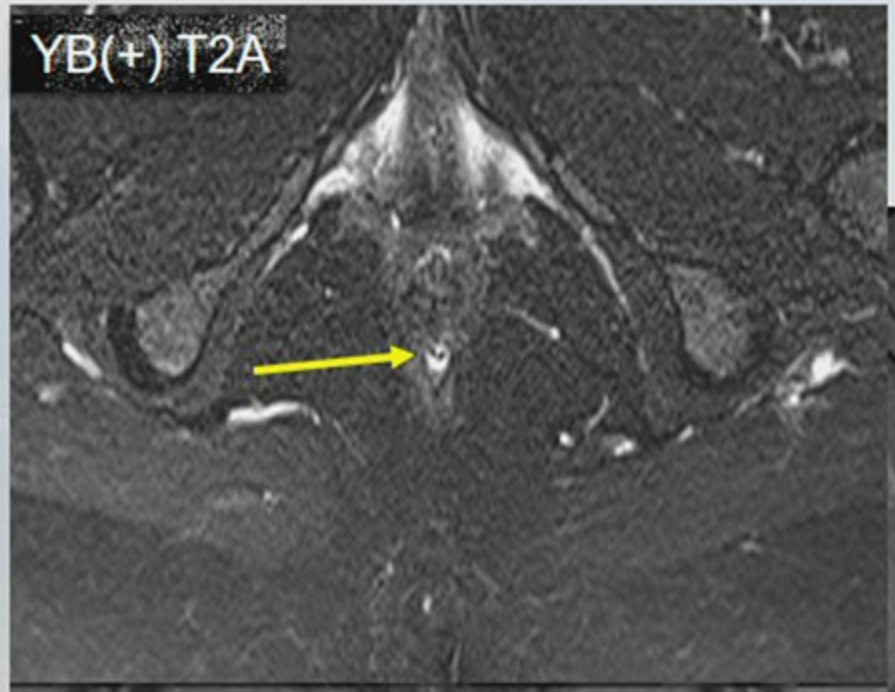
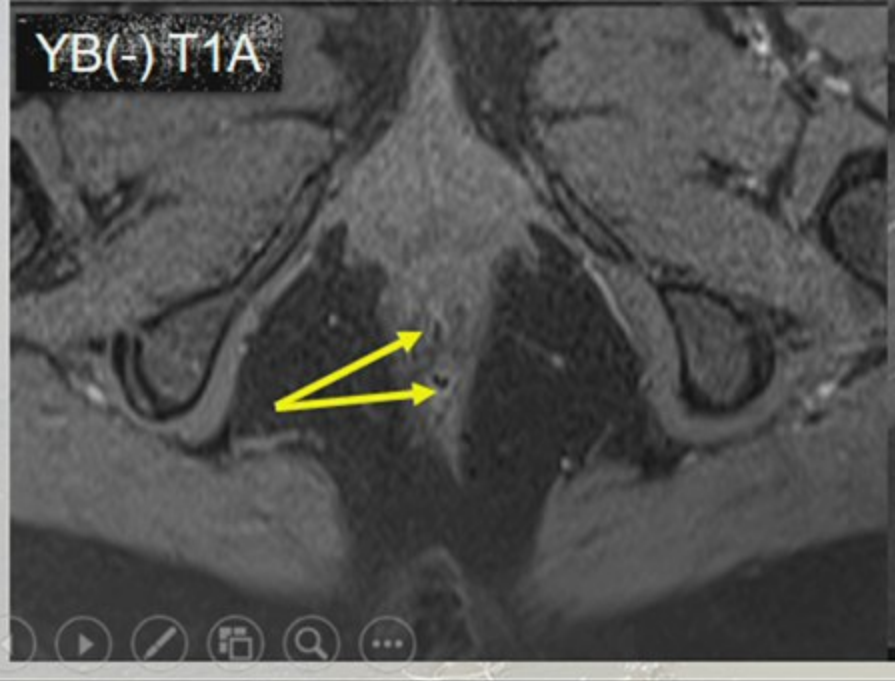
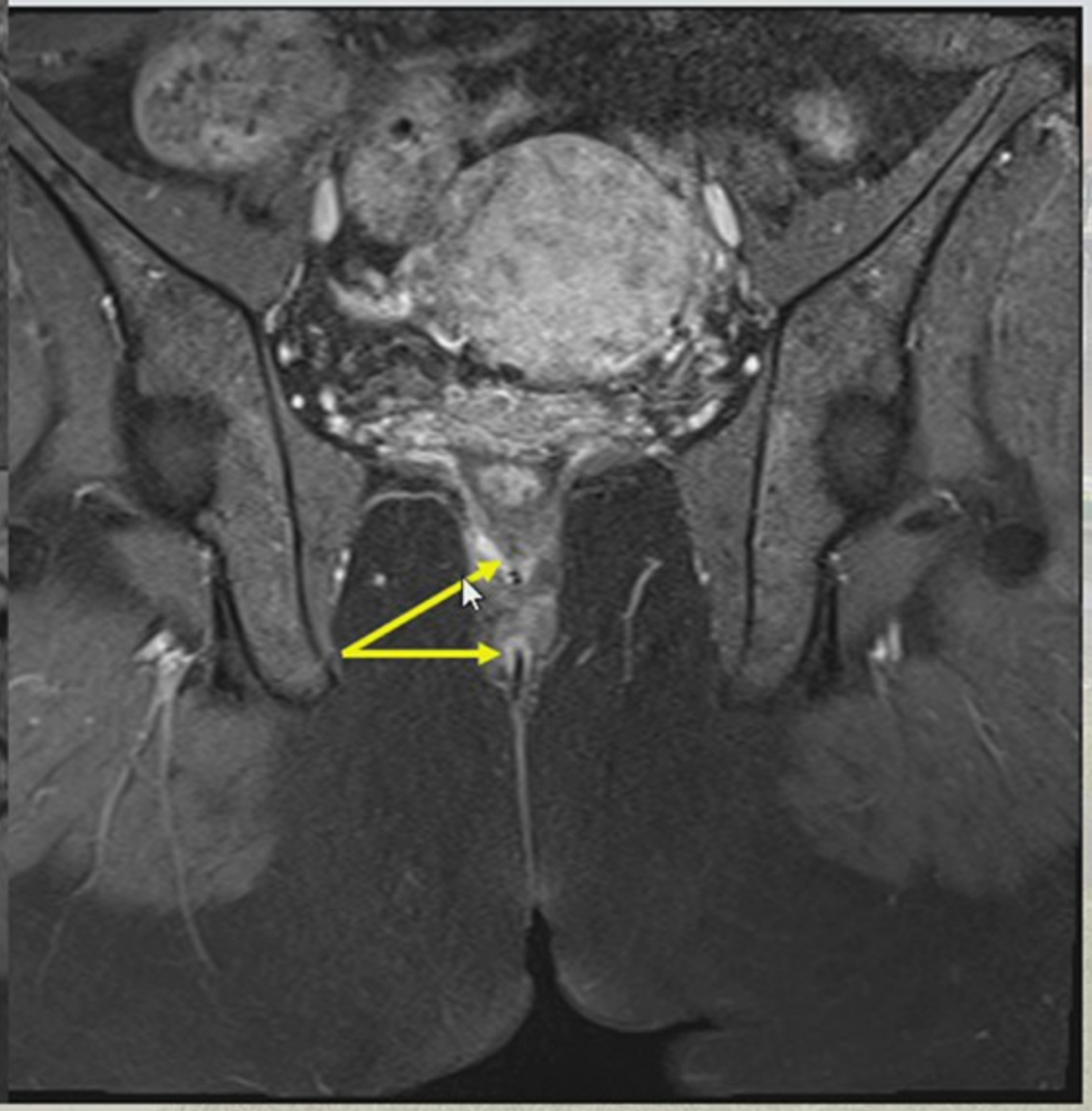
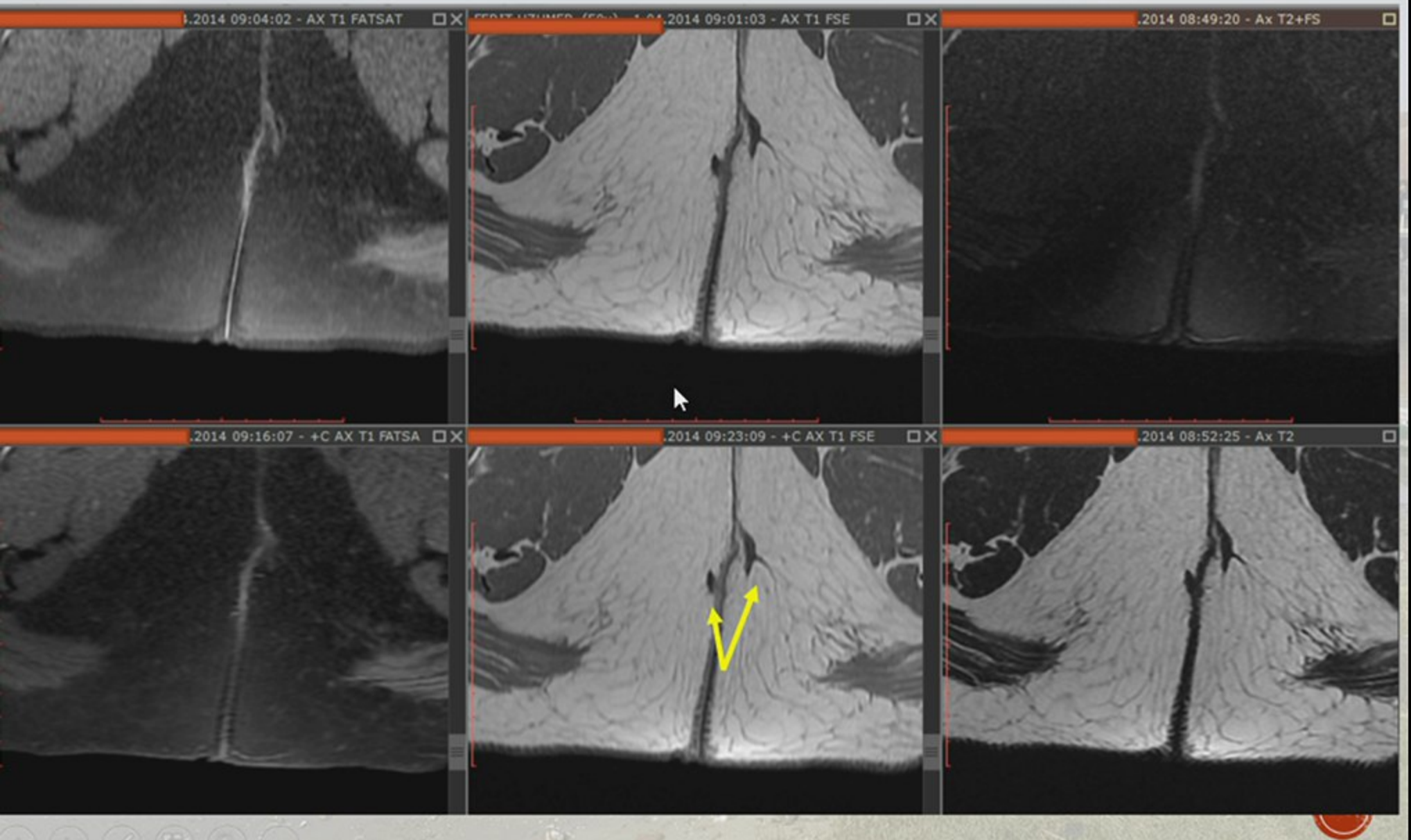


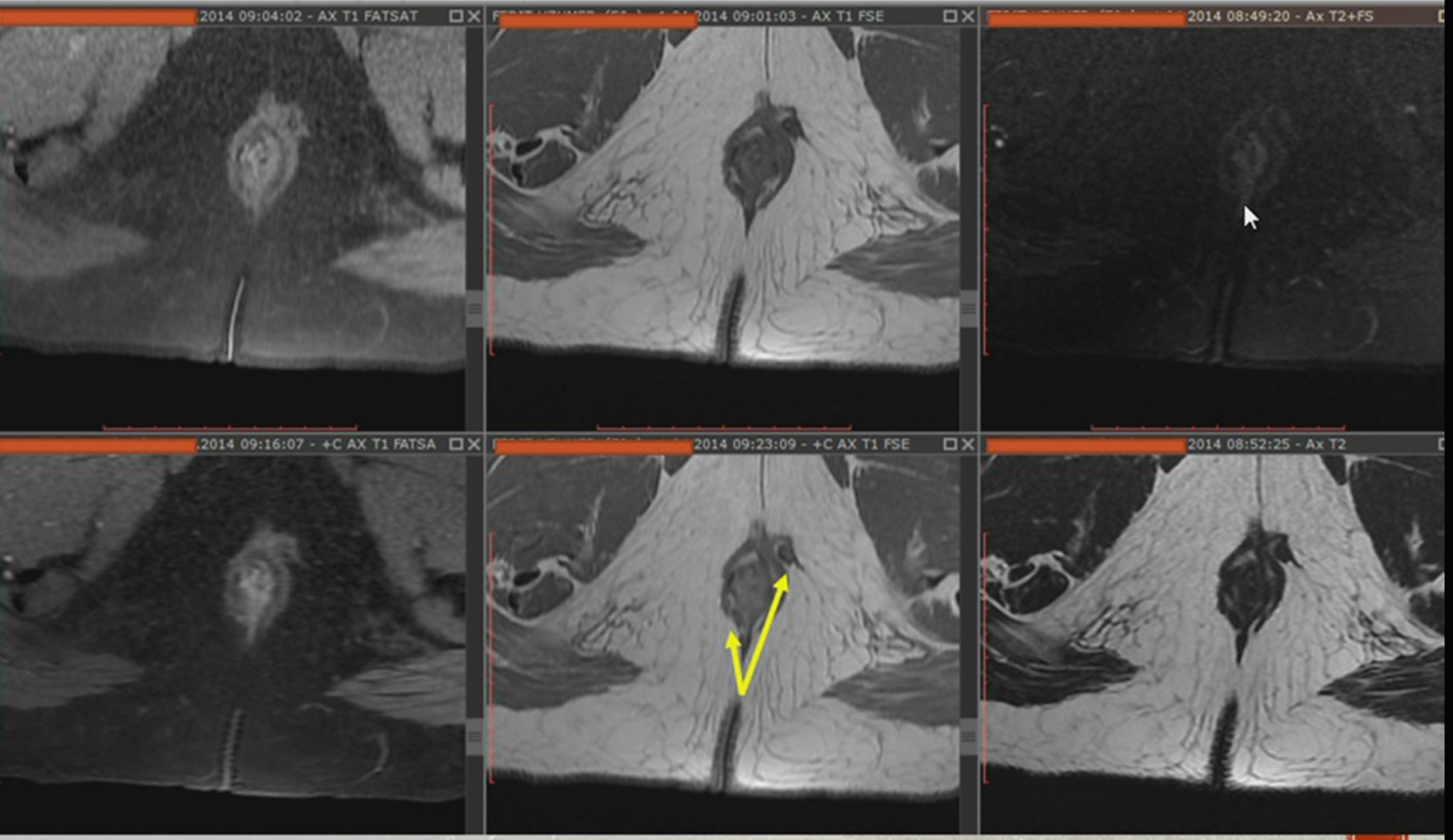




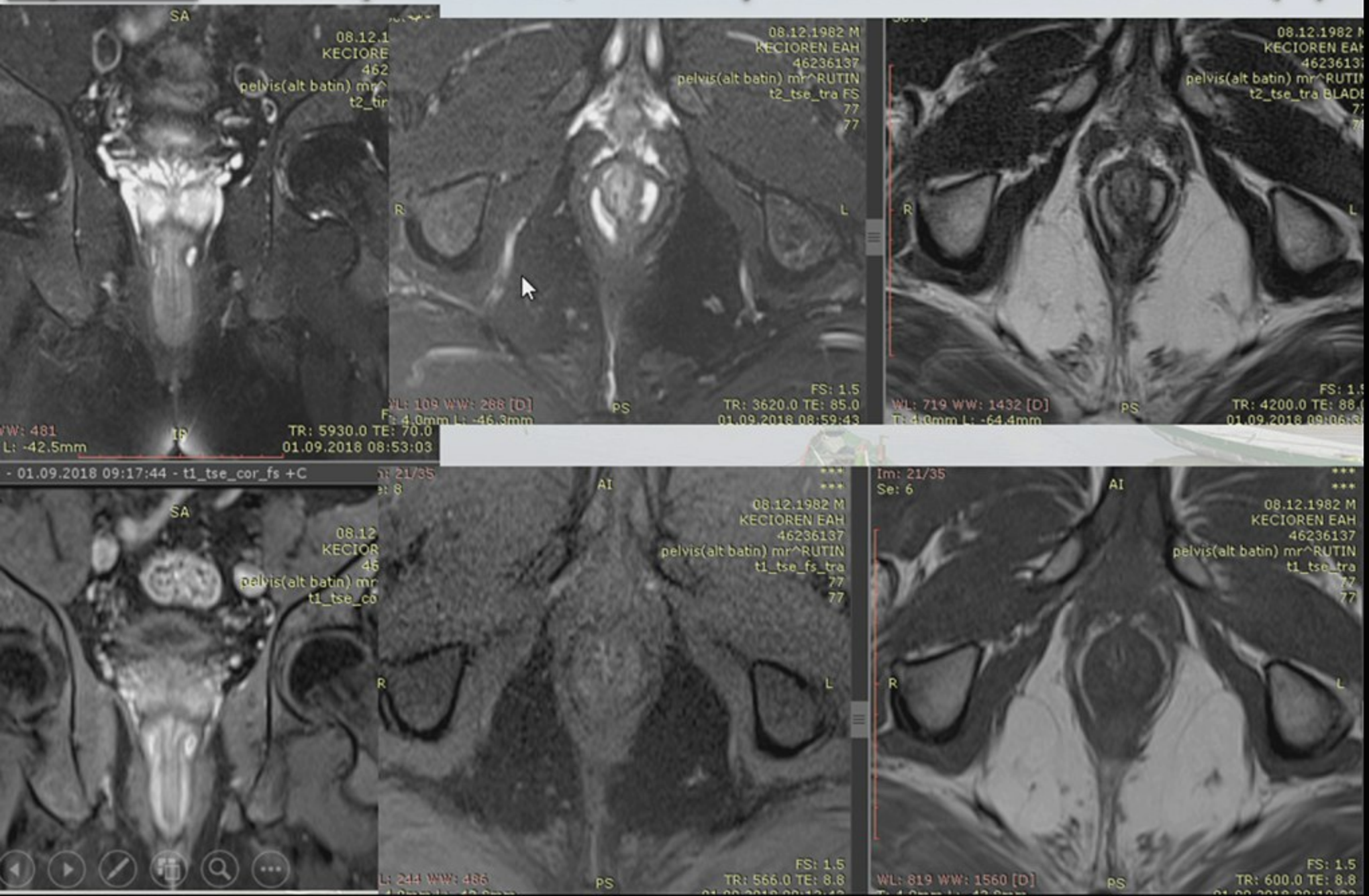
İnaktif traktus → T1a ve T2a da hipointens ve KT(-)



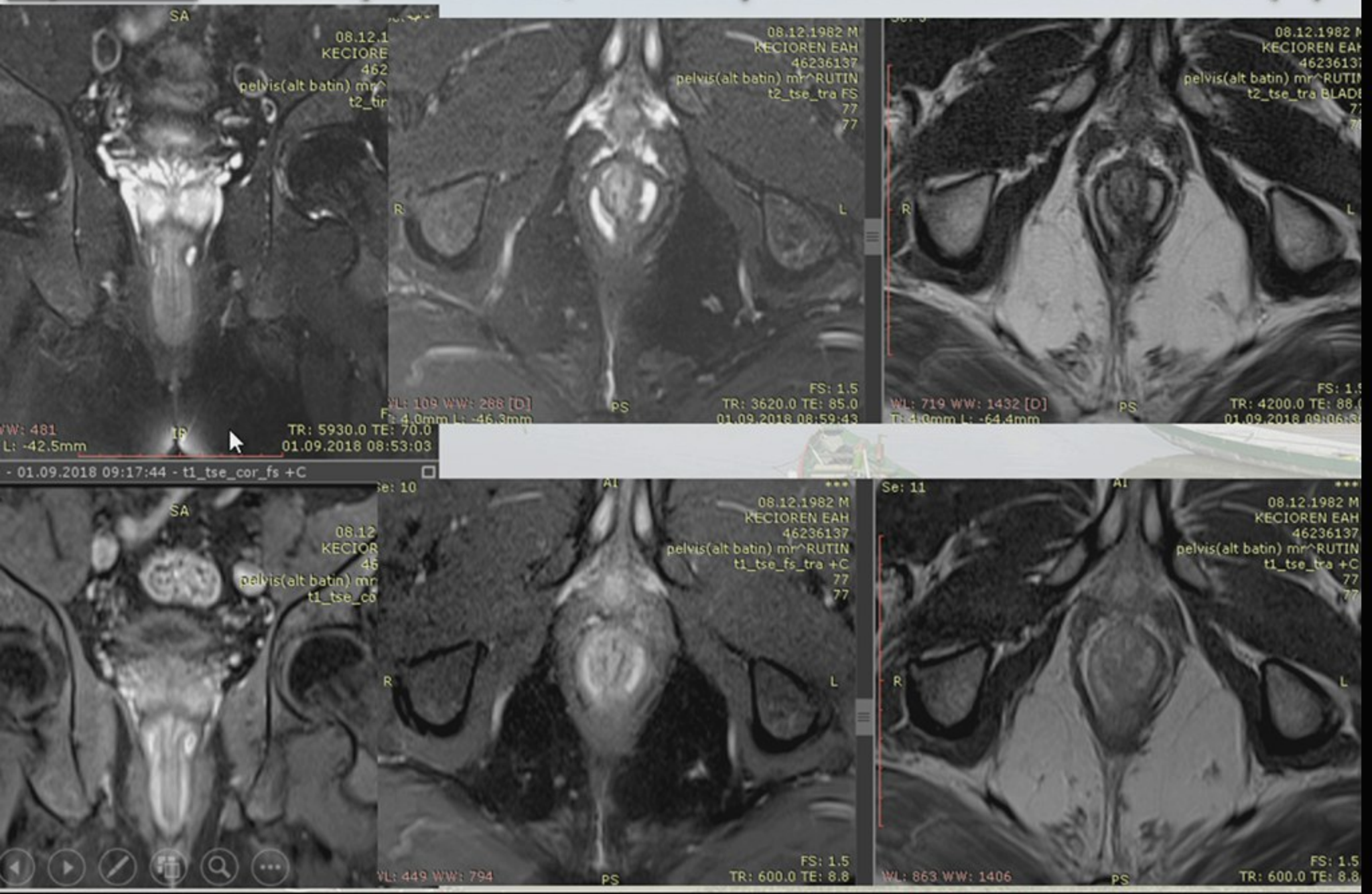
İnaktif traktus ➤ T1a ve T2a da hipointens ve KT(-)



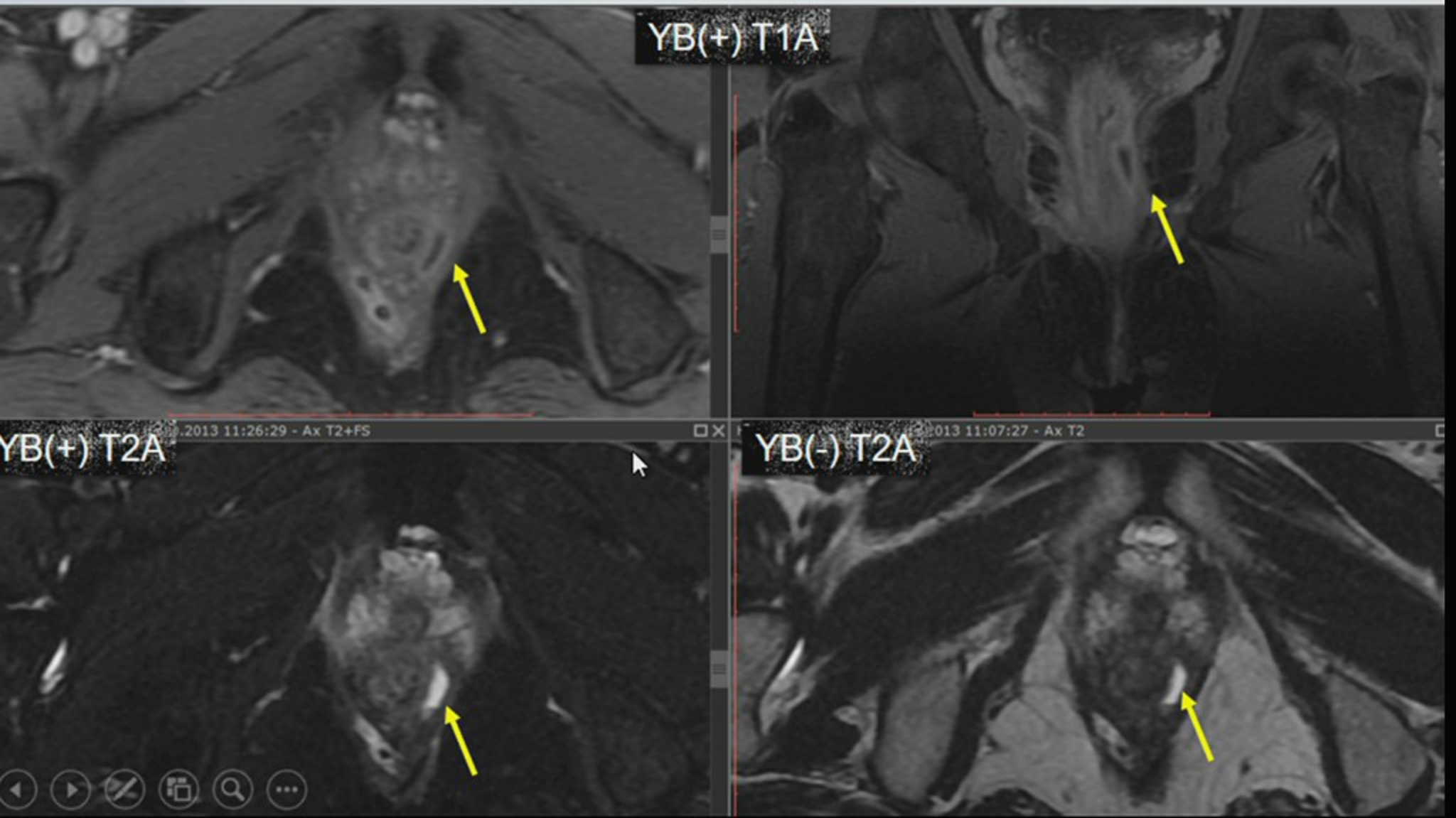
Apse ➤ T1a hipointens, T2a hiperintens ve duvar KT(+)



Apse ➤ T1a hipointens, T2a hiperintens ve duvar KT(+)

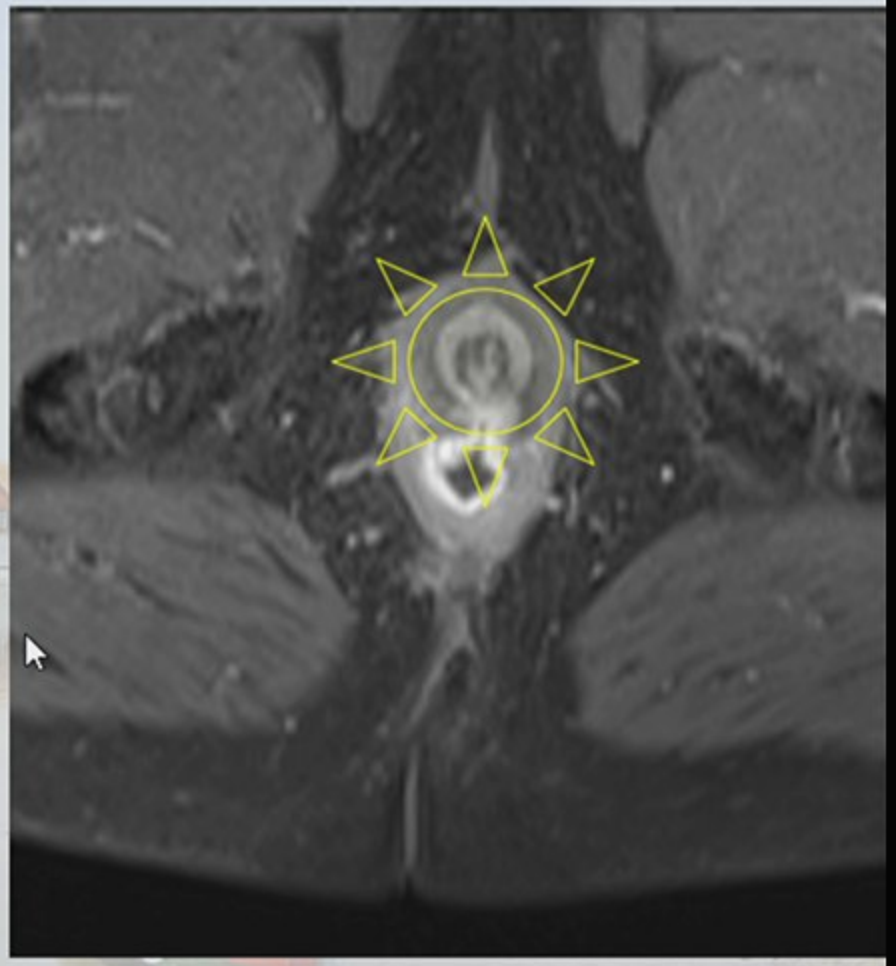


Apse ➤ T1a hipointens, T2a hiperintens ve duvar KT(+)

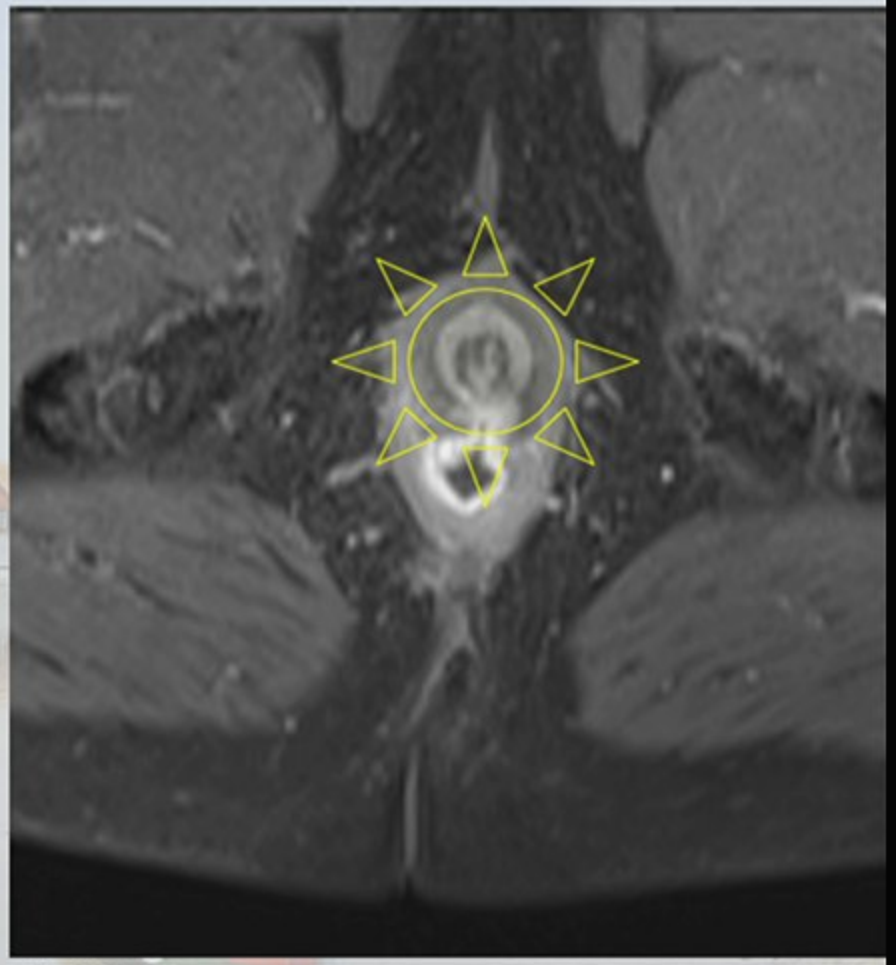


PERİANAL FİSTÜL

- Kompleks perianal fistüllerde, pre op MR ile rekürrens oranı %75 azalır



PERİANAL FİSTÜL

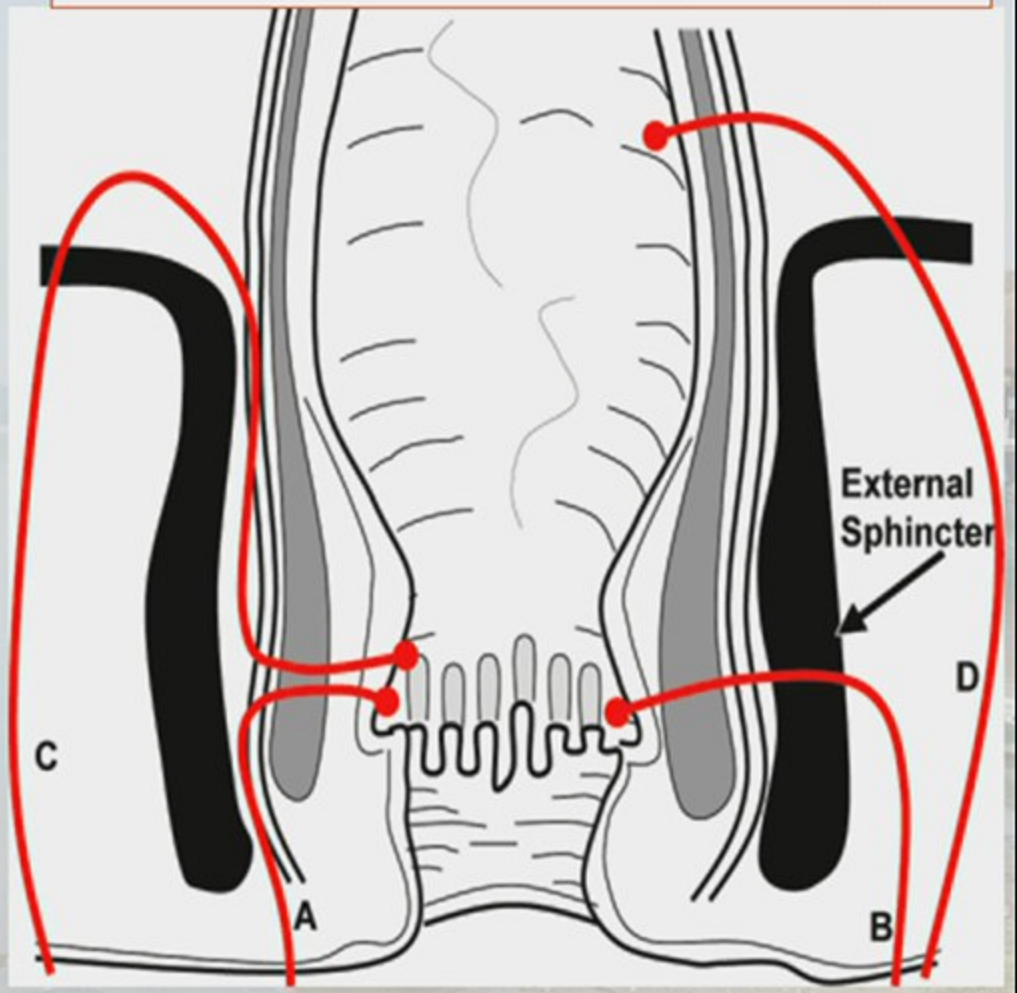


- Kompleks perianal fistüllerde, pre op MR ile rekürrens oranı %75 azalır

- saat kadranına göre
- iç ağız
- dış ağız
- ana fistül traktus seyri
- yan dal varlığı (rekürrens riski?)
- sfinkter/anal kanal ile ilişki (enkoprezis riski?)
- diğer komşulukları
- +/- apse
- supralevator uzanım

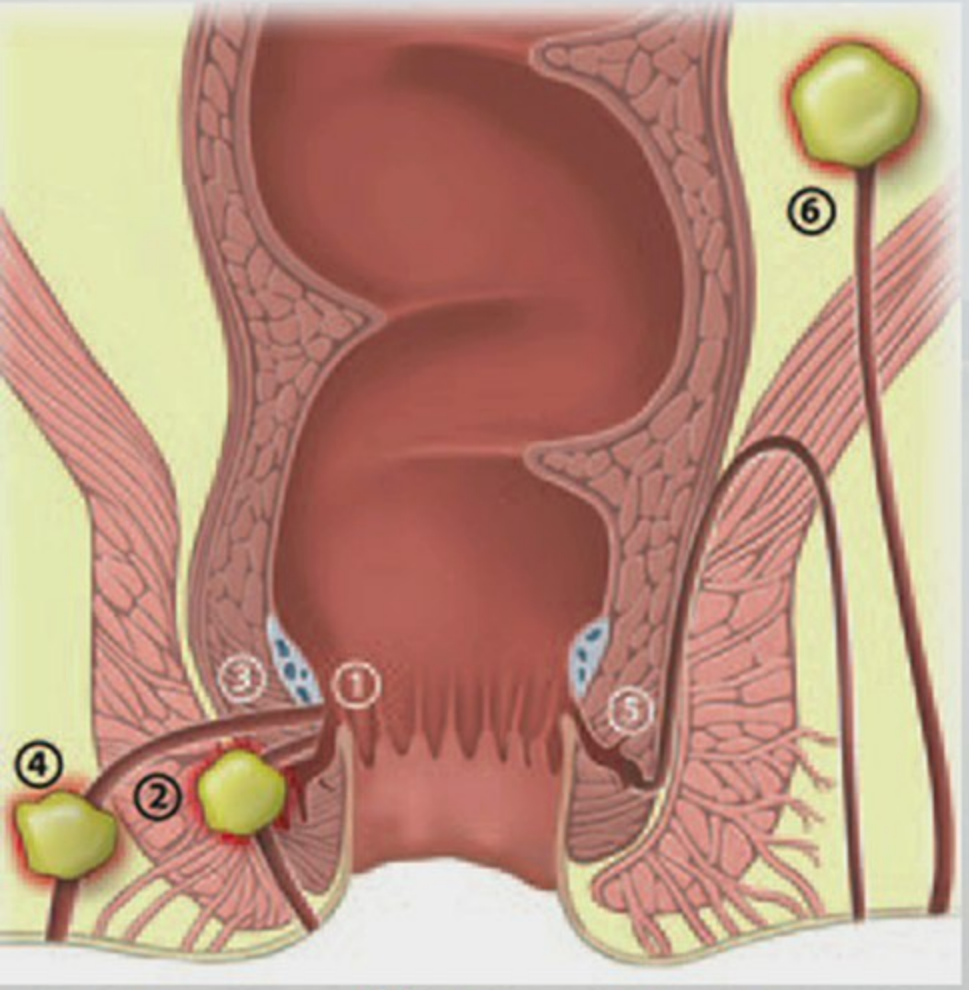
PERİANAL FİSTÜL

Park sınıflaması (1976)



RadioGraphics 2012; 32:175–194

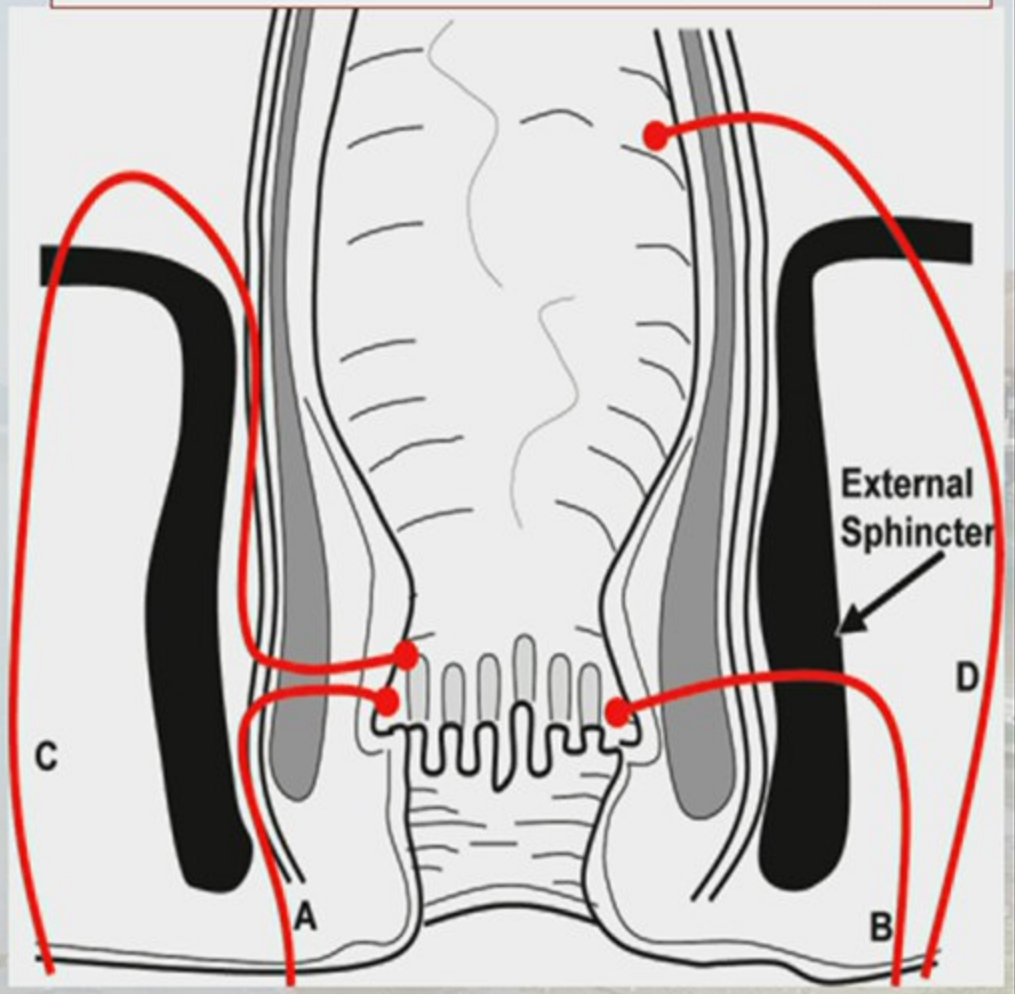
PERİANAL FİSTÜL



St James Üniversitesi Hastanesinin sınıflaması (2000)

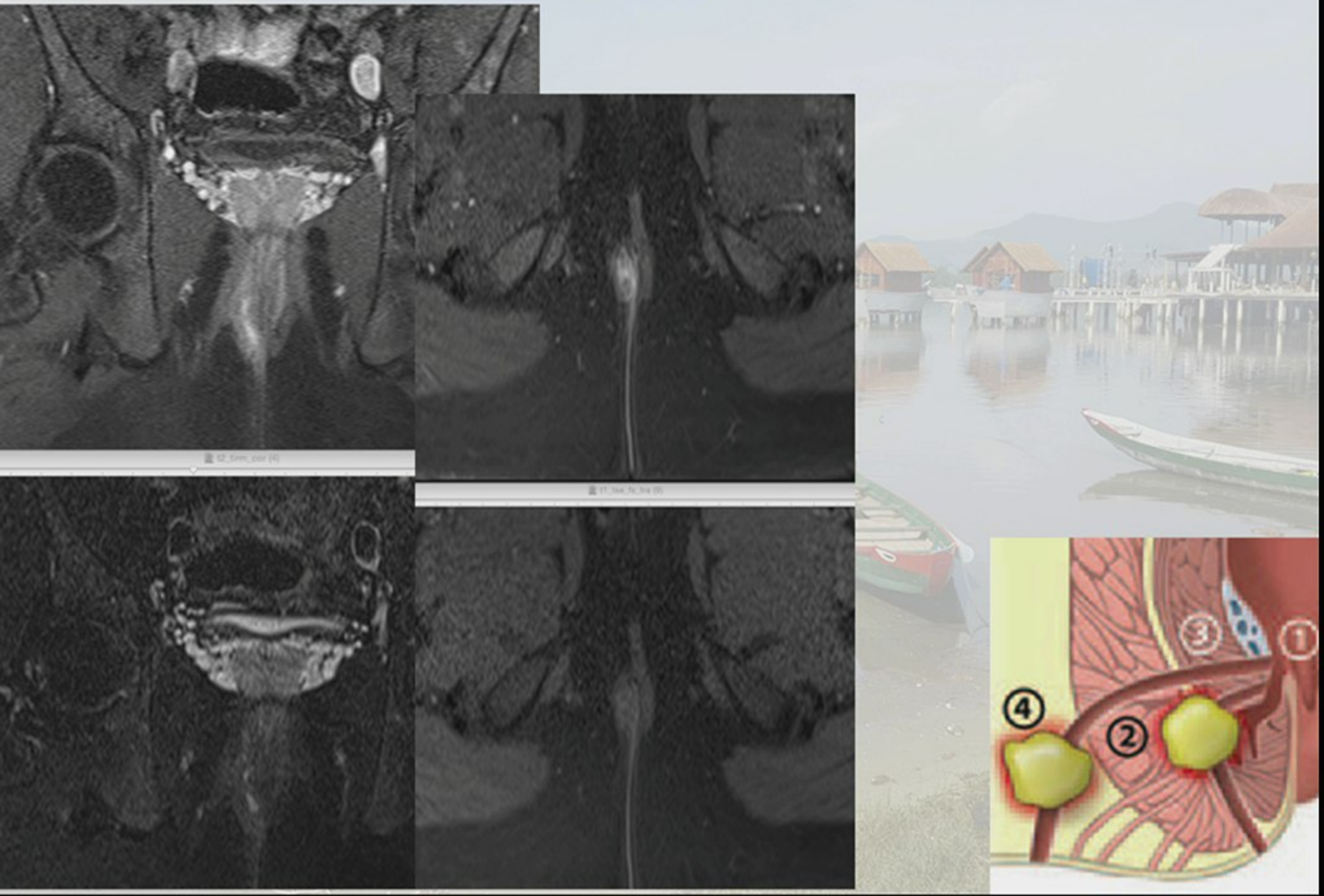
AJR 2012; 199:W43–W53

Park sınıflaması (1976)

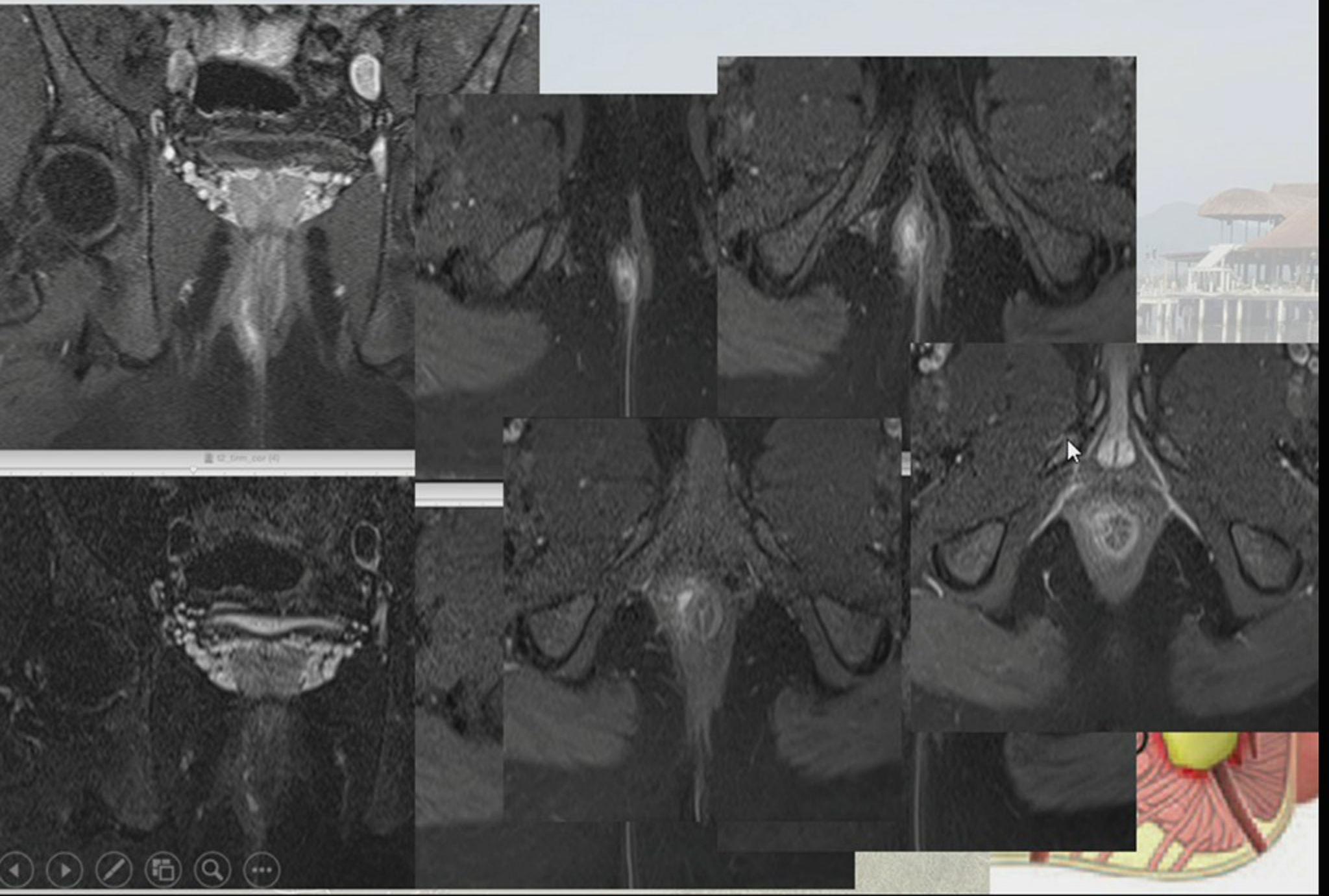


RadioGraphics 2012; 32:175–194

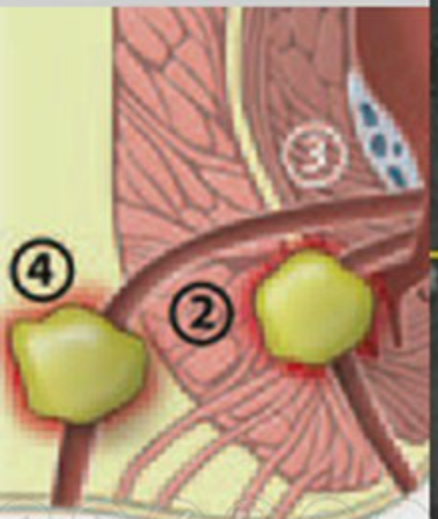
EVRE 1: Basit Lineer İntersfinkterik Fistül



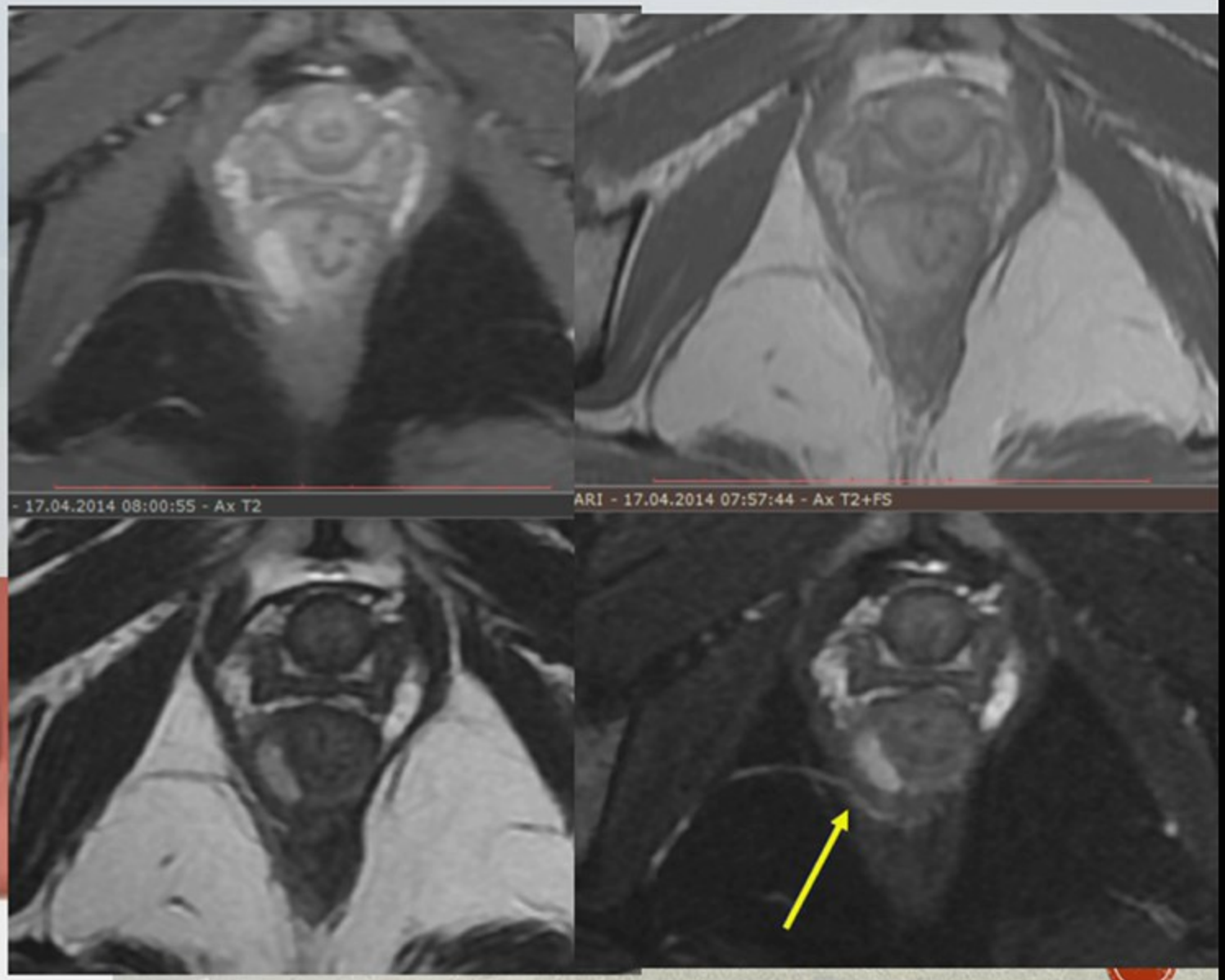
EVRE 1: Basit Lineer İntersfinkterik Fistül

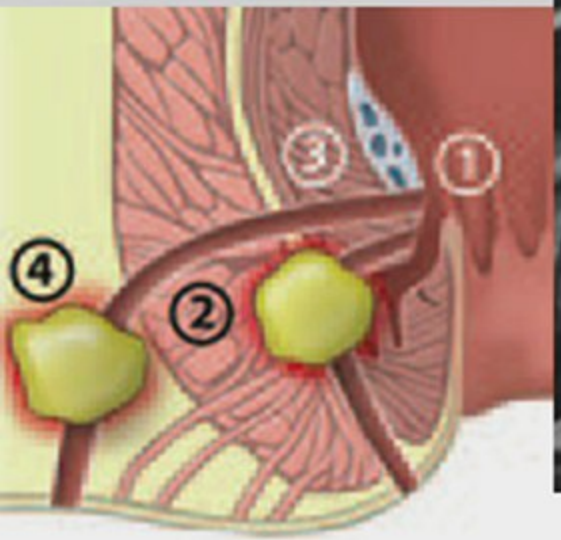


EVRE 2: İntersfinkterik Fistül ve İntersfinkterik Apse veya Yan Dal

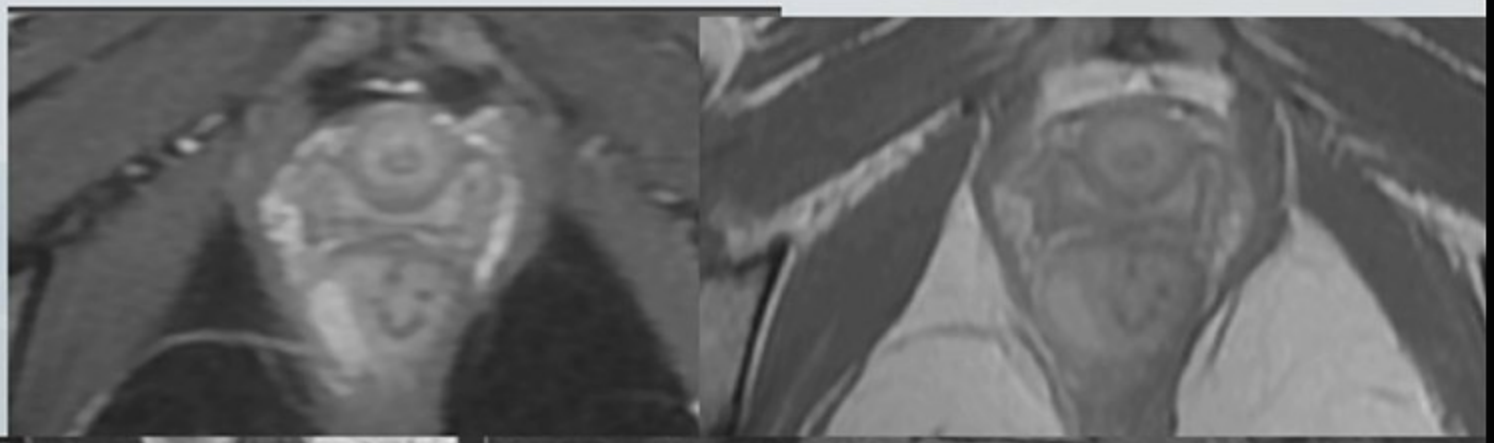


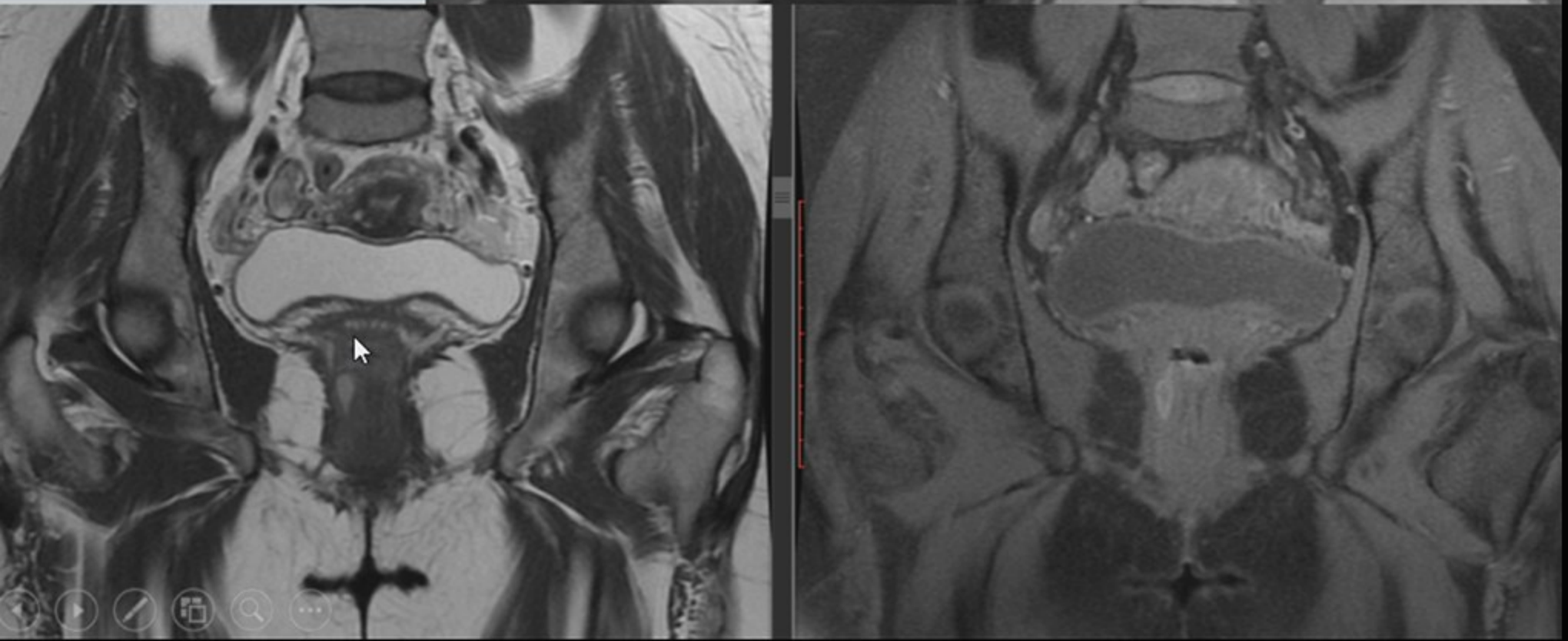
EVRE 2: İntersfinkterik Fistül ve İntersfinkterik Apse veya Yan Dal



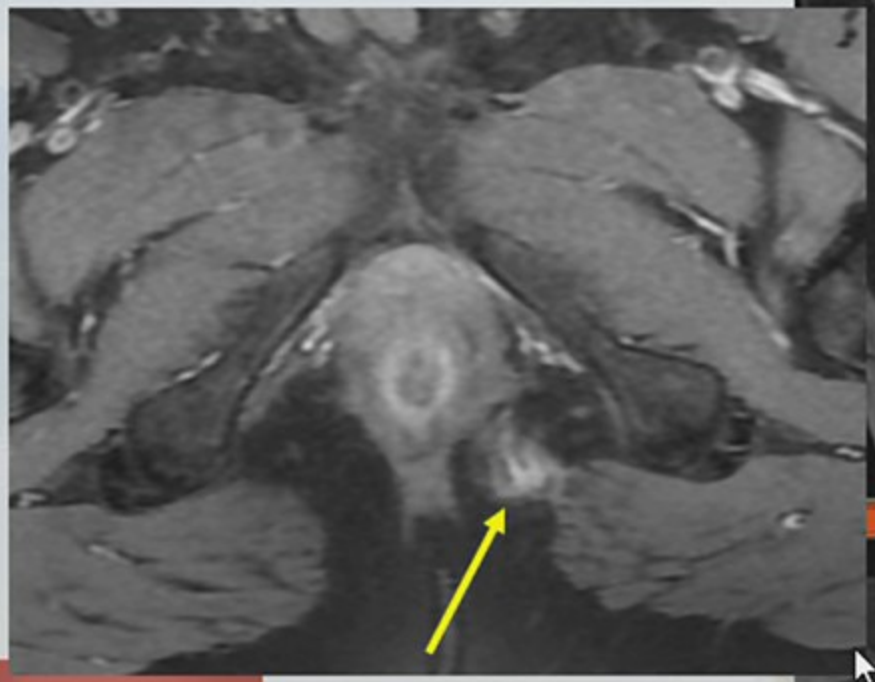


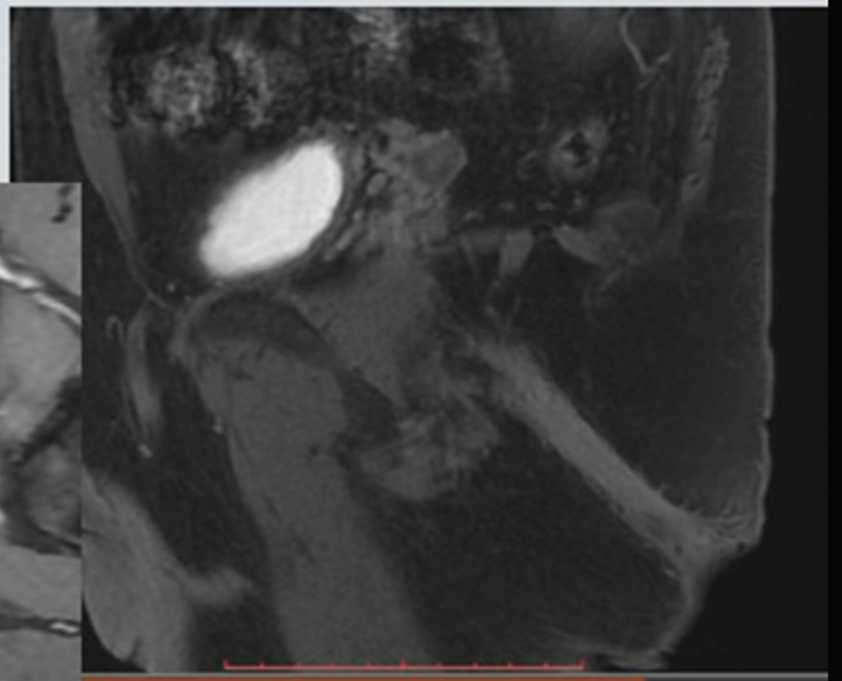
EVRE 2: İntersfinkterik Fistül ve İntersfinkterik Apse veya Yan Dal

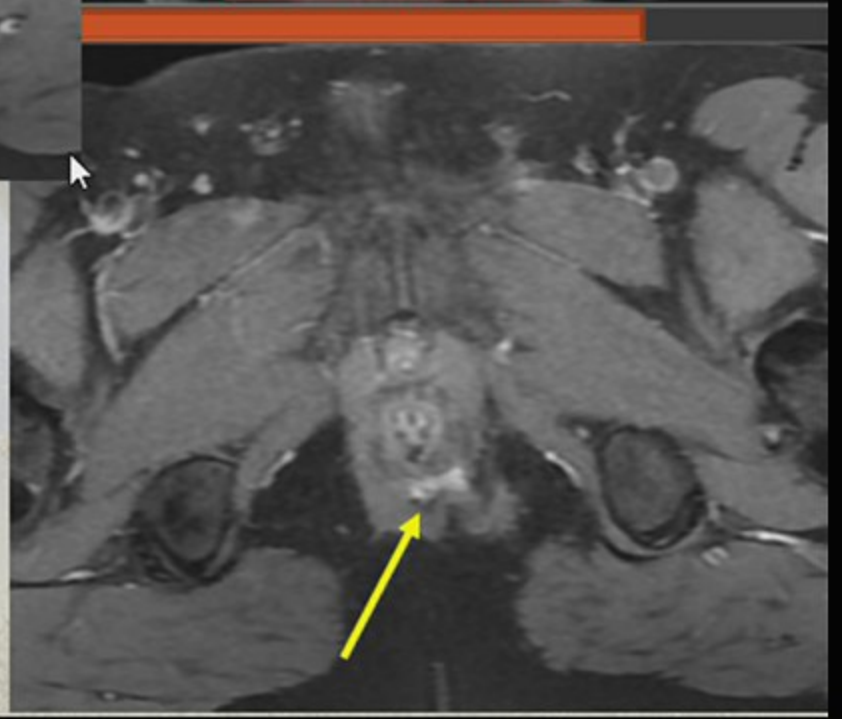


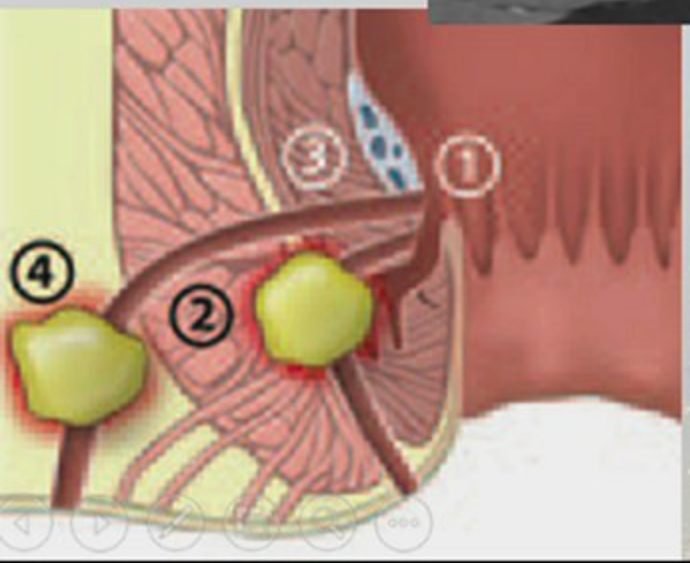


EVRE 3: Transsfinkterik Fistül

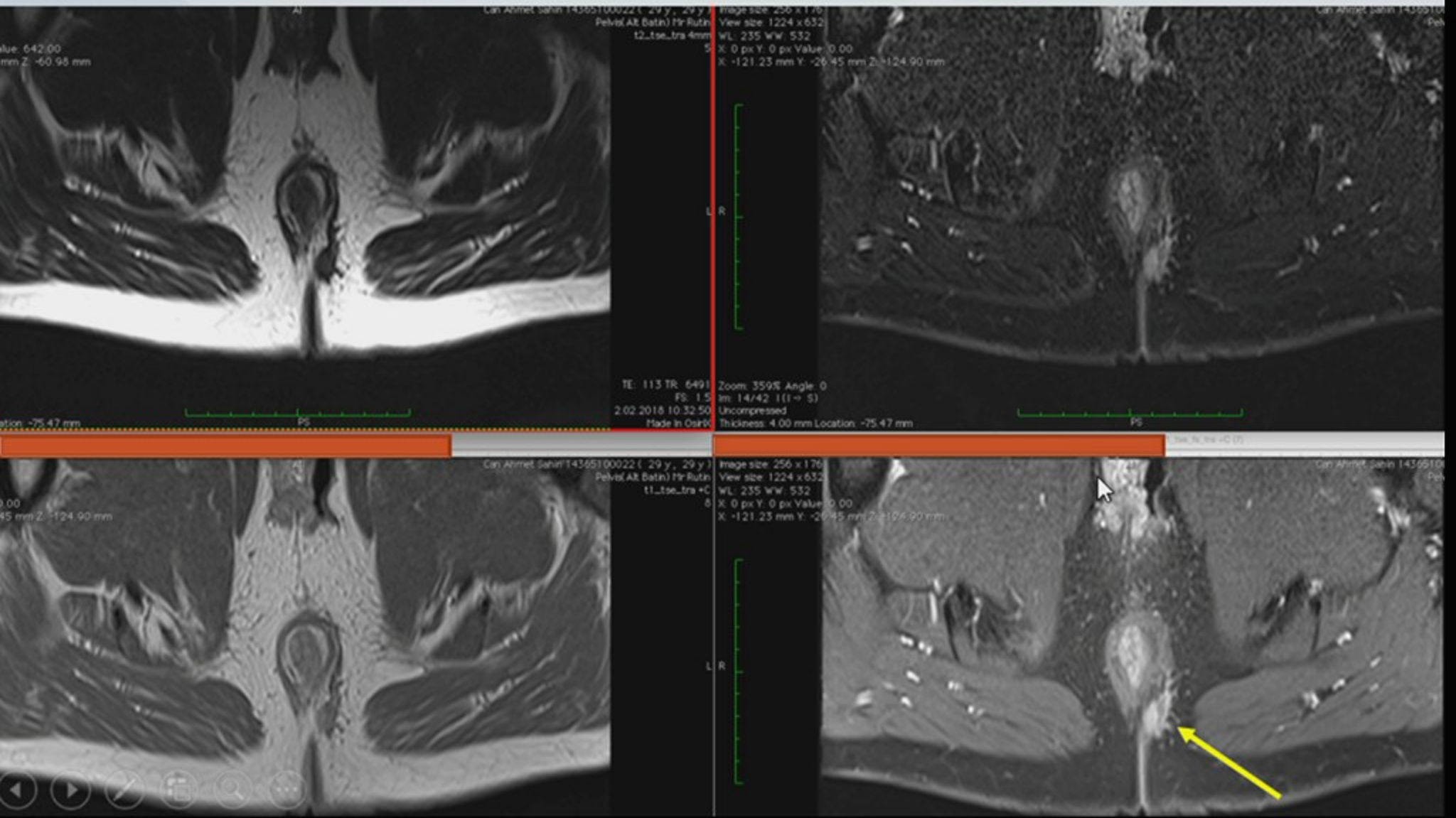




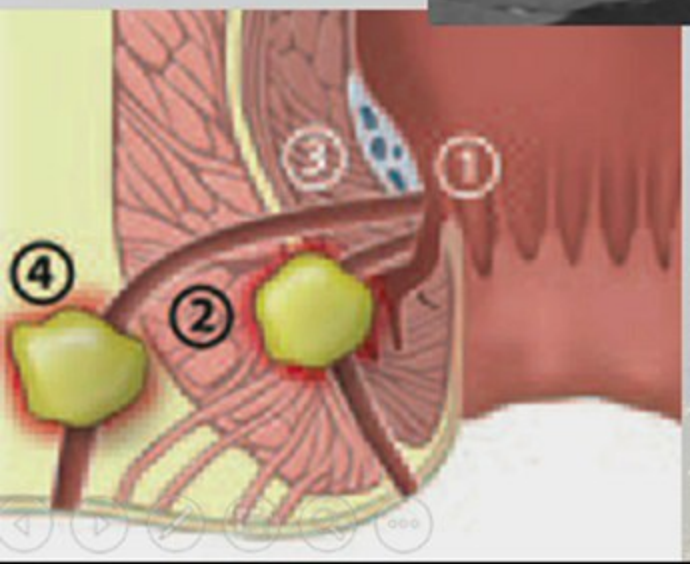




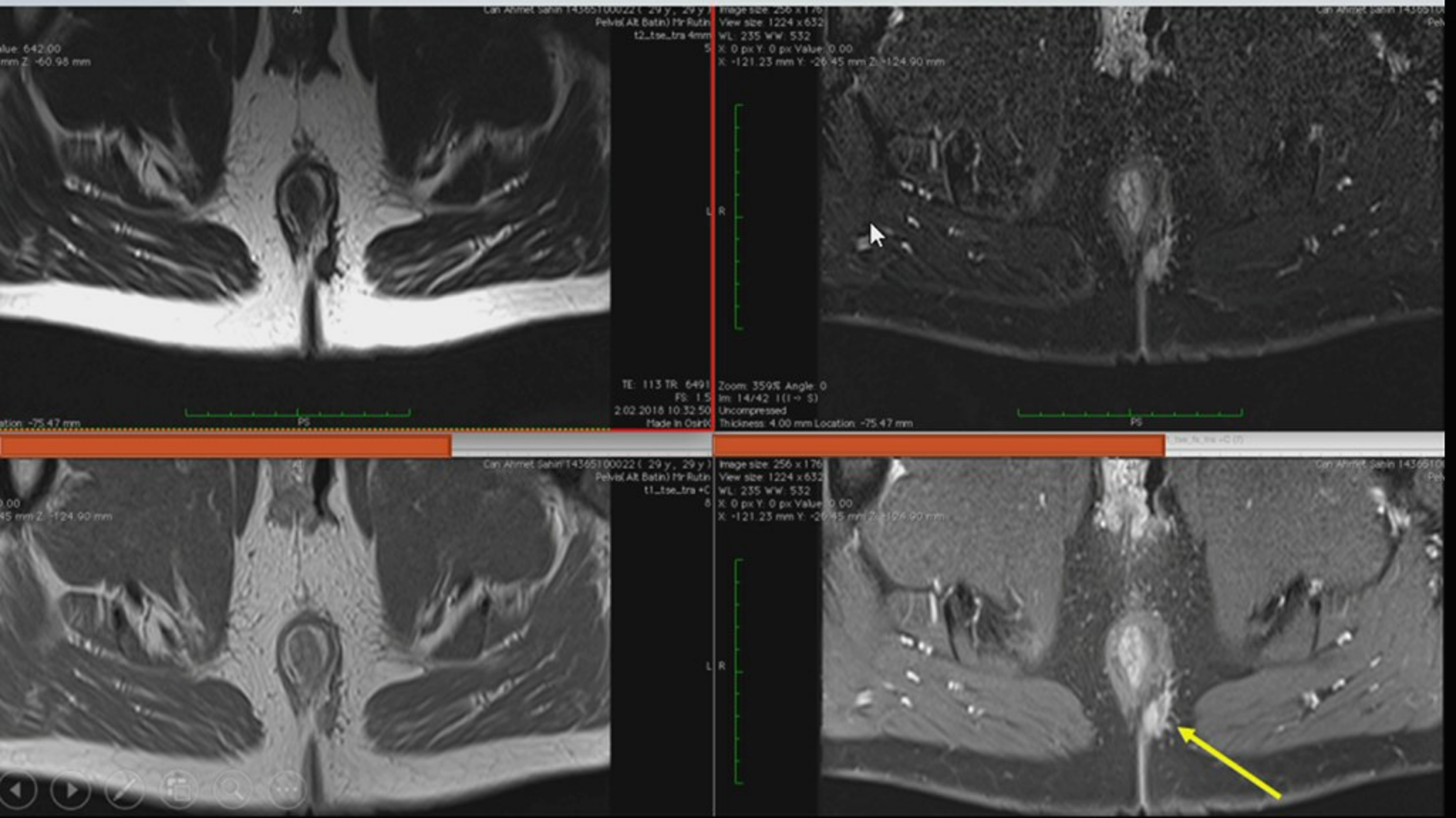
EVRE 3: Transsfinkterik Fistül

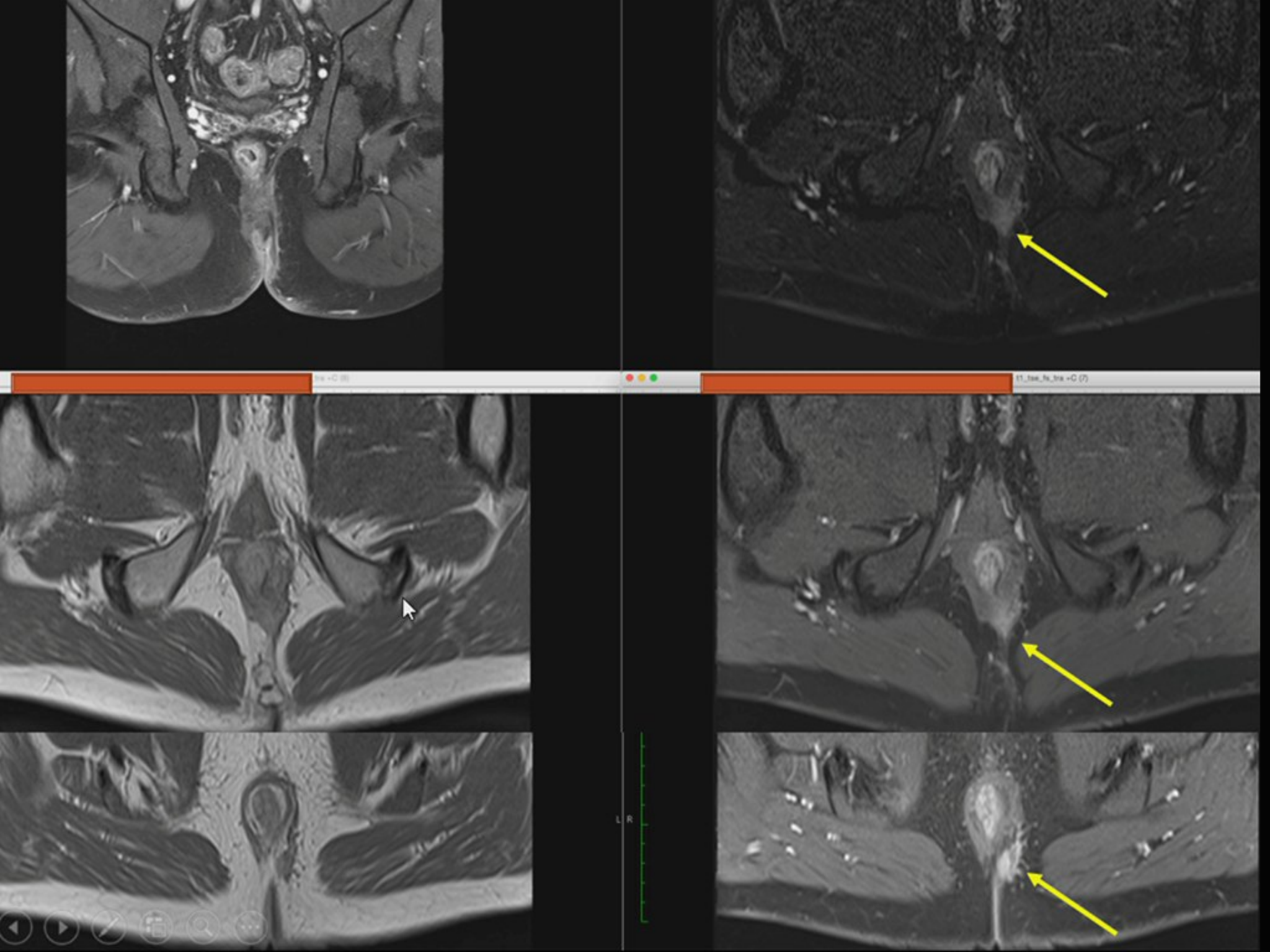


EVRE 3: Transsfinkterik Fistül

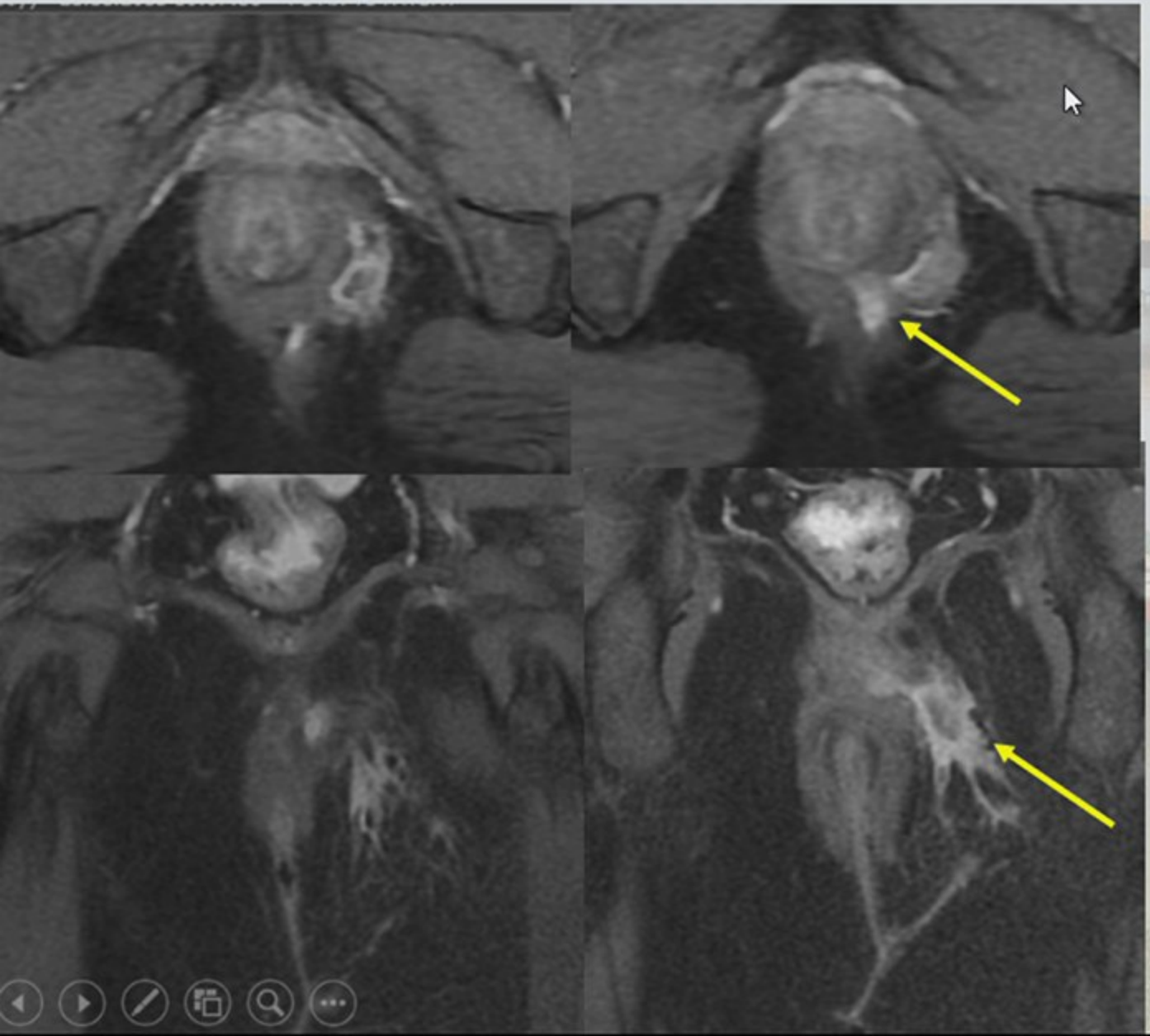


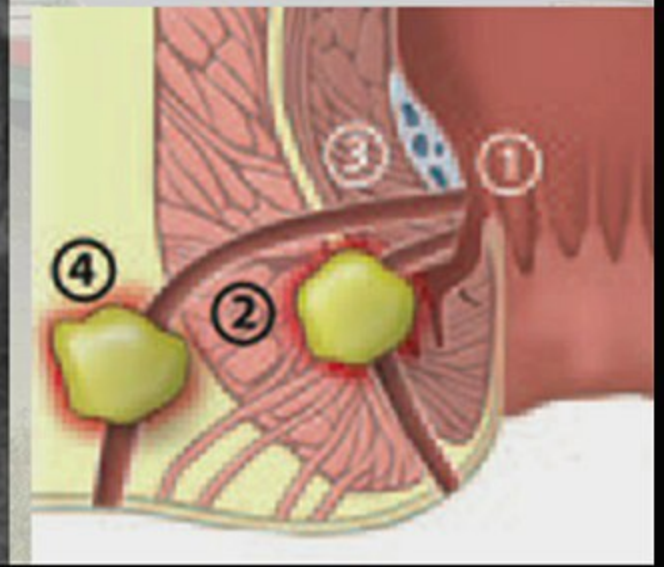
EVRE 3: Transsfinkterik Fistül



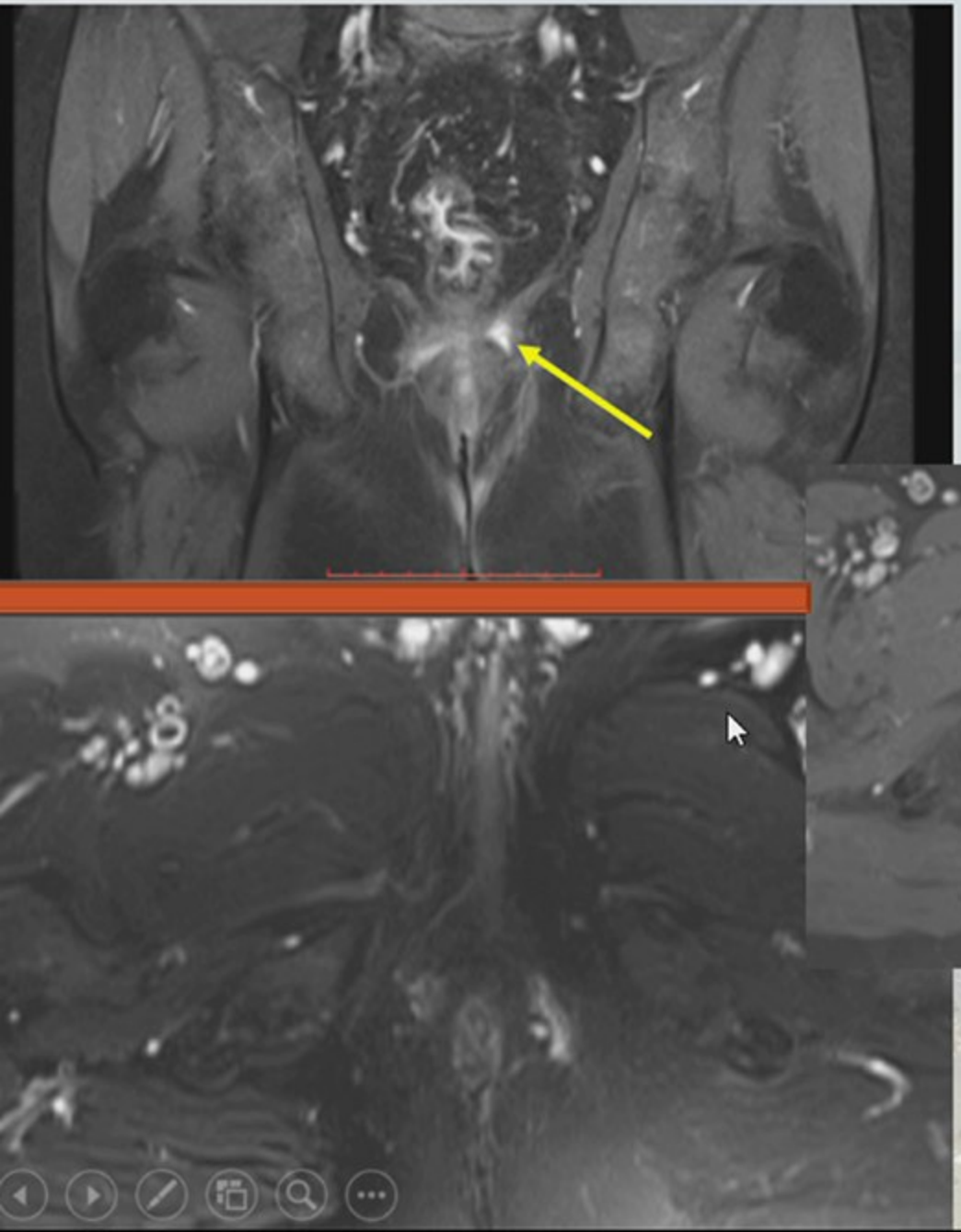


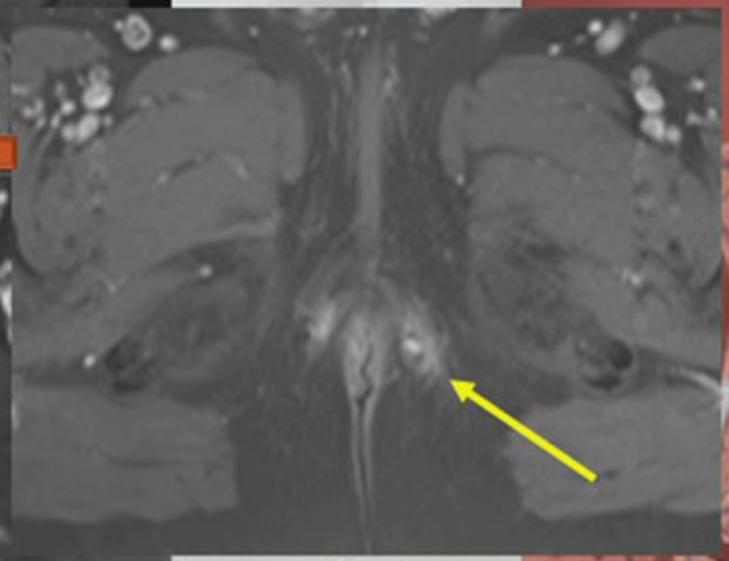
EVRE 4: Transsfinkterik Fistül ve İskioanal Fossada Apse veya Yan Dal

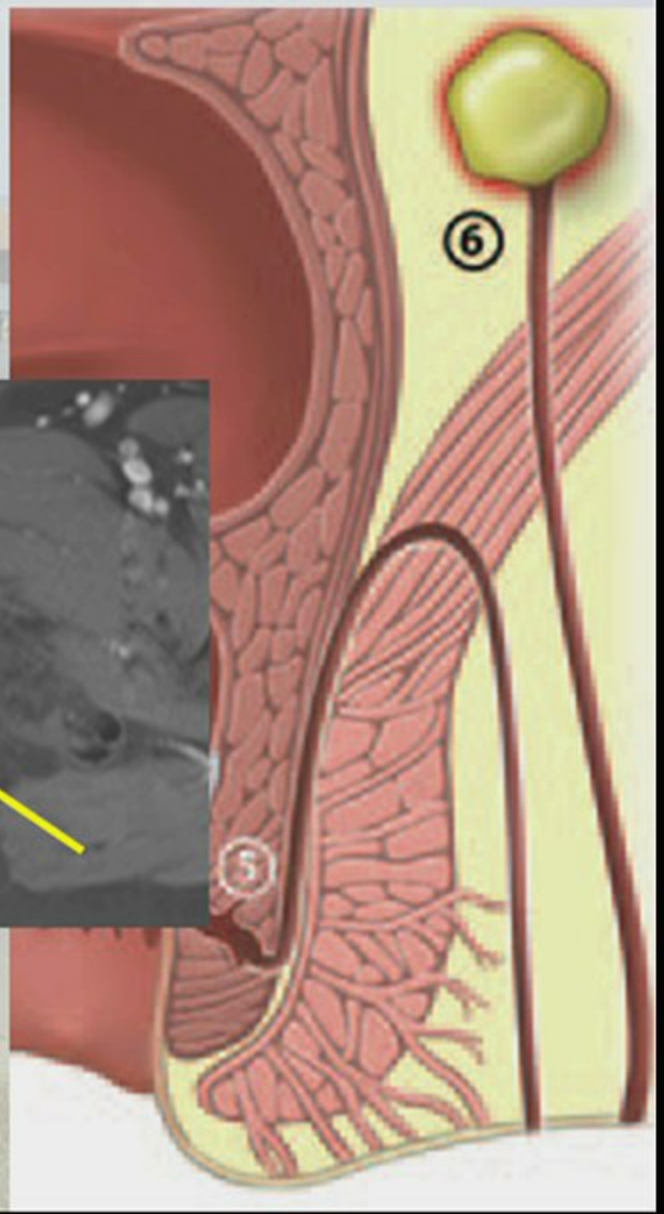




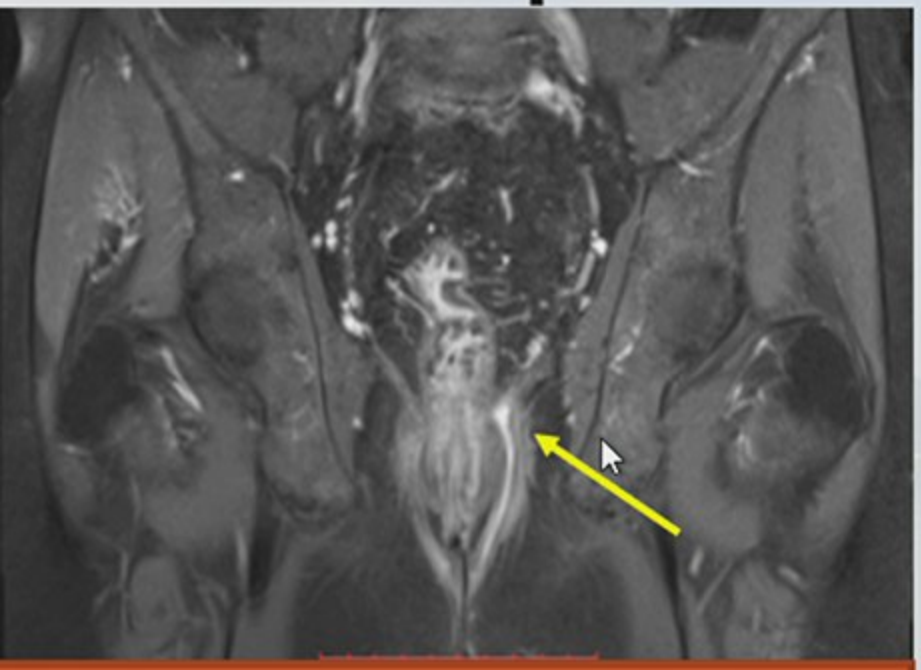
EVRE 5: Supralevator ve Translevator Fistül

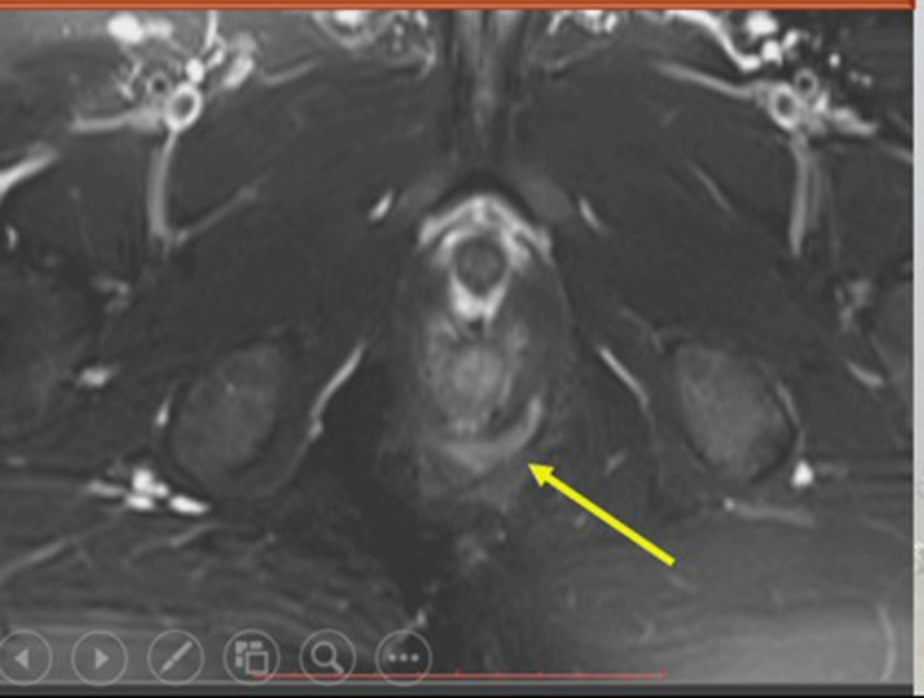


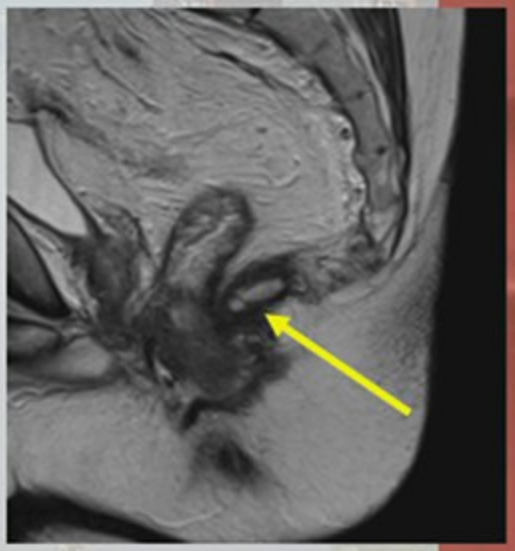


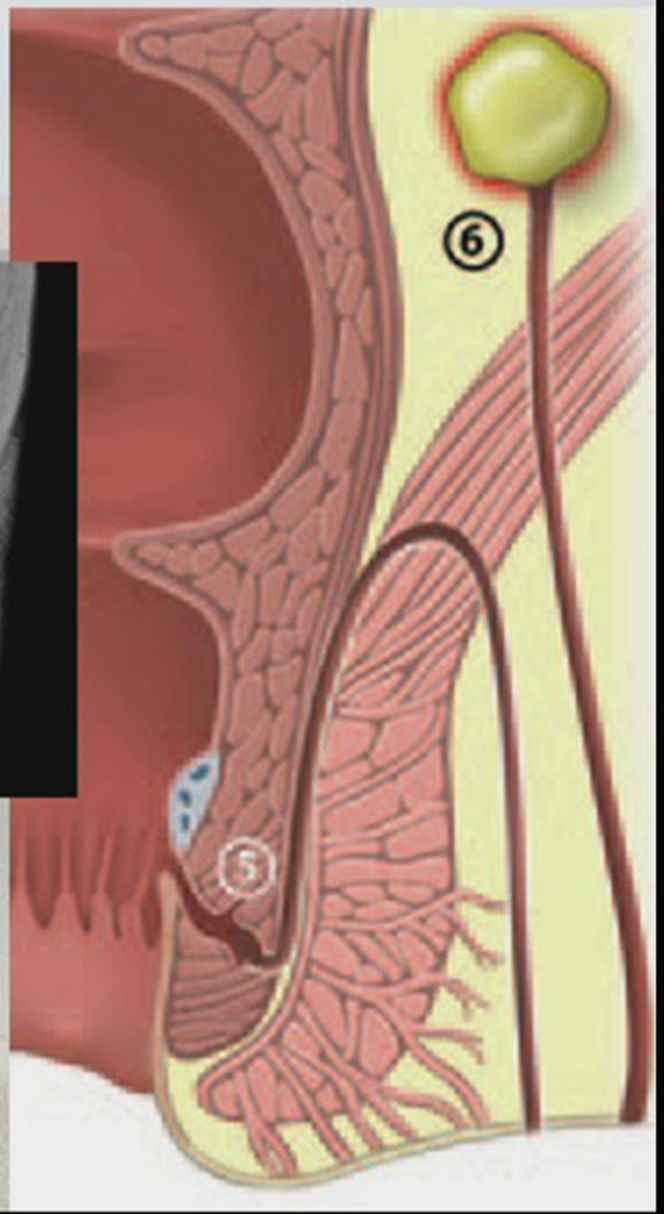


EVRE 5: Supralevator ve Translevator Fistül

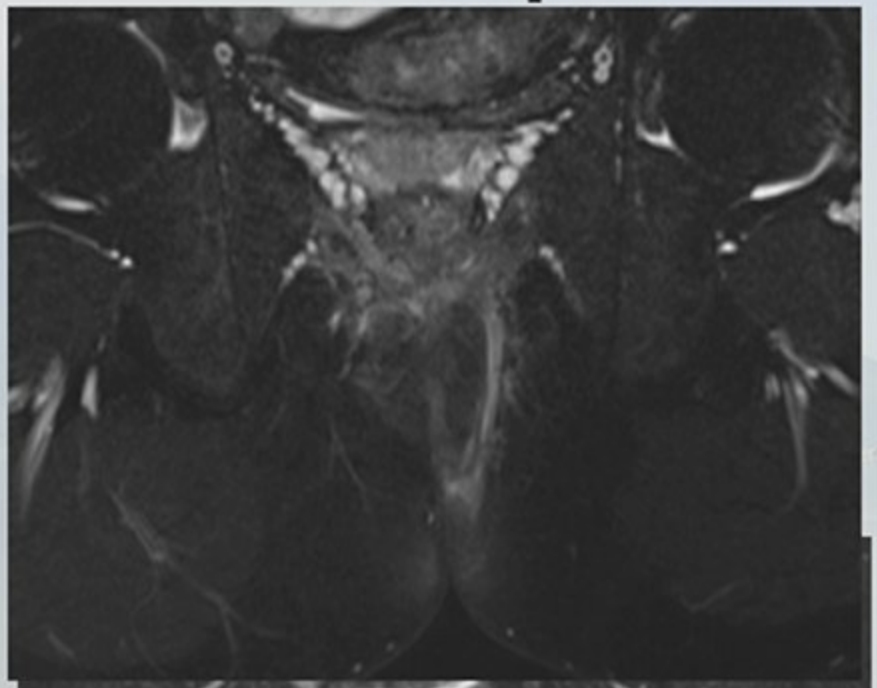


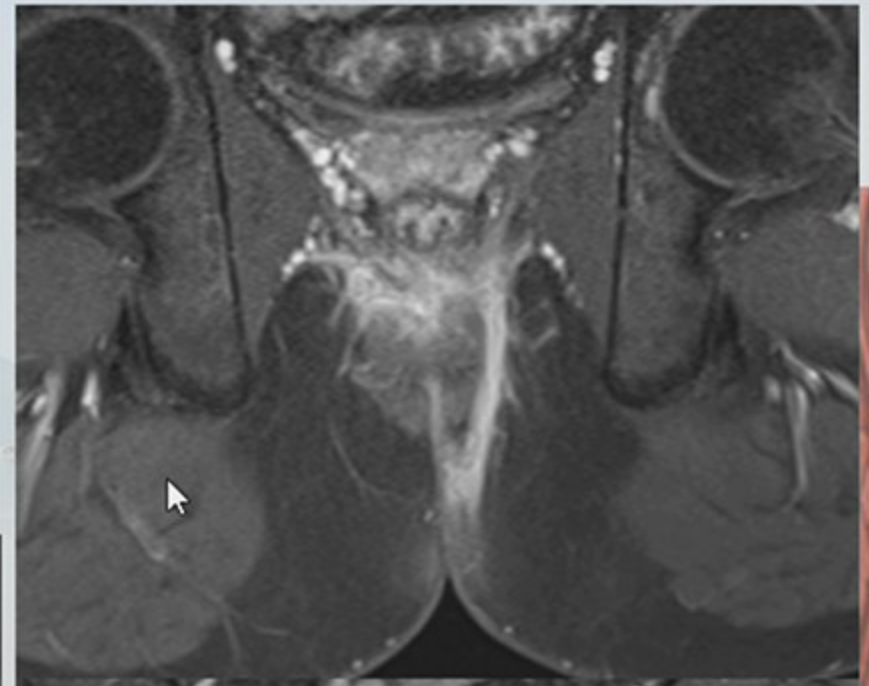


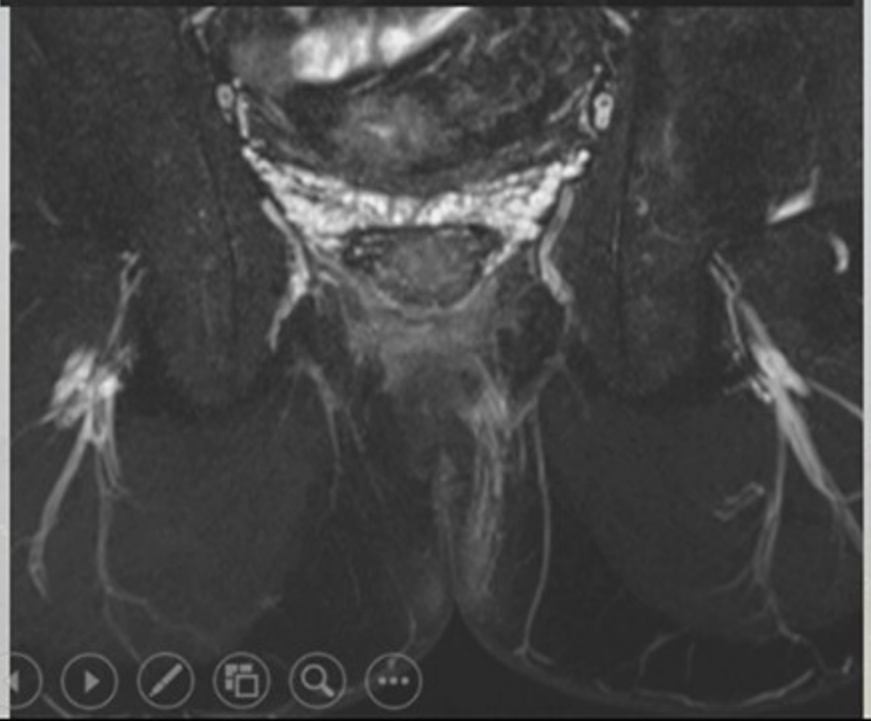


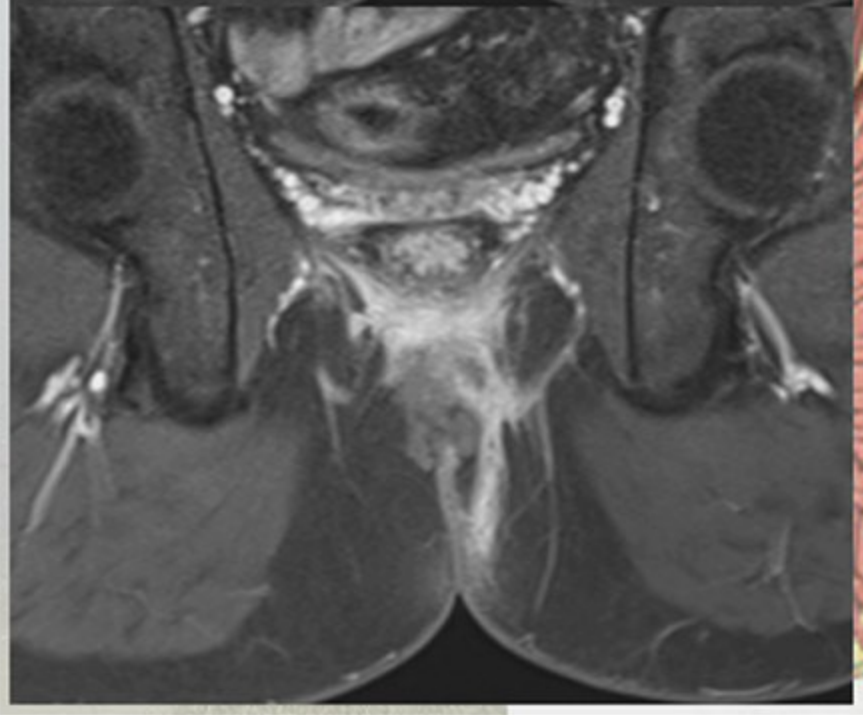


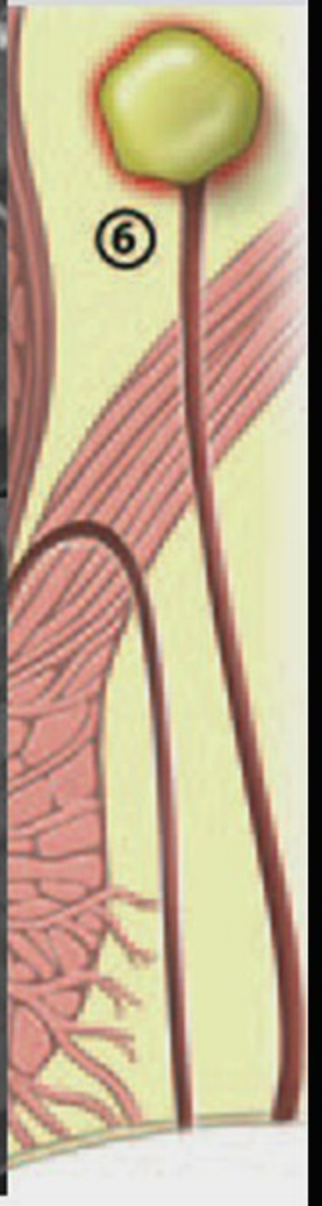
EVRE 5: Supralevator ve Translevator Fistül



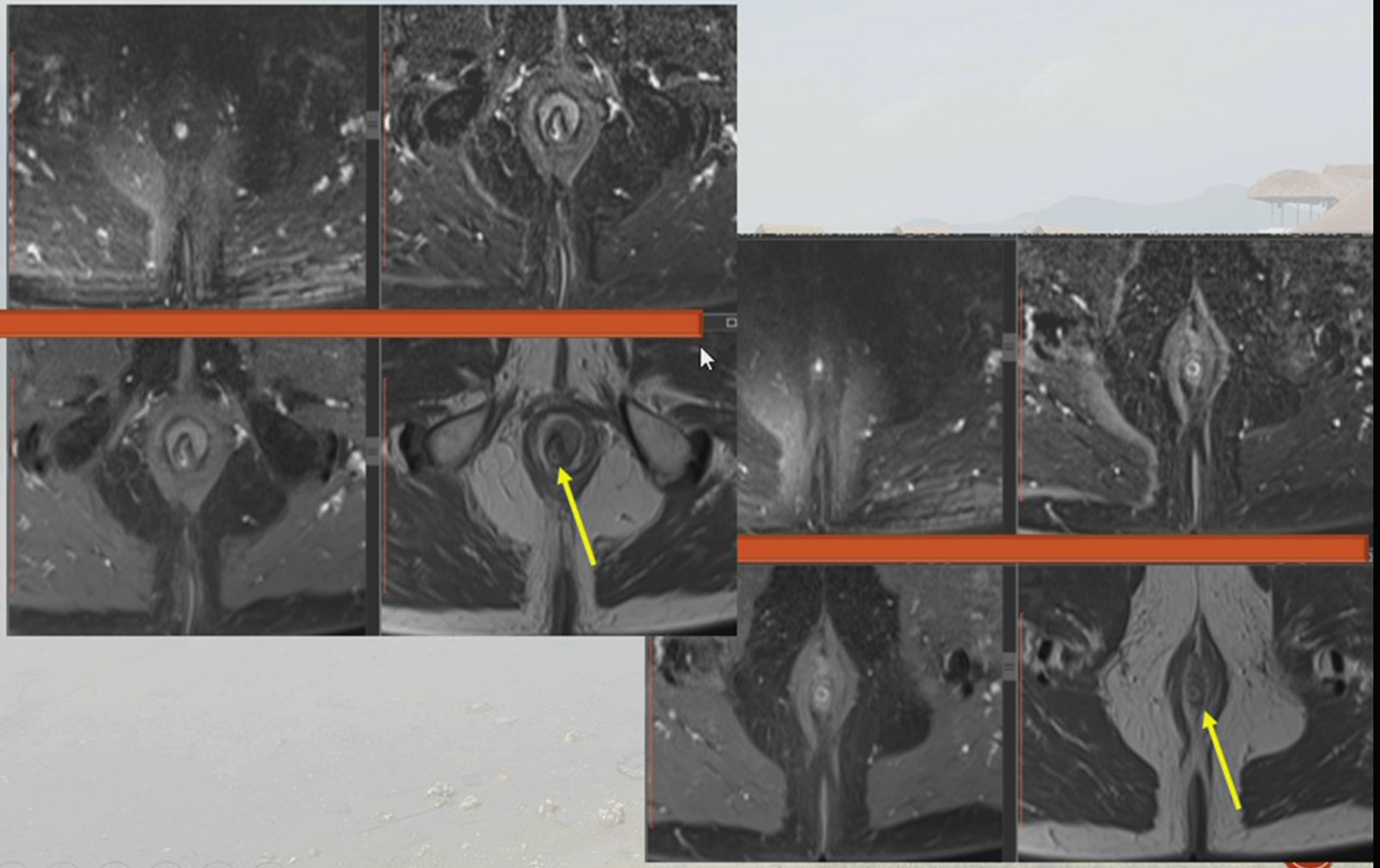


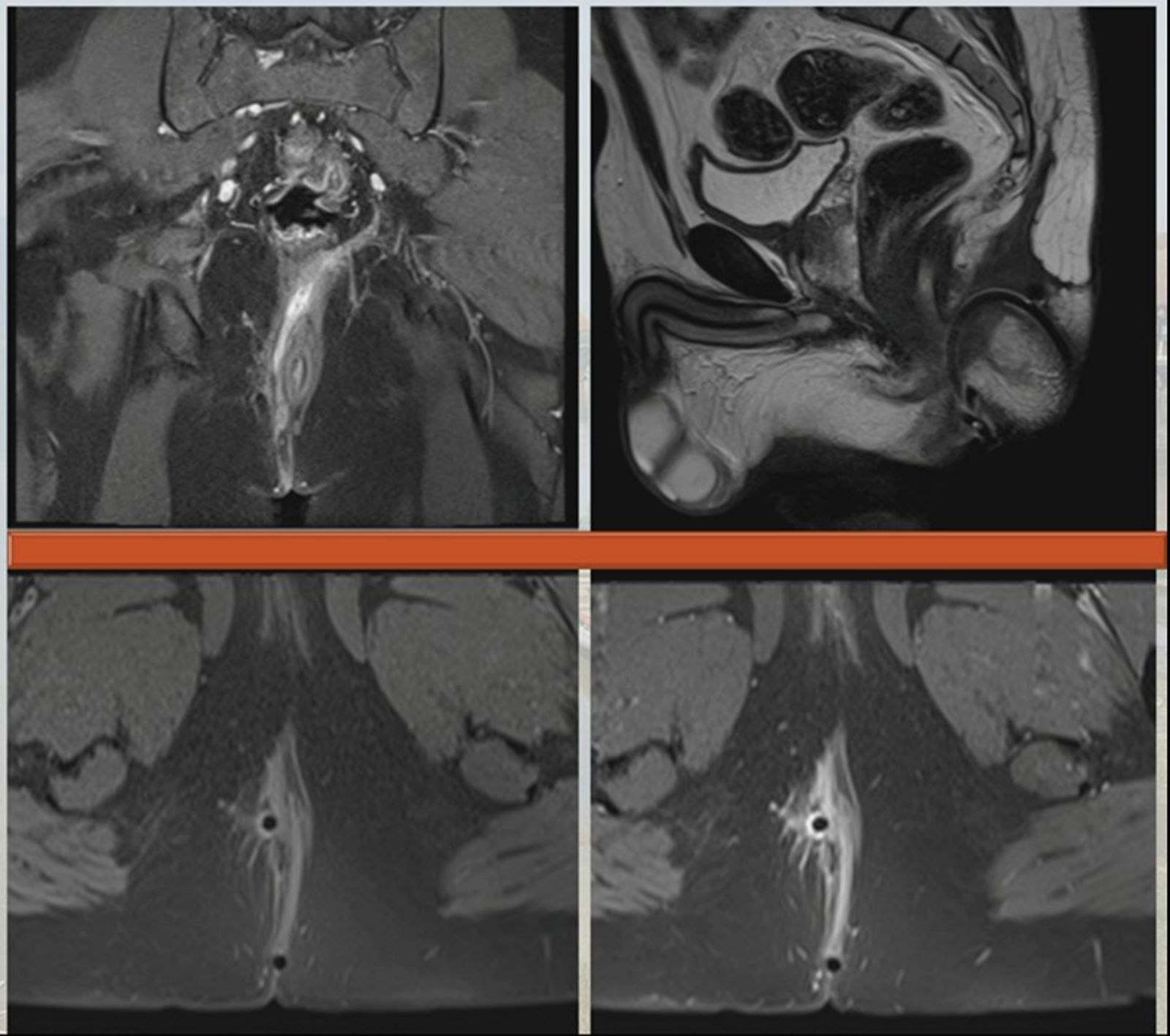






Submukozal Fistül





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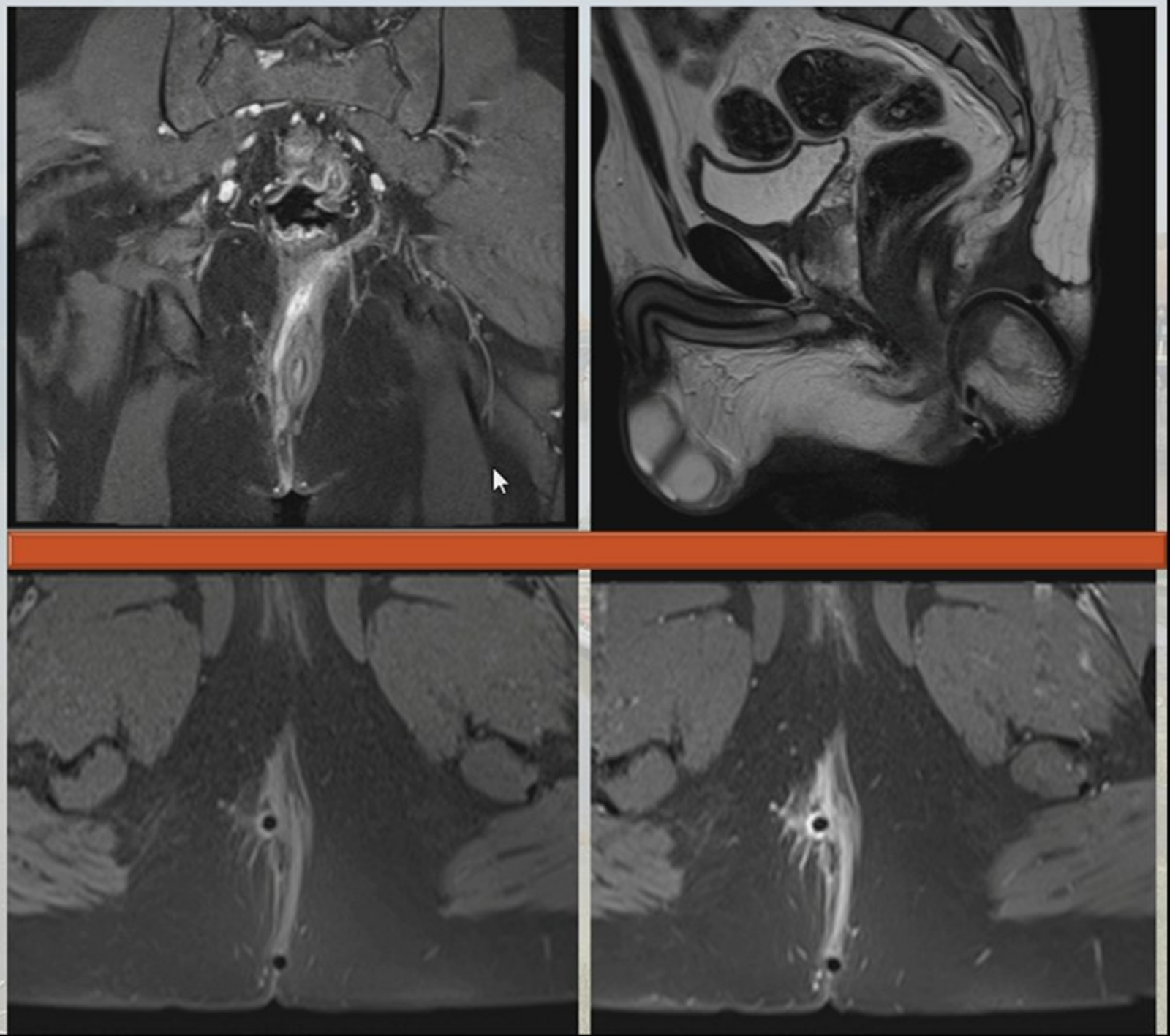

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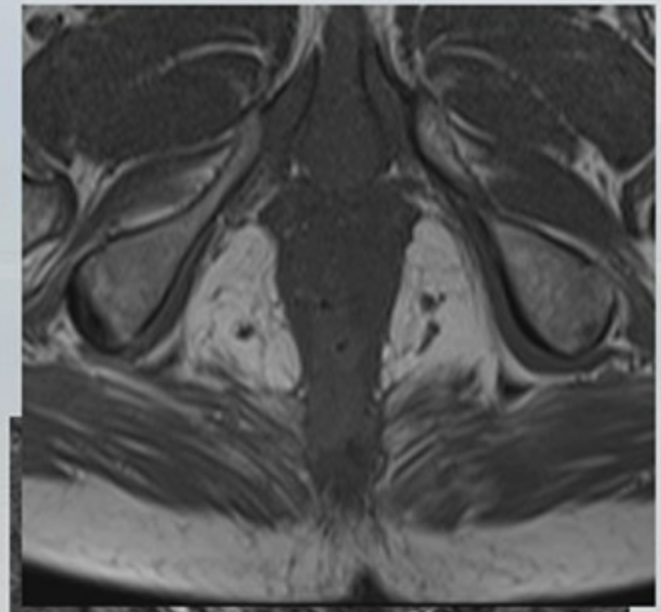
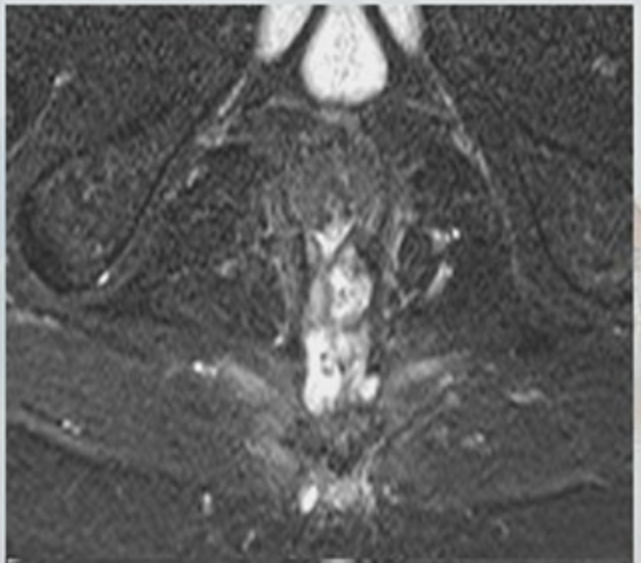
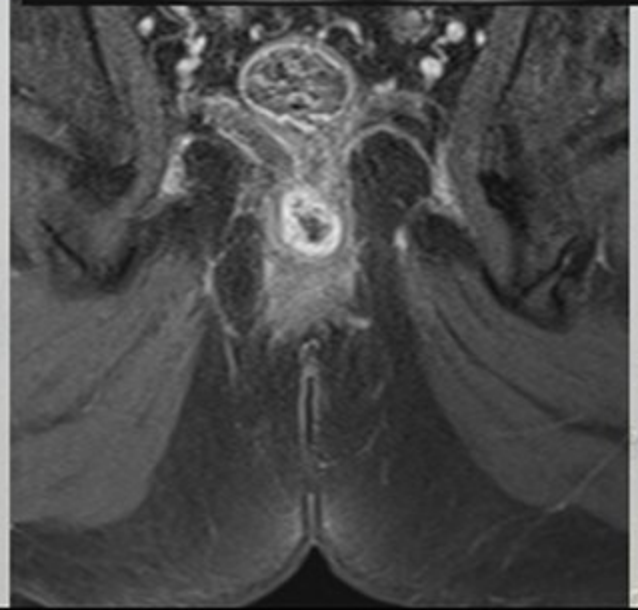
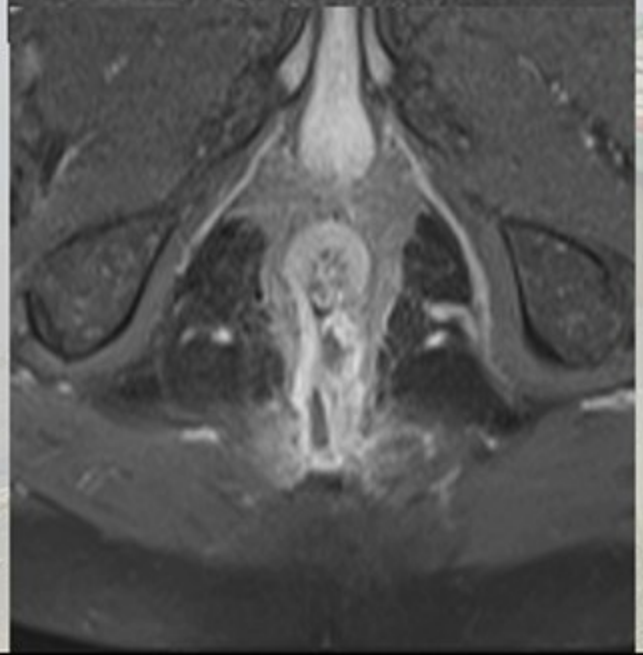


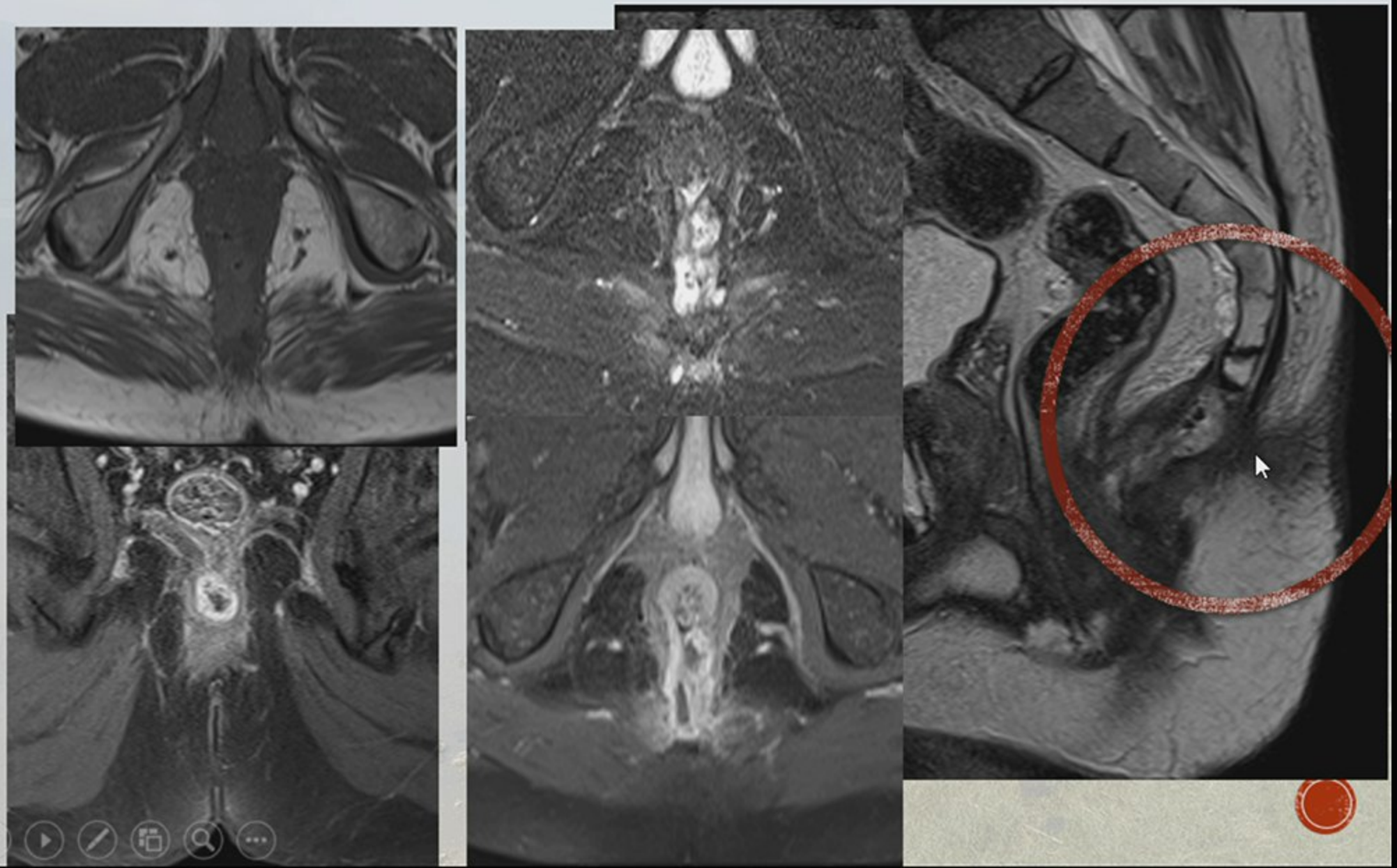




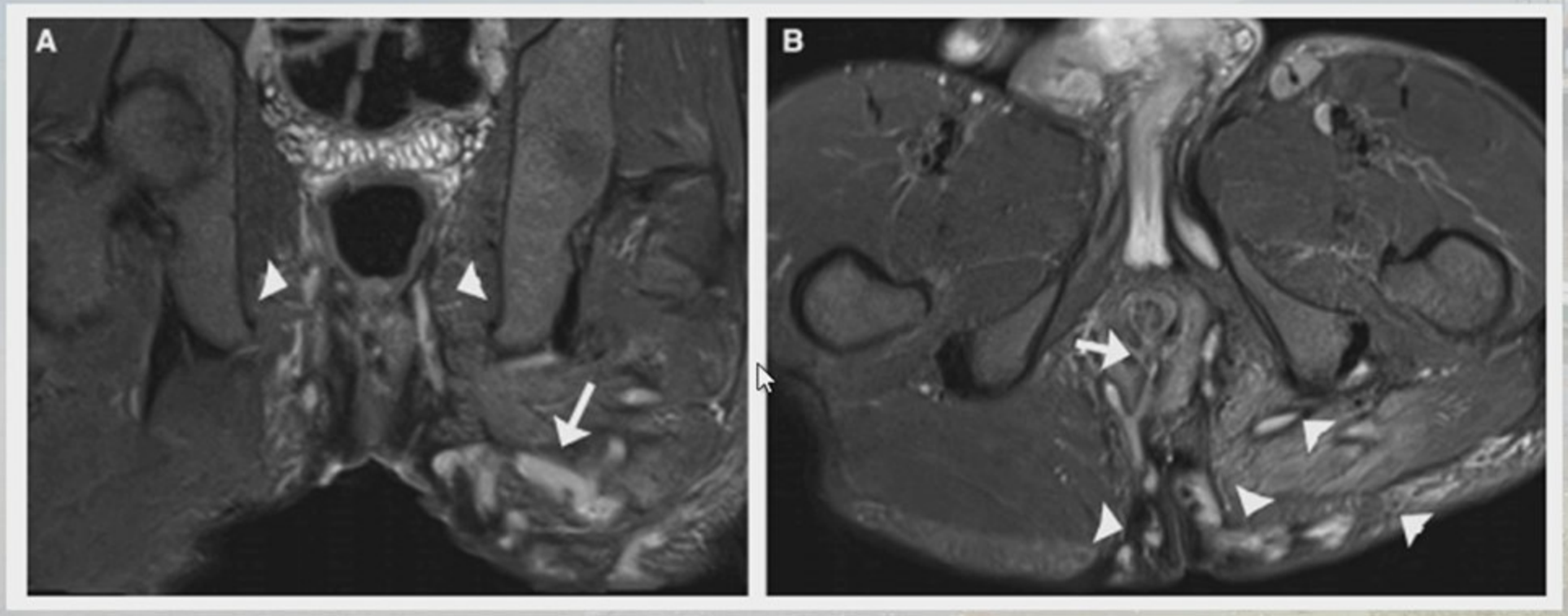


?

DİSTAL SAKRAL CERRAHİ



AYIRICI TANI: HİDRADENİTİS SÜPÜRATİVA



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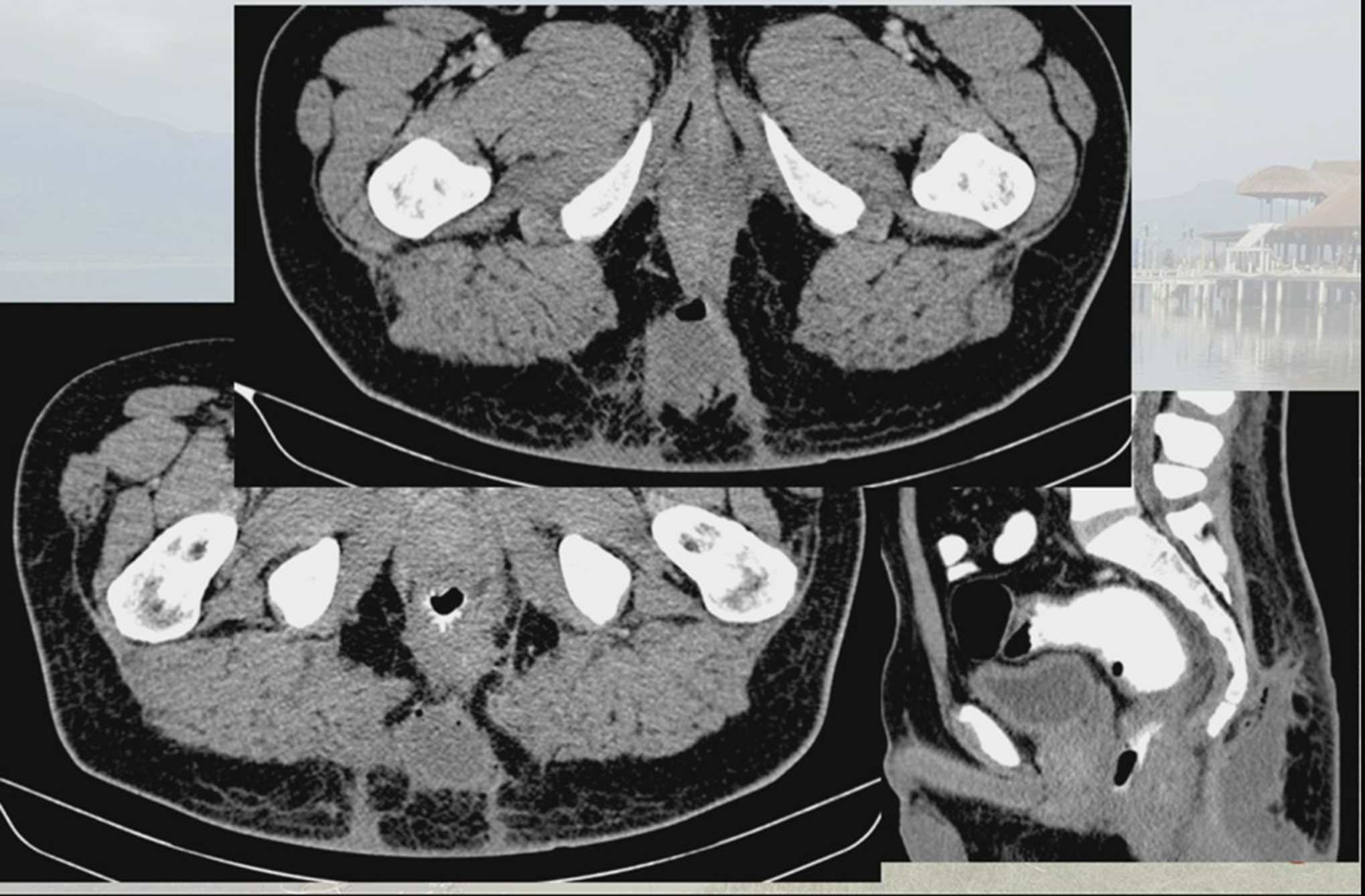
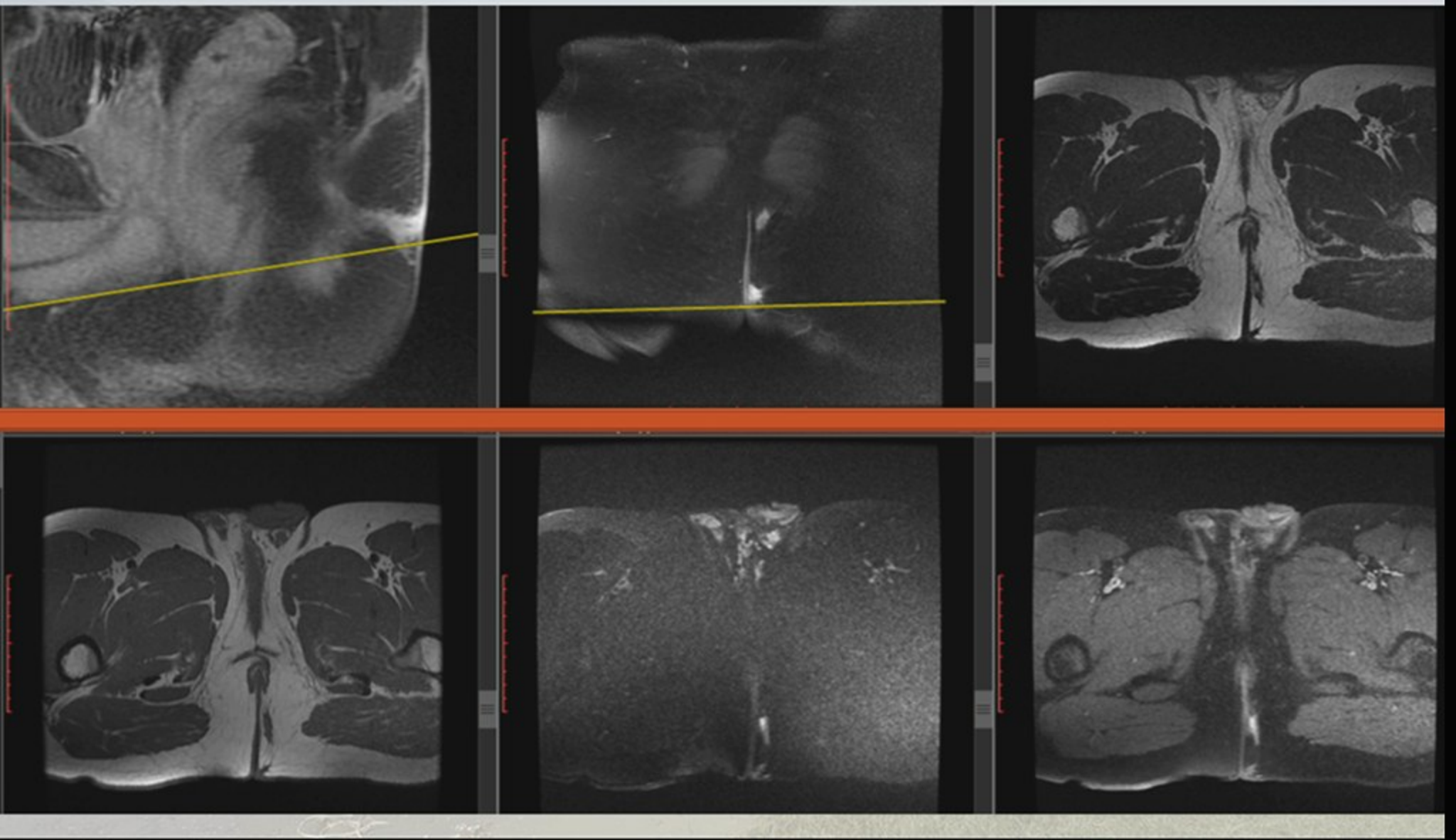
AYIRICI TANI: PİLONOİDAL SİNÜS



AYIRICI TANI: PİLONOİDAL SİNÜS



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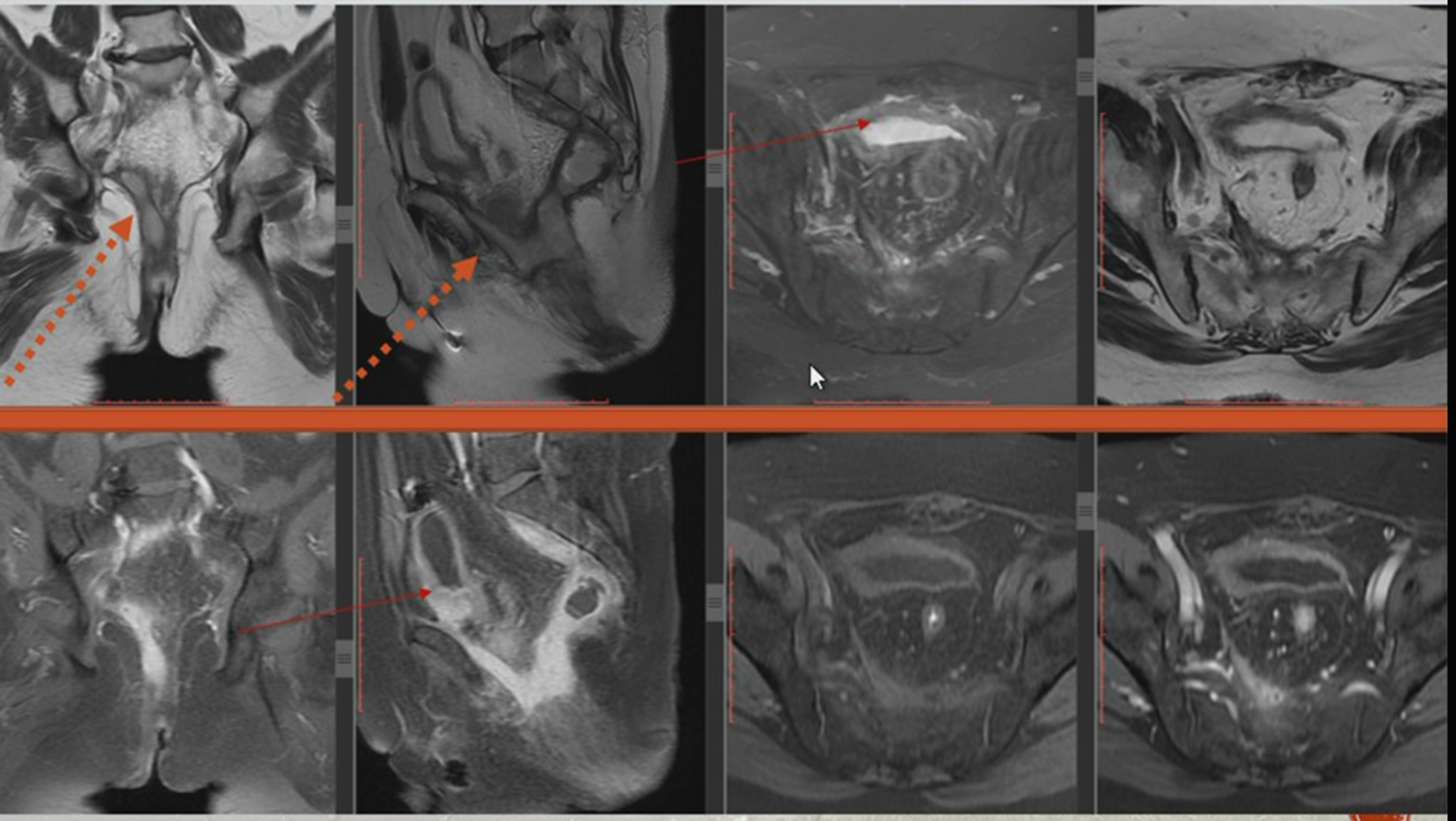
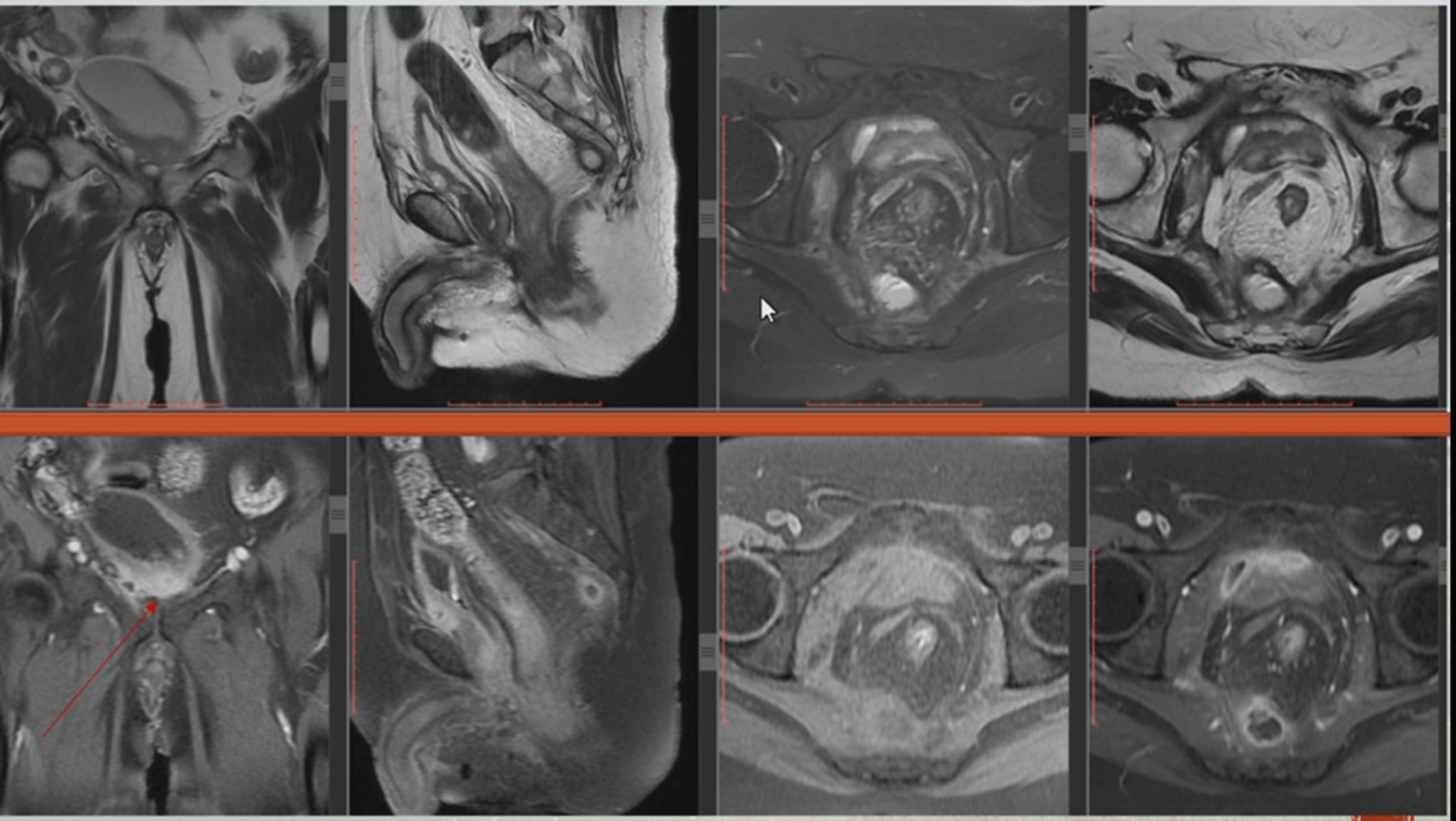
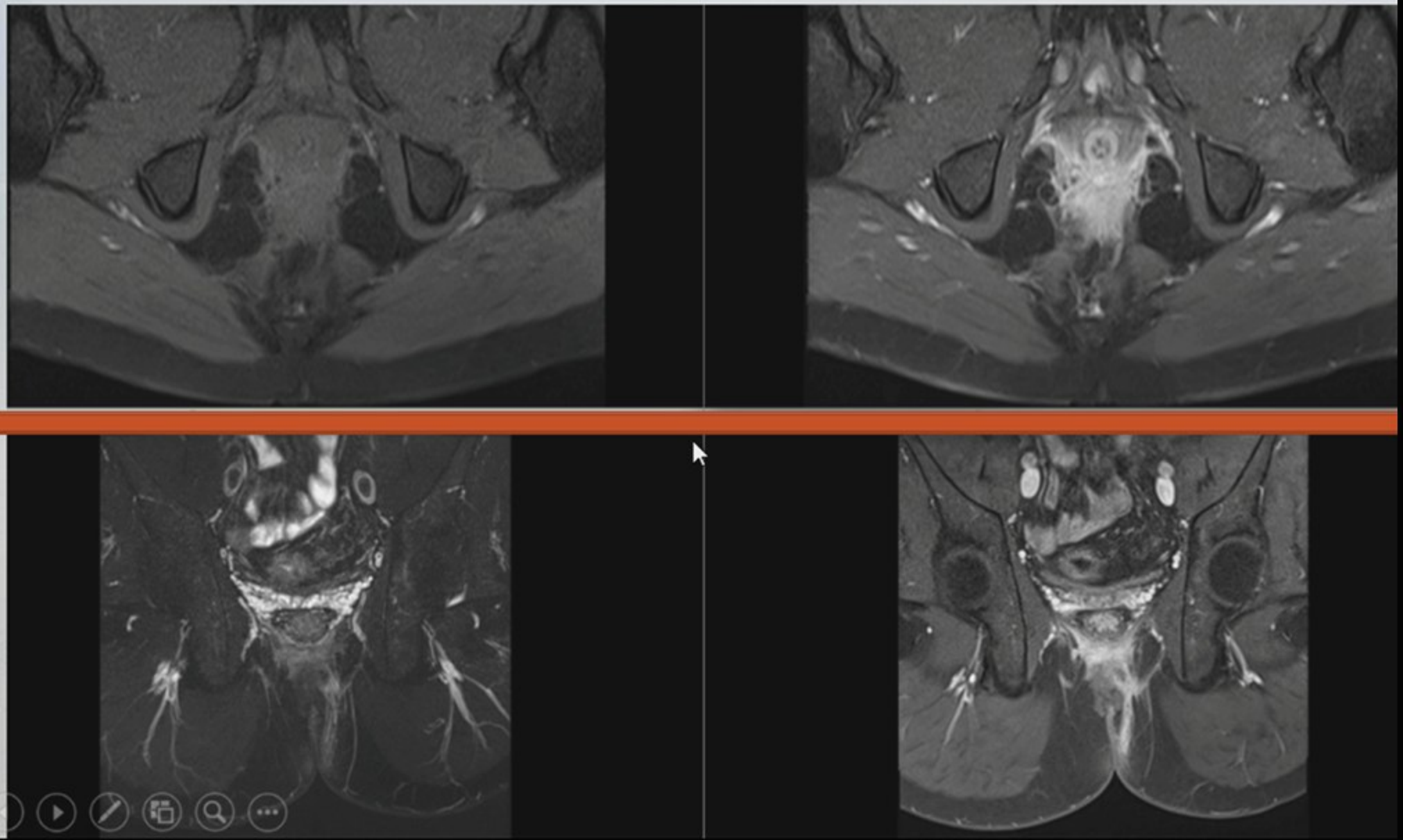


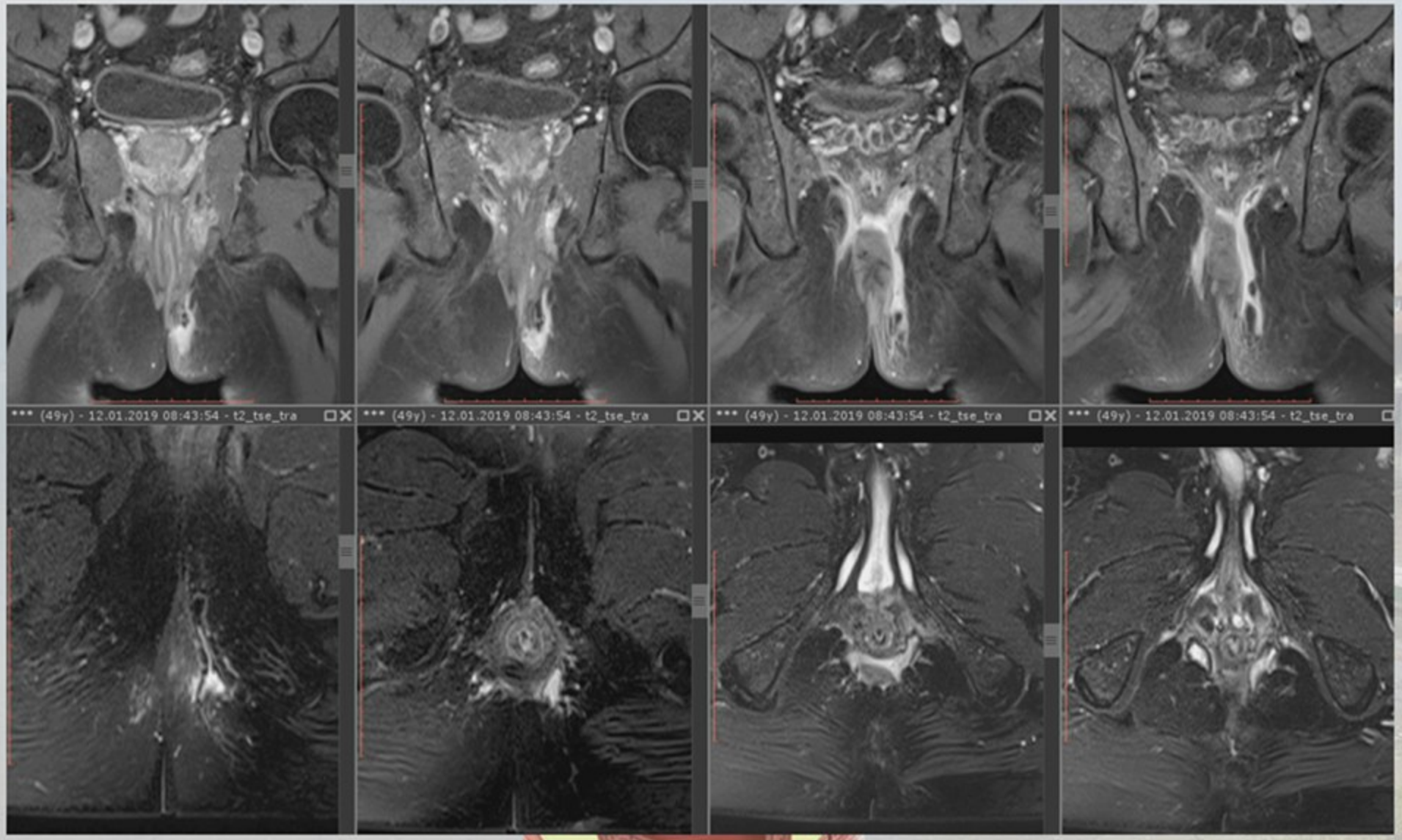
ÜLSERATİF KOLİT

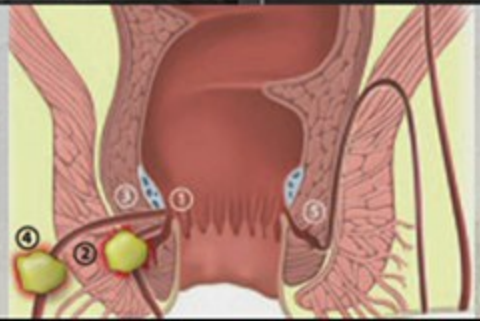


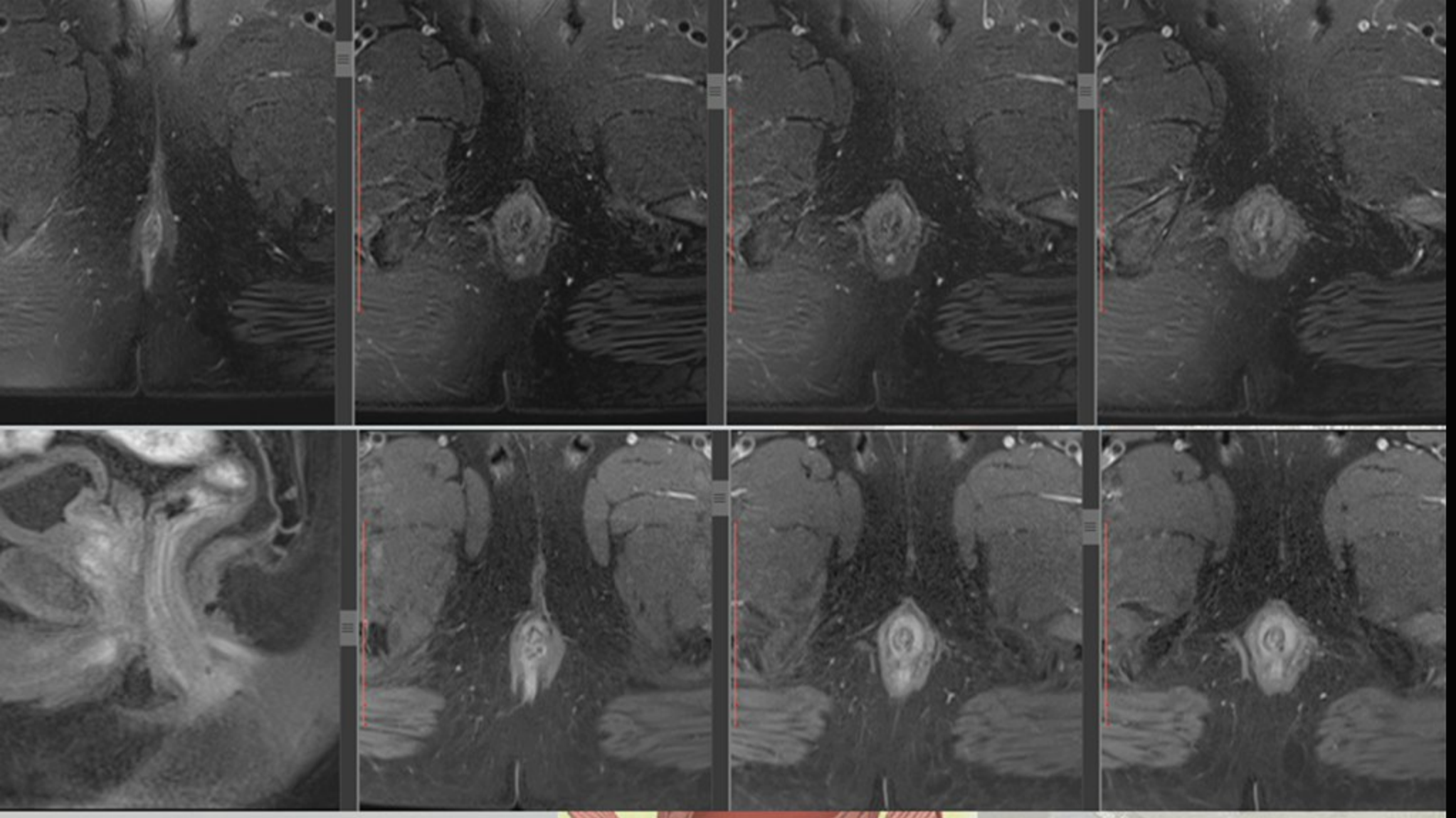
CROHN

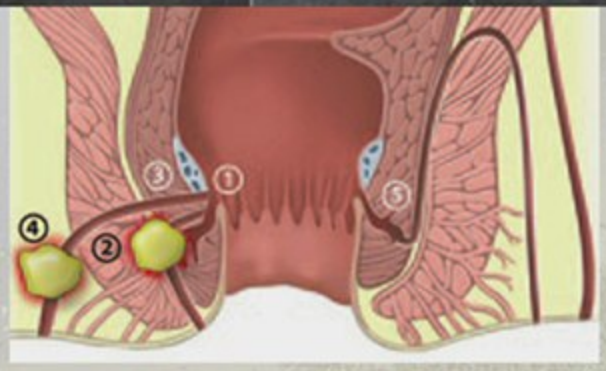


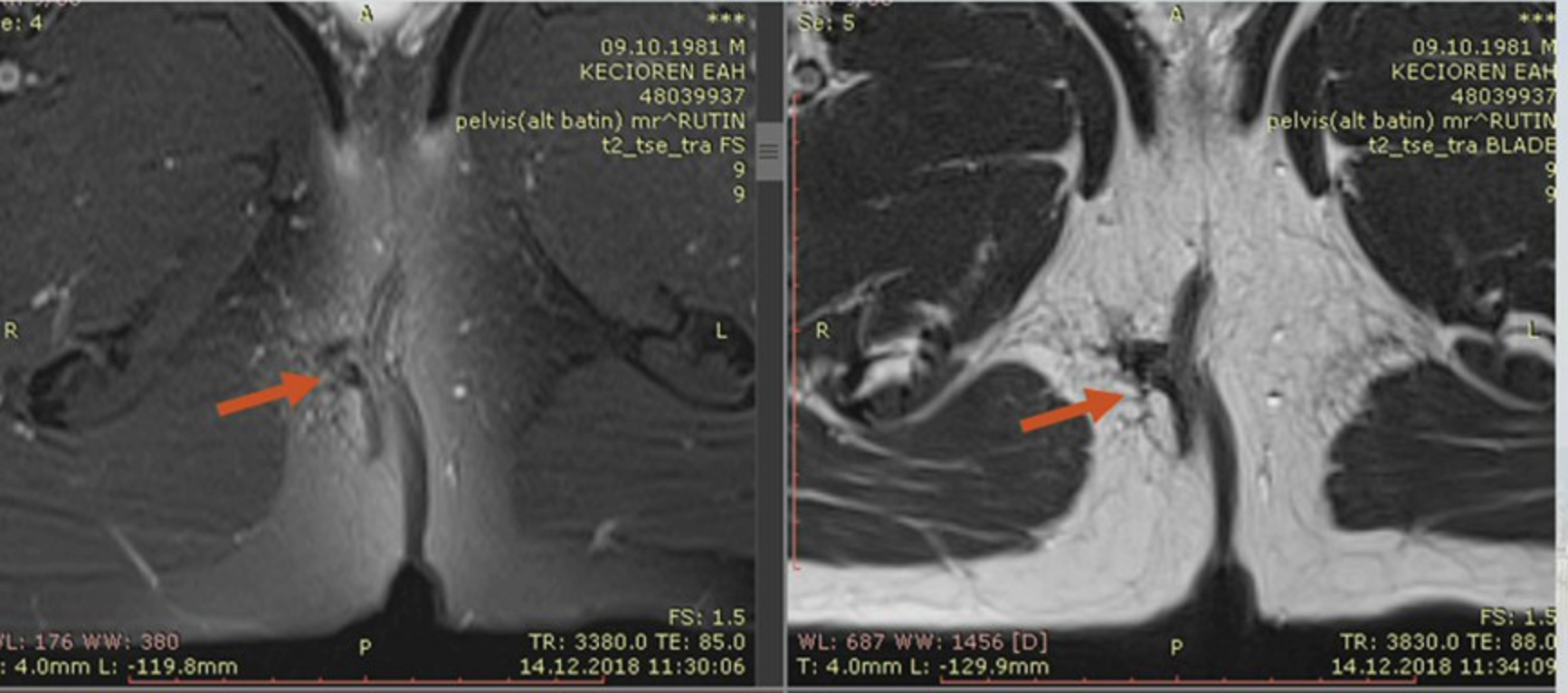
ÖRNEKLER


*** (49y) - 12.01.2019 08:43:54 - t2_tse_tra
*** (49y) - 12.01.2019 08:43:54 - t2_tse_tra
*** (49y) - 12.01.2019 08:43:54 - t2_tse_tra
*** (49y) - 12.01.2019 08:43:54 - t2_tse_tra

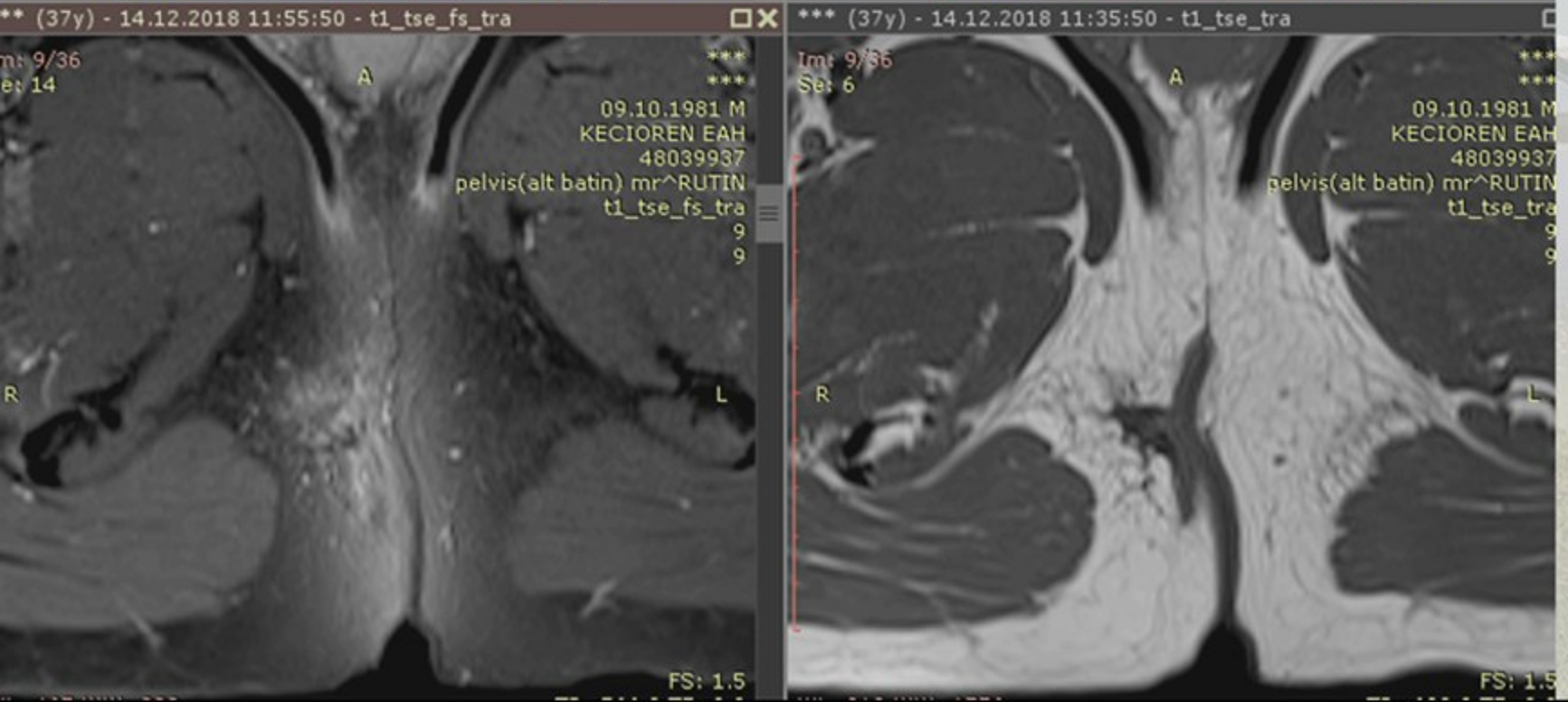

3
1
5
4
2



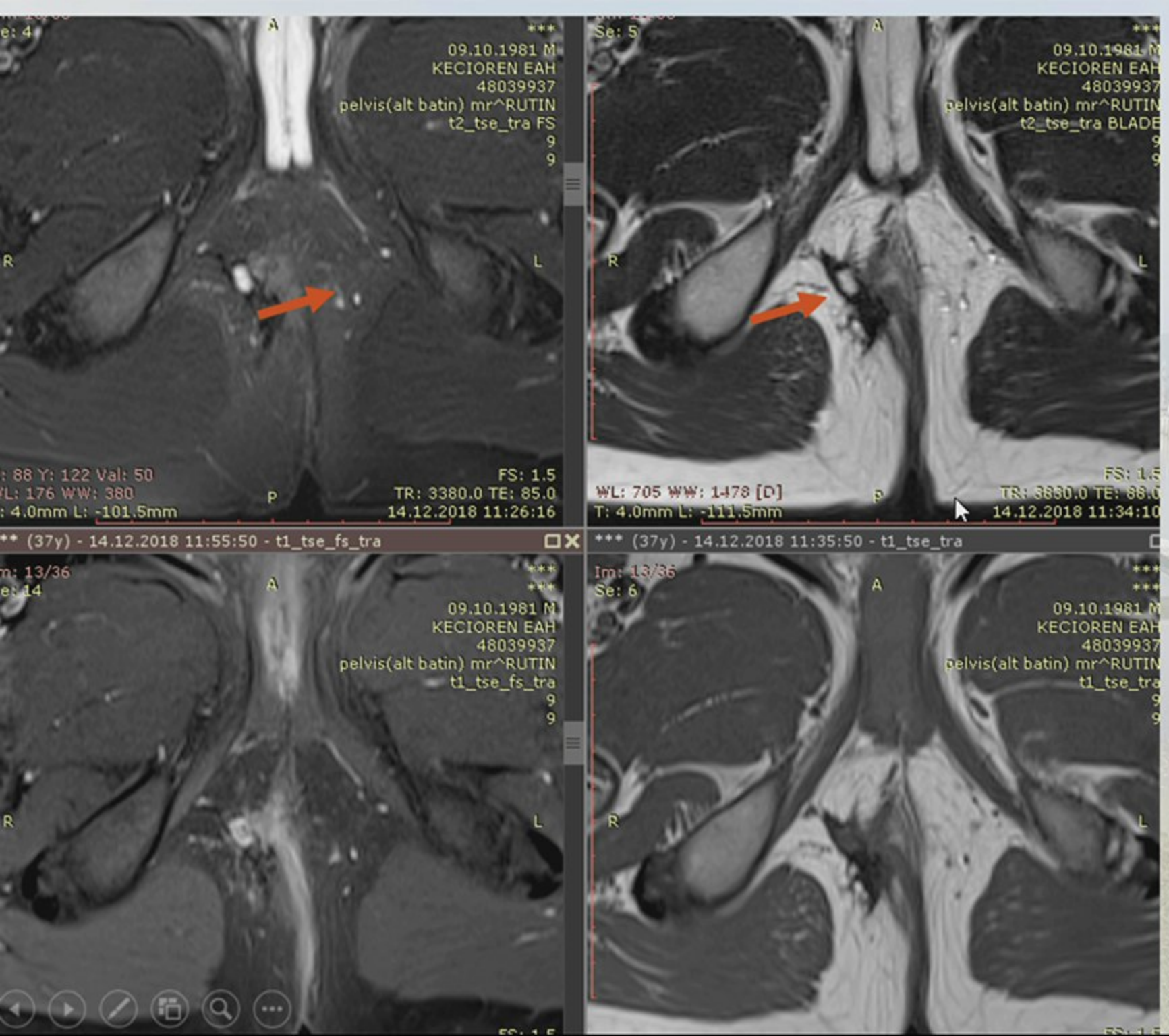

3
1
5
4
2

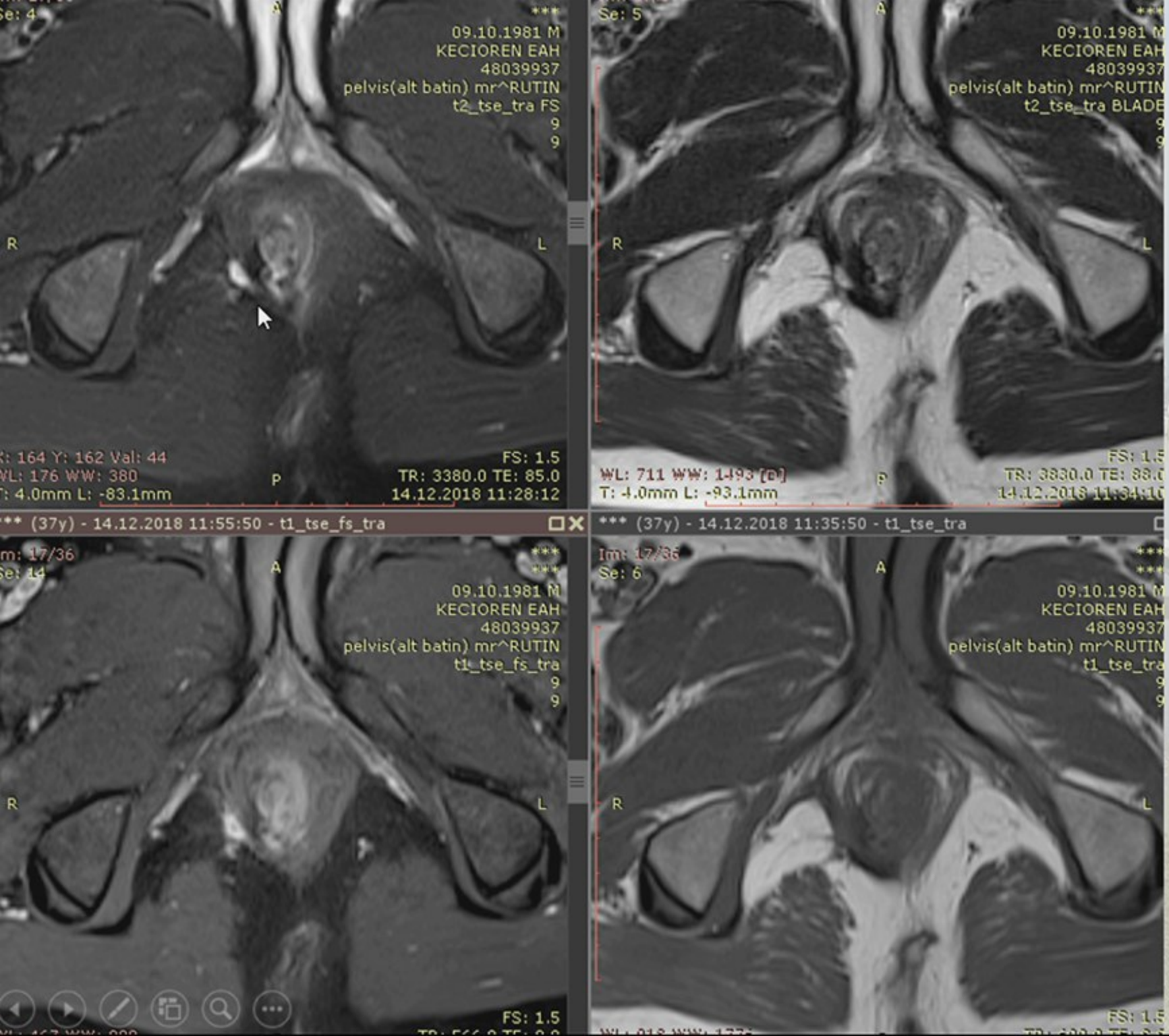

09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
R
L
FS: 1.5
TR: 3380.0 TE: 85.0
14.12.2018 11:30:06
P

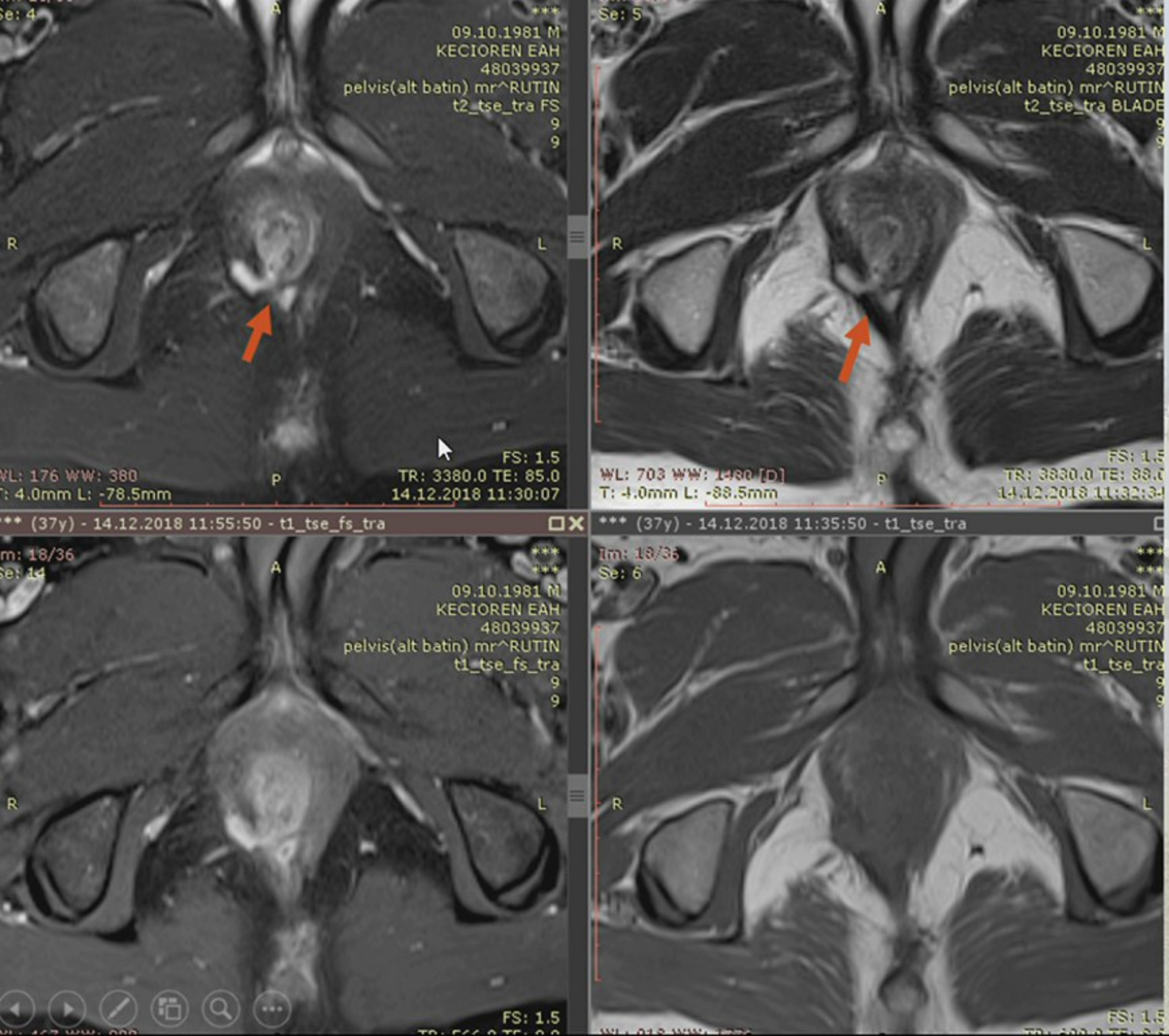
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra BLADE
R
L
FS: 1.5
WL: 687 WW: 1456 [D]
T: 4.0mm L: -129.9mm
P

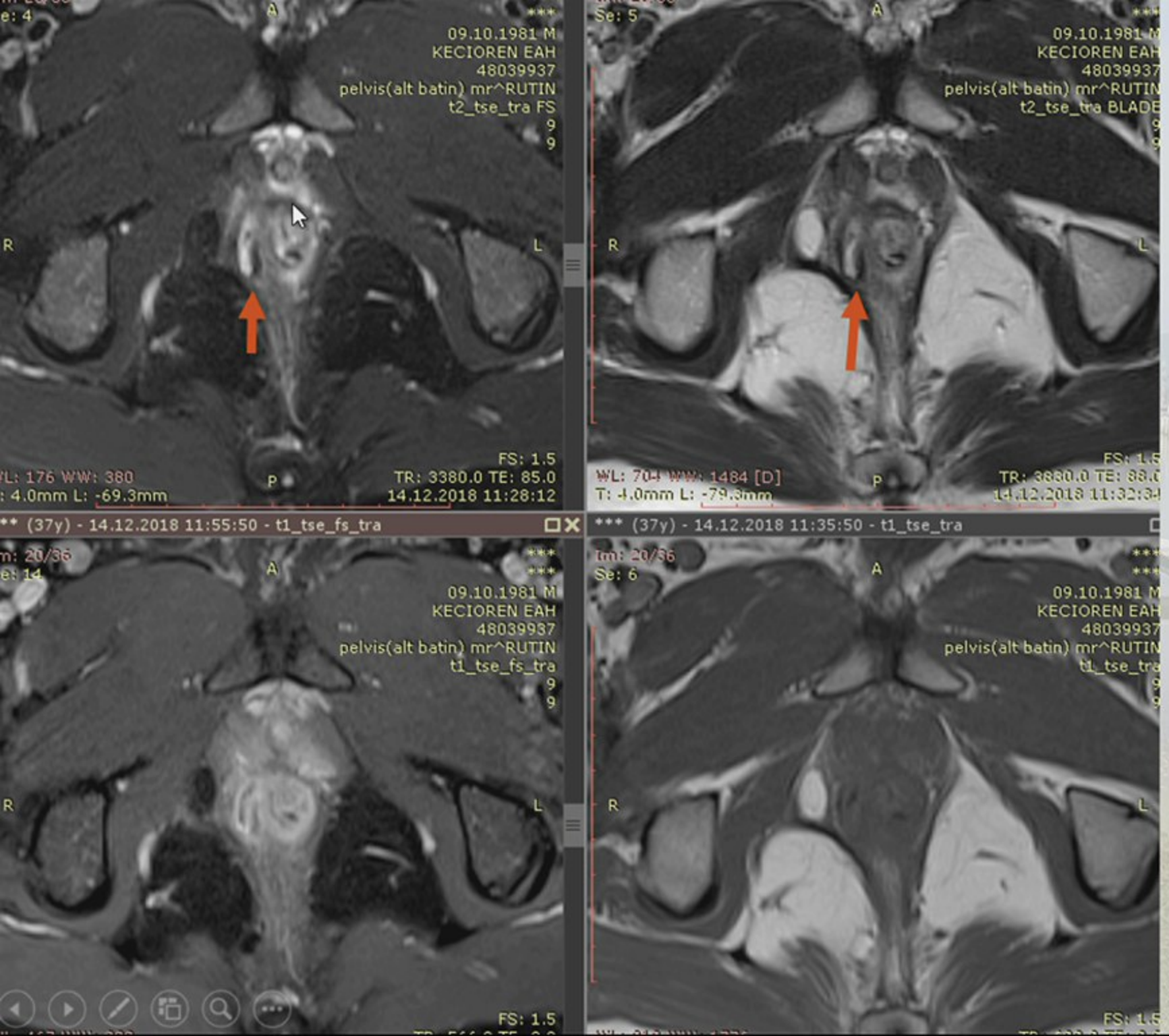

(37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t1_tse_fs_tra
R
L
FS: 1.5

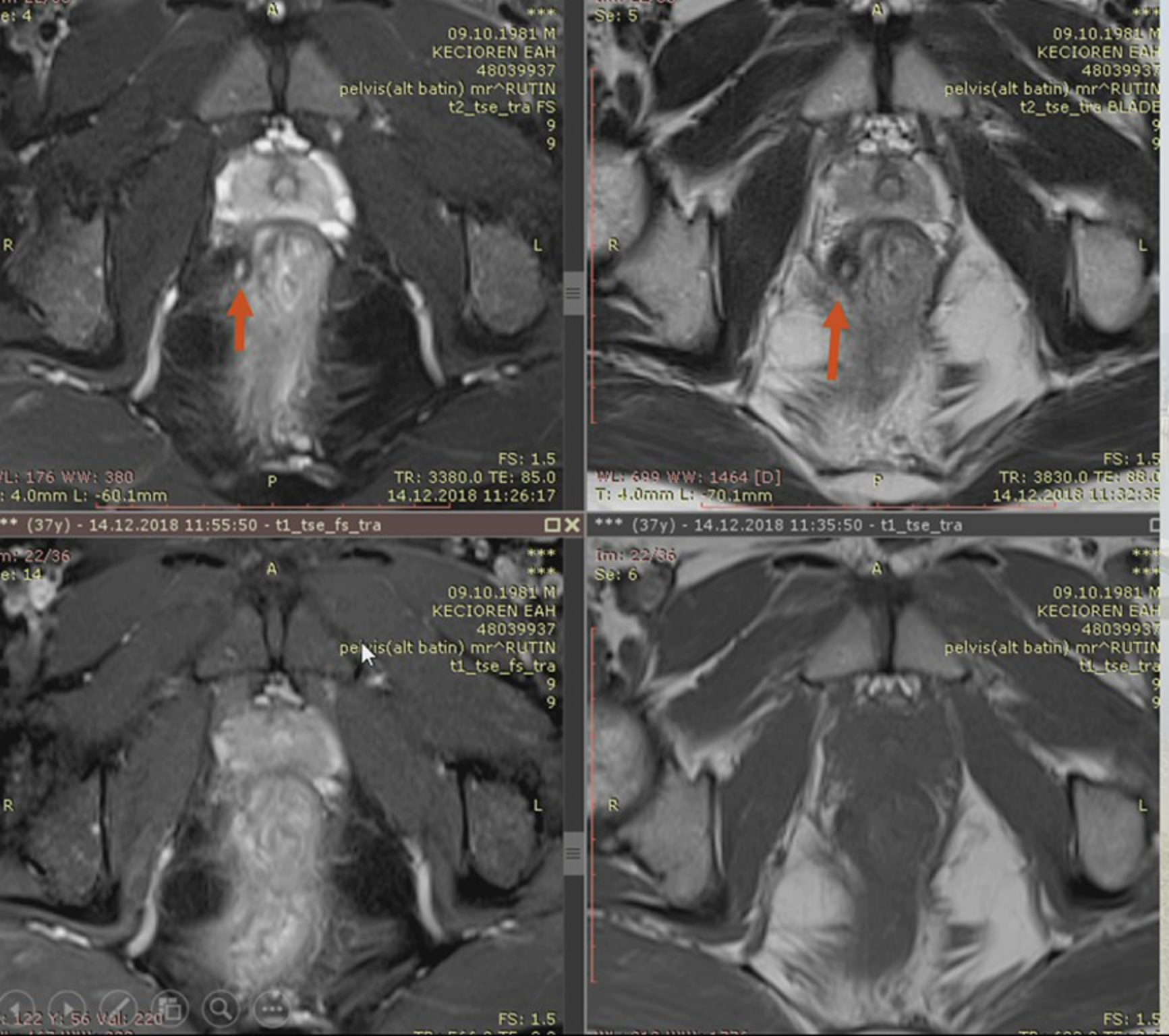
(37y) - 14.12.2018 11:35:50 - t1_tse_tra
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
R
L
FS: 1.5


09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
t2_tse_tra BLADE
t1_tse_fs_tra
t1_tse_tra
R
L
A
P
FS: 1.5
TR: 3380.0 TE: 85.0
14.12.2018 11:26:16
WL: 705 WW: 1478 [D]
T: 4.0mm L: -111.5mm
(37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra
(37y) - 14.12.2018 11:35:50 - t1_tse_tra


09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
R
L
FS: 1.5
TR: 3380.0 TE: 85.0
14.12.2018 11:28:12
t2_tse_tra BLADE
WL: 711 WW: 1493
T: 4.0mm L: -93.1mm
(37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra
t1_tse_fs_tra
(37y) - 14.12.2018 11:35:50 - t1_tse_tra
t1_tse_tra


Se: 4
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
R
L
WL: 176 WW: 380
T: 4.0mm L: -78.5mm
P
FS: 1.5
TR: 3380.0 TE: 85.0
14.12.2018 11:30:07
Se: 5
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra BLADE
R
L
WL: 703 WW: 1480 [D]
T: 4.0mm L: -88.5mm
P
*** (37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra
Se: 14
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t1_tse_fs_tra
R
L
FS: 1.5
*** (37y) - 14.12.2018 11:35:50 - t1_tse_tra
Im: 18/36
Se: 6
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
R
L
FS: 1.5


09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
FS: 1.5
TR: 3380.0 TE: 85.0
14.12.2018 11:28:12
t2_tse_tra BLADE
WL: 704 WW: 1484 [D]
(37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra
t1_tse_fs_tra
(37y) - 14.12.2018 11:35:50 - t1_tse_tra


09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
FS: 1.5
TR: 3380.0 TE: 85.0
14.12.2018 11:26:17
t2_tse_tra BLADE
(37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra
t1_tse_fs_tra
(37y) - 14.12.2018 11:35:50 - t1_tse_tra

Se: 4
A
***
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra FS
9
9
R
L
P
FS: 1.5
WL: 176 WW: 380
TR: 3380.0 TE: 85.0
T: 4.0mm L: -50.9mm
14.12.2018 11:30:08

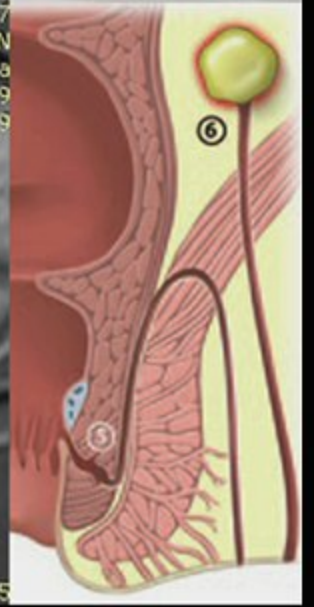
Se: 5
A
***
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t2_tse_tra BLADE
R
L
P
FS: 1.5
WL: 702 WW: 1464 [D]
TR: 3830.0 TE: 88.0
T: 4.0mm L: -60.9mm
14.12.2018 11:32:35

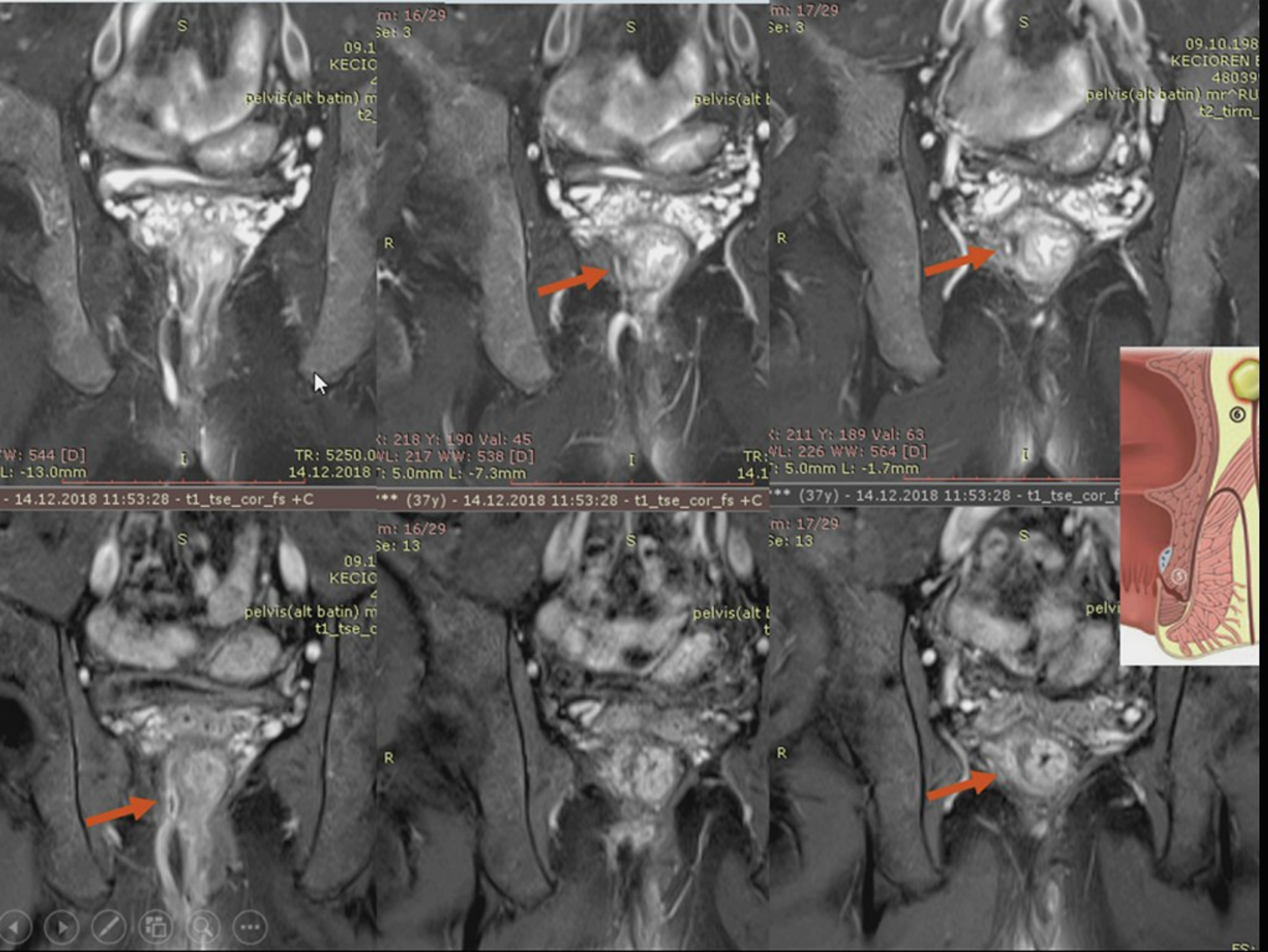
*** (37y) - 14.12.2018 11:55:50 - t1_tse_fs_tra

Im: 24/36
Se: 14
A
***
***
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t1_tse_fs_tra
9
9
R
L
FS: 1.5
X: 136 Y: 105 Val: 162

*** (37y) - 14.12.2018 11:35:50 - t1_tse_tra

Im: 24/36
Se: 6
A
***
***
09.10.1981 M
KECIOREN EAH
48039937
pelvis(alt batin) mr^RUTIN
t1_tse_tra
9
9
R
L
FS: 1.5




S
R
I
pelvis(alt batin)
TR: 5250.0
14.12.2018
- 14.12.2018 11:53:28 - t1_tse_cor_fs +C
(37y) - 14.12.2018 11:53:28 - t1_tse_cor_fs +C
KECIOREN
t2_tirm_
t1_tse_c

SONUÇ OLARAK

- Perianal fistül ve apse değerlendirilmesinde;
  - T2a YB(+) ve postkontrast T1a YB(+) sekanslar esastır.
  - Geçirilmiş operasyon, seton uygulaması bilgileri değerlendirme öncesinde bilinmelidir.
  - Fistül giriş, çıkış ağzı, uzanımları ve yan dal varlığı yönünden ayrıntılandırılmalıdır.


Teşekkür ederim