

LA STADIAZIONE LOCOREGIONALE DEI TUMORI DEL RETTO

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Ruolo della RM nella stadiazione locoregionale

Criteria for treatment stratification		
Low risk	cT ₁₋₂ N ₀	TME or local excision
	cT _{3ab} N ₀ (≤ 5 mm)	
	MRF > 1 mm	
Intermediate risk	cT _{3cd} (> 5 mm)	+ Short course neoadjuvant radiotherapy
	cN ₁	
	MRF > 1 mm	
High risk	cT _{3cd} or cT ₄	+ Long course neoadjuvant treatment (chemoradiotherapy) + Restaging
	cN ₂	
	MRF ≤ 1 mm	

Protocollo di acquisizione

Panoramica

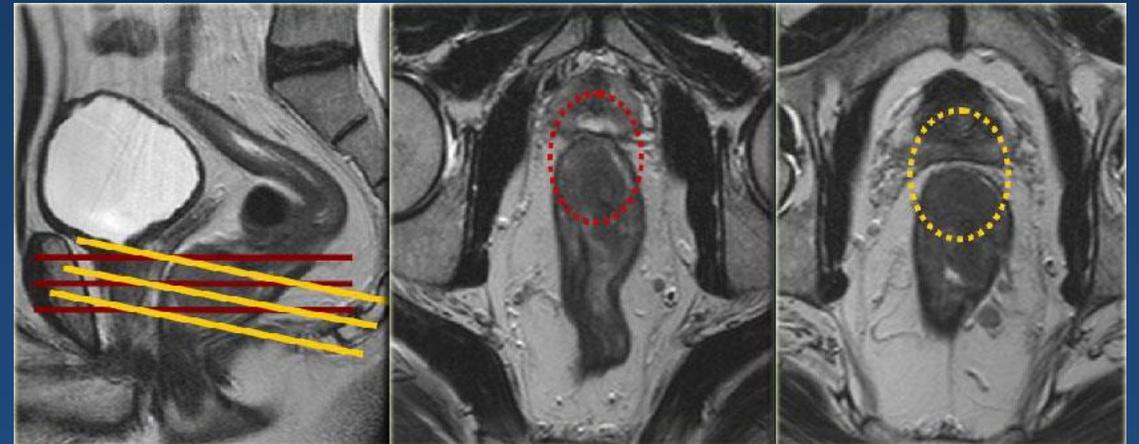
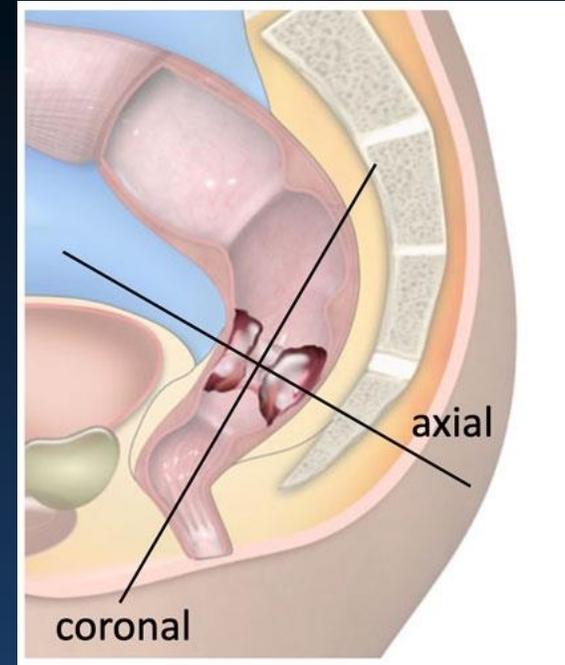
- TSE T2W assiale
- TSE T2W sagittale

FOV piccolo sull'asse del tumore

- TSE T2W assiale obliqua
- TSE T2W coronale obliqua

Altre sequenze

- DWI (soprattutto restaging)
- TSE T1W assiale (opzionale)
- CE-T1W (dibattuto)



Protocollo di acquisizione

DOS

Magnete ad alto campo (1.5 - 3T)

Bobine di superficie

TSE T2W non saturate

FOV piccolo

Strato sottile (≤ 3 mm)

MAYBES

Preparazione intestinale

Spasmolitico

Gel endorettale

3D-T2W

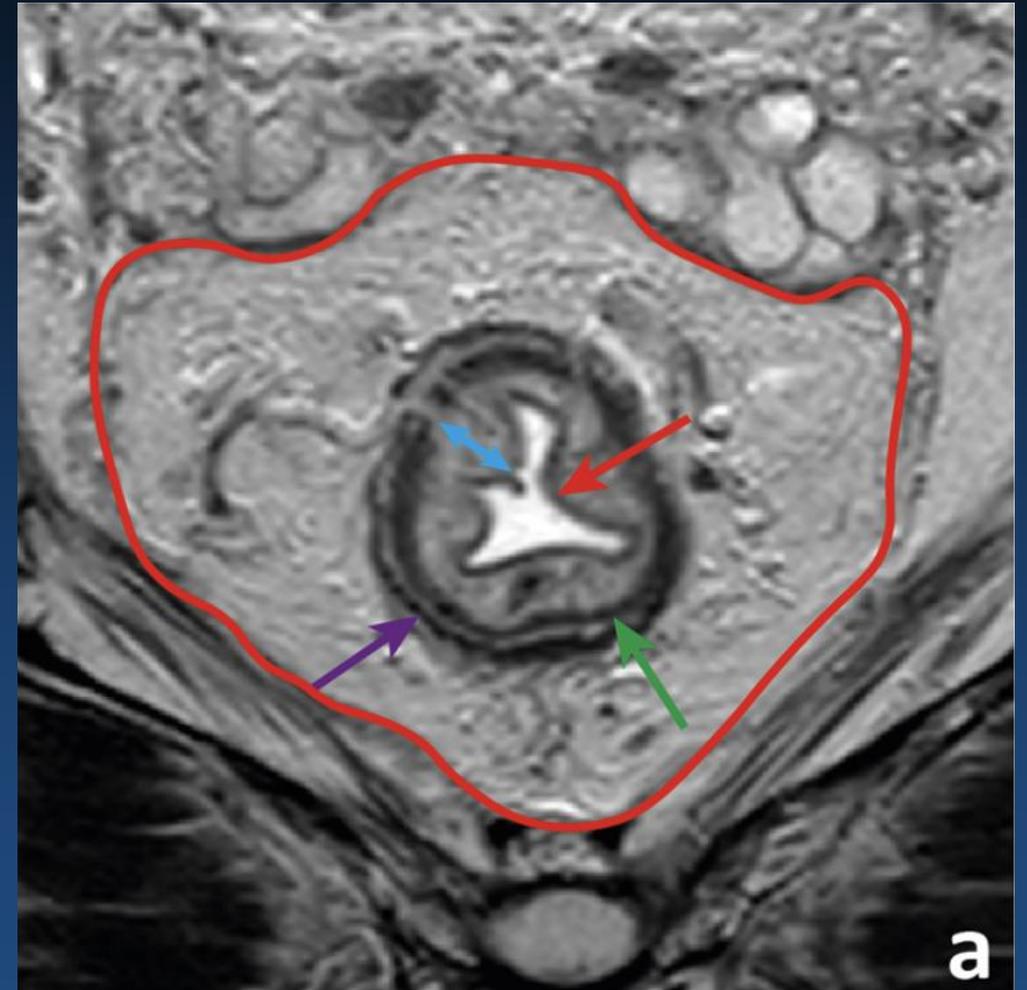
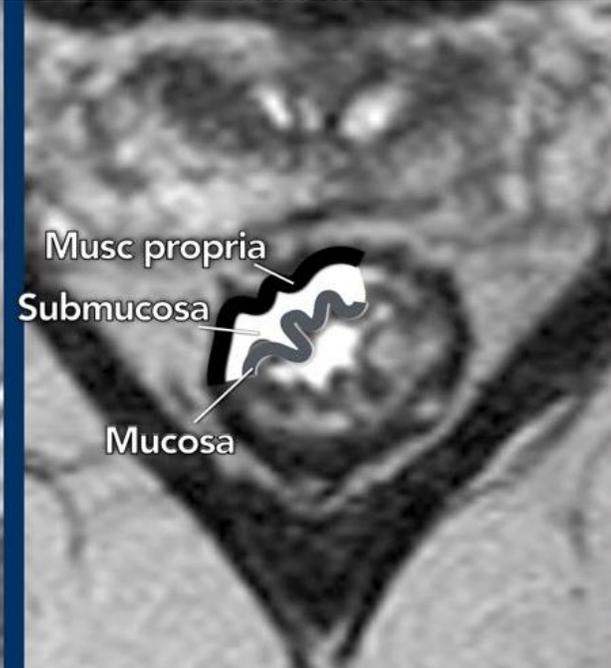
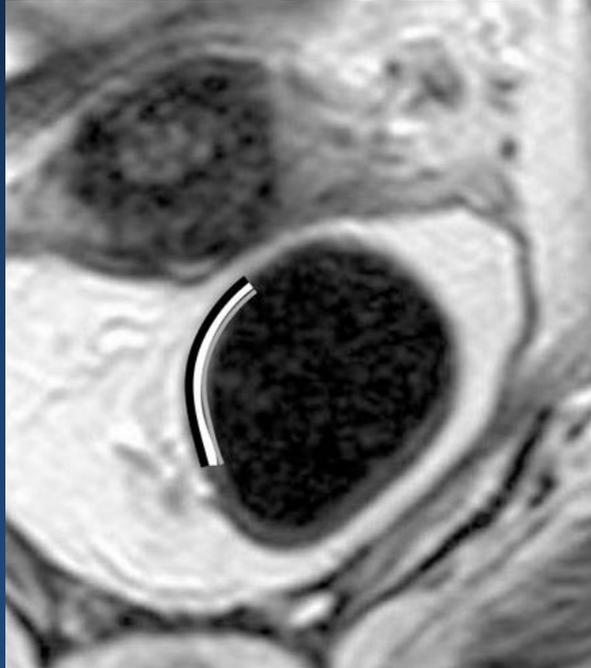
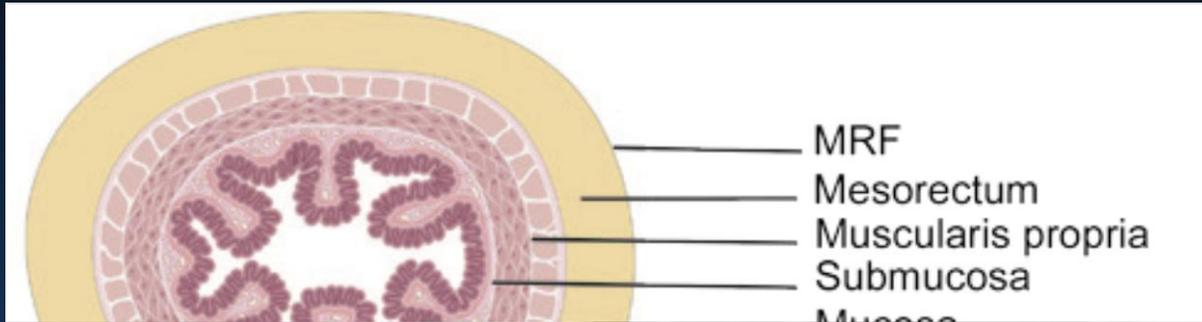
DON'TS

Insufflazione di gas

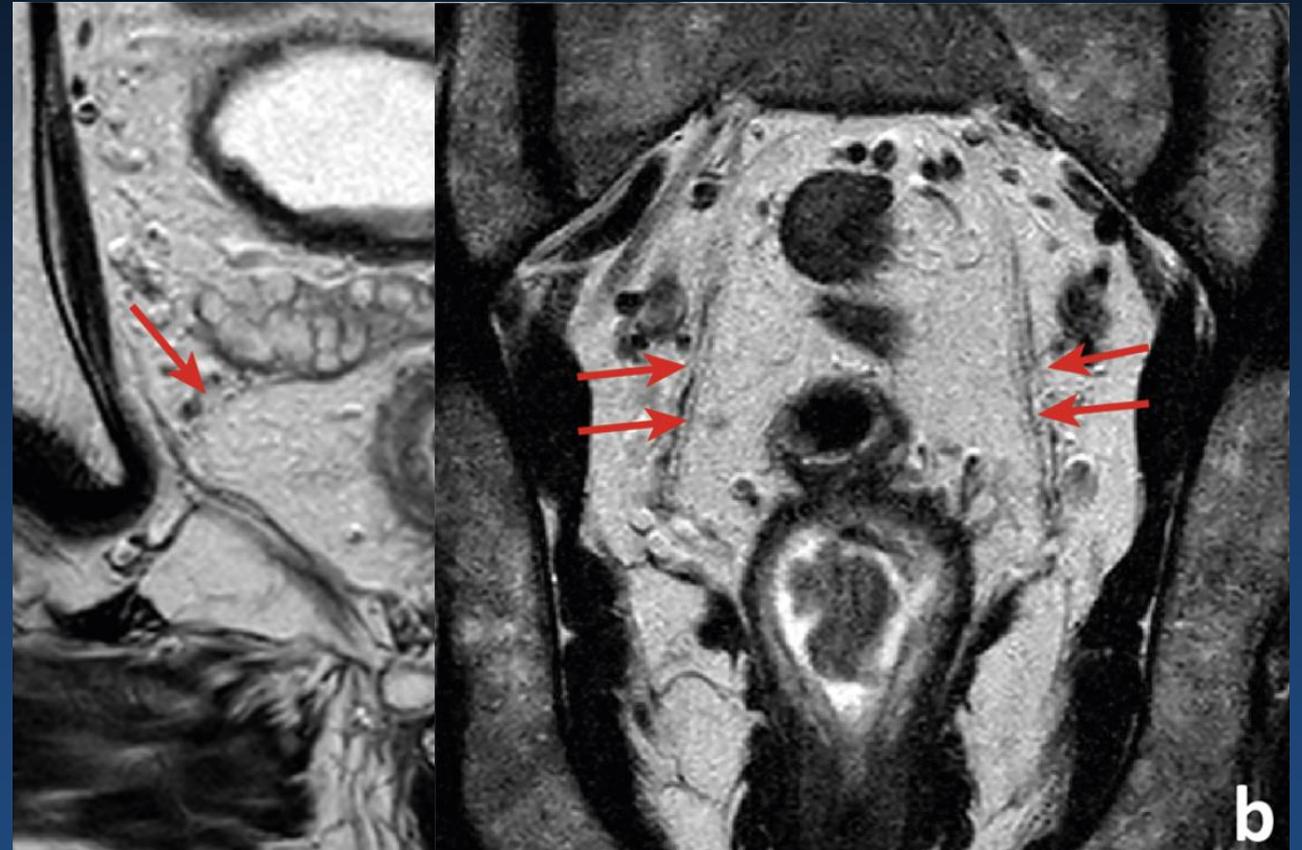
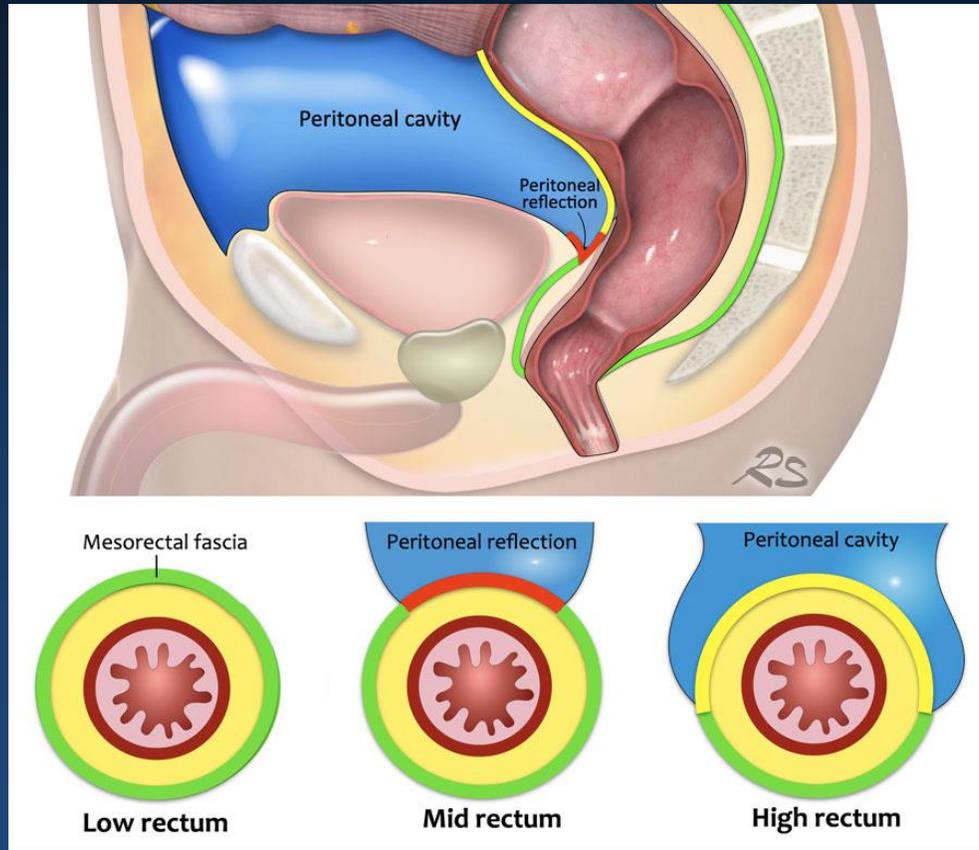
Bobina endorettale

T2W fat-sat

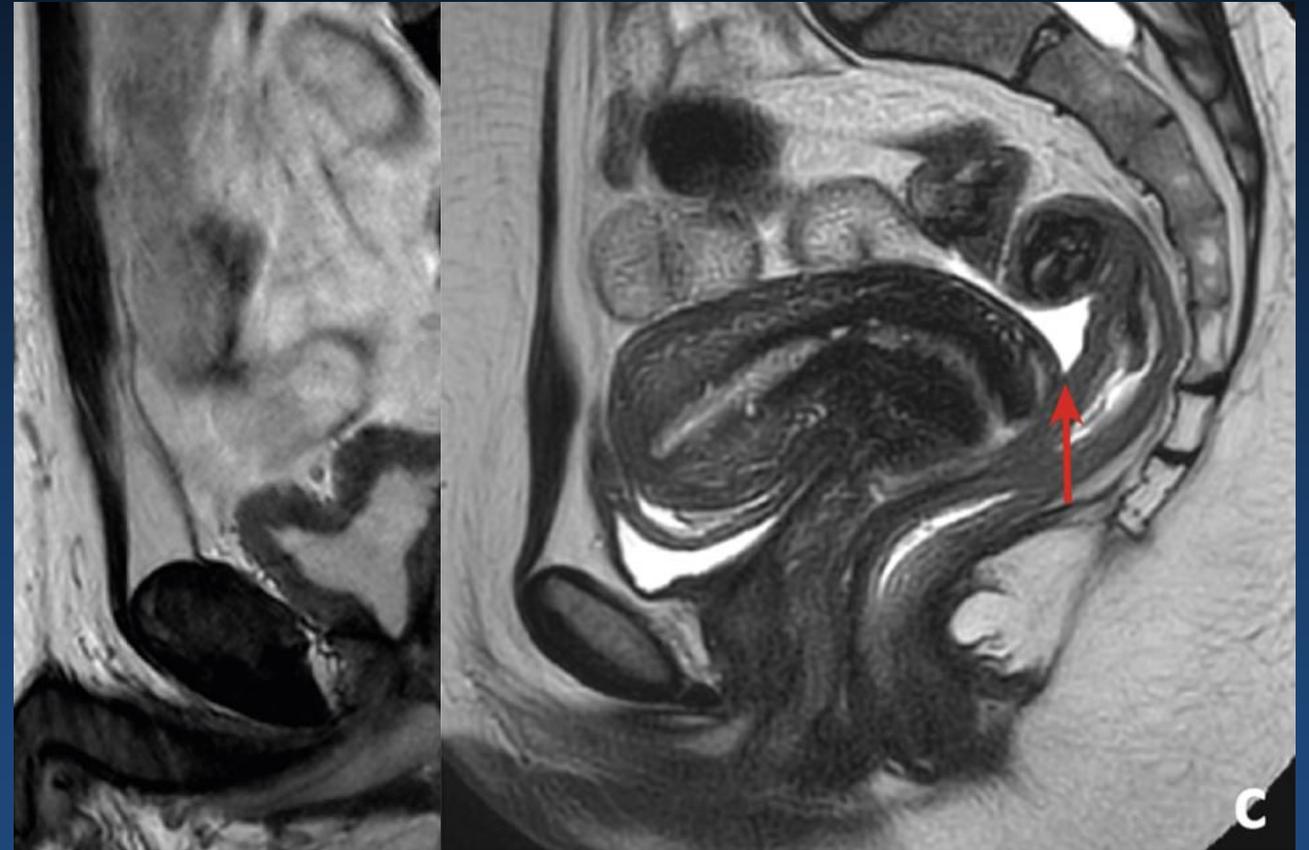
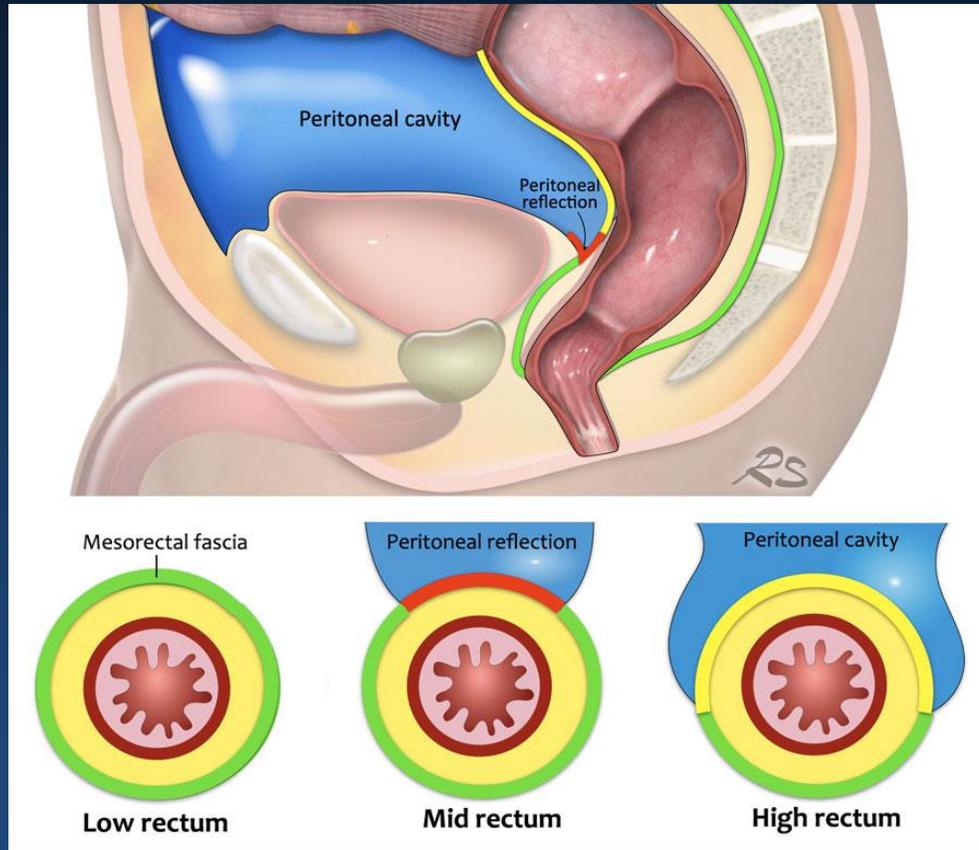
Anatomia radiologica – Retto



Anatomia radiologica – Fascia mesorettale

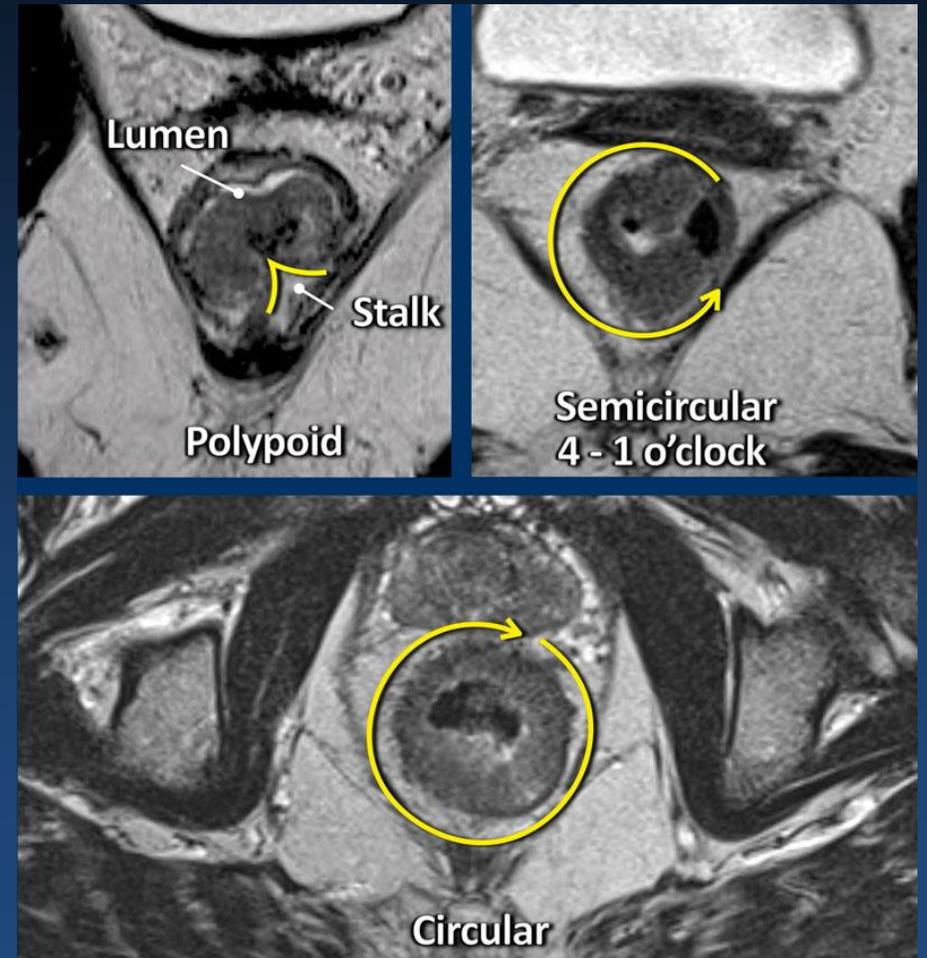


Anatomia radiologica – Riflessione peritoneale



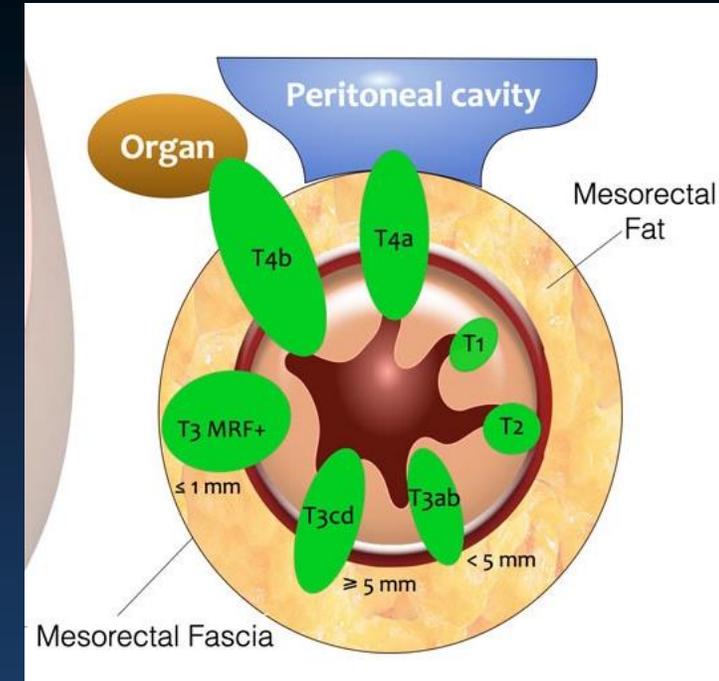
Localizzazione e morfologia

- Retto superiore – medio – inferiore
- Estensione cranio-caudale
- Distanza dalla giunzione ano-rettale
- Solido VS mucinoso
- Morfologia
 - Polipoide
 - Semi-circonfrenziale
 - Circonfrenziale
- Esteso da ore X ad ore Y



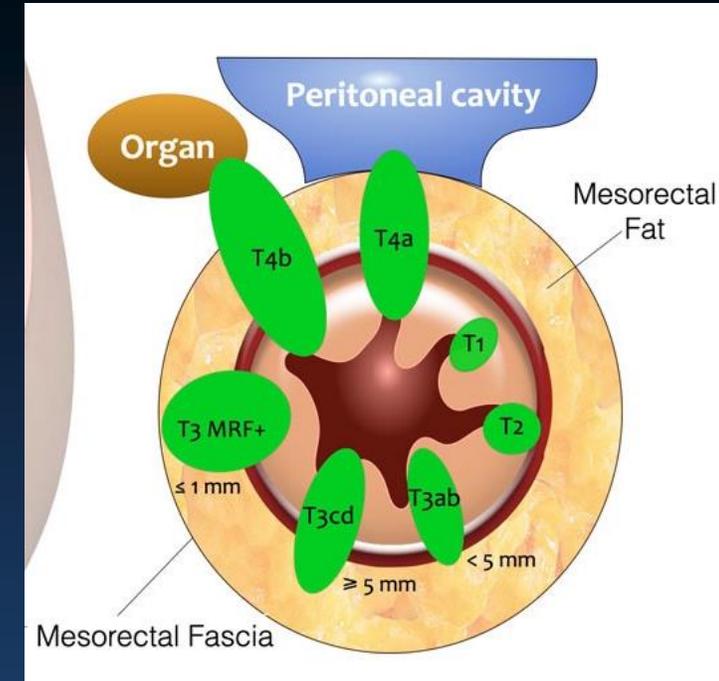
T-stage

- T1: invasione della sottomucosa
- T2: invasione della muscolare propria
- T3: estensione al mesoretto
 - T3a: < 1 mm
 - T3b: 1-5 mm
 - T3c: 5-15 mm
 - T3d: > 15 mm
- T4a: invasione del peritoneo o della riflessione peritoneale
- T4b: invasione di altri organi o di strutture extra-mesorettali
- MRF- : il tumore non invade la fascia mesorettale
- MRF+ : il tumore invade o si trova ≤ 1 mm dalla fascia mesorettale

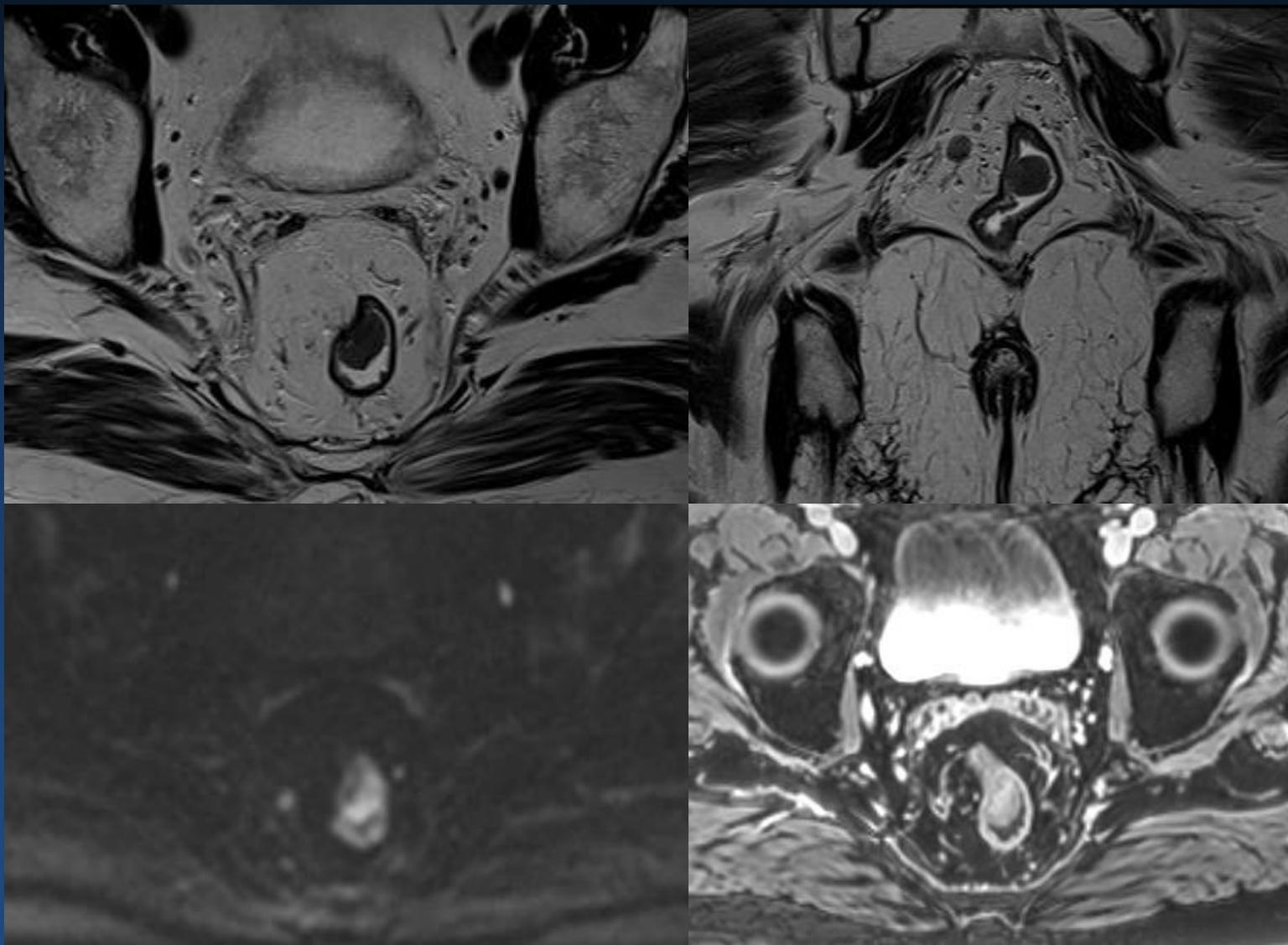


T-stage

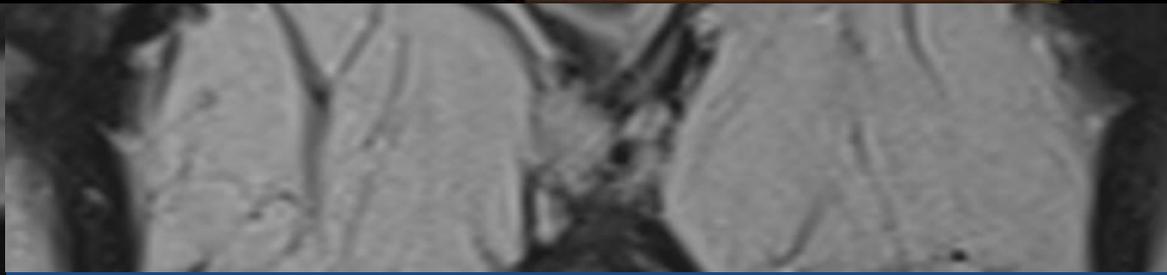
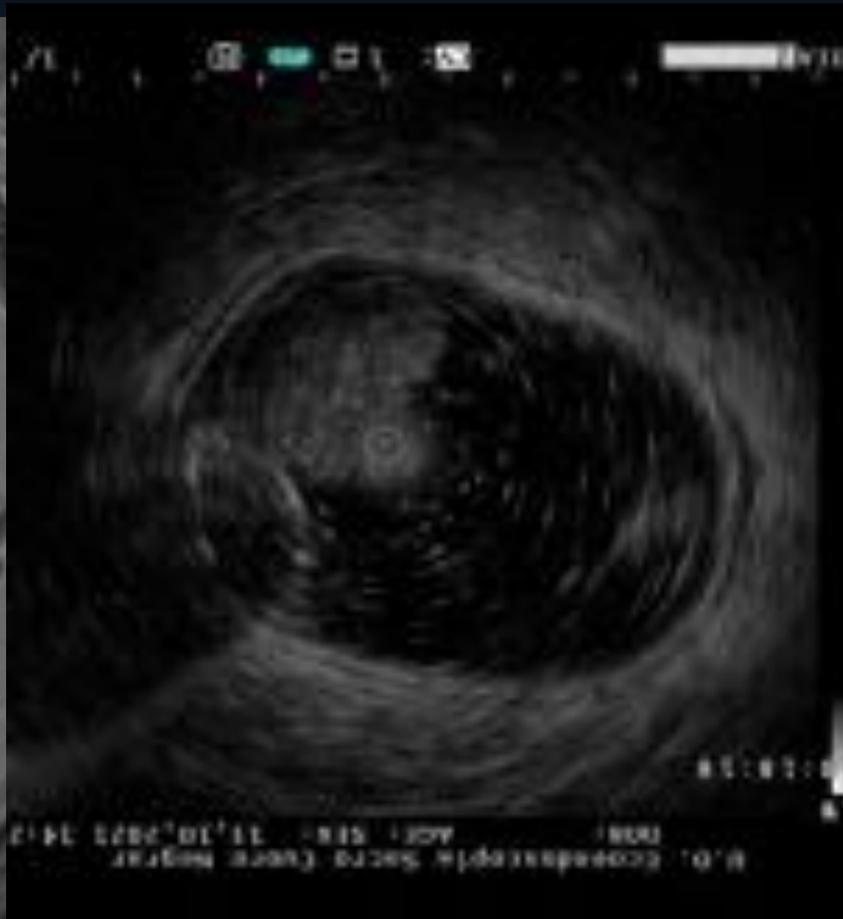
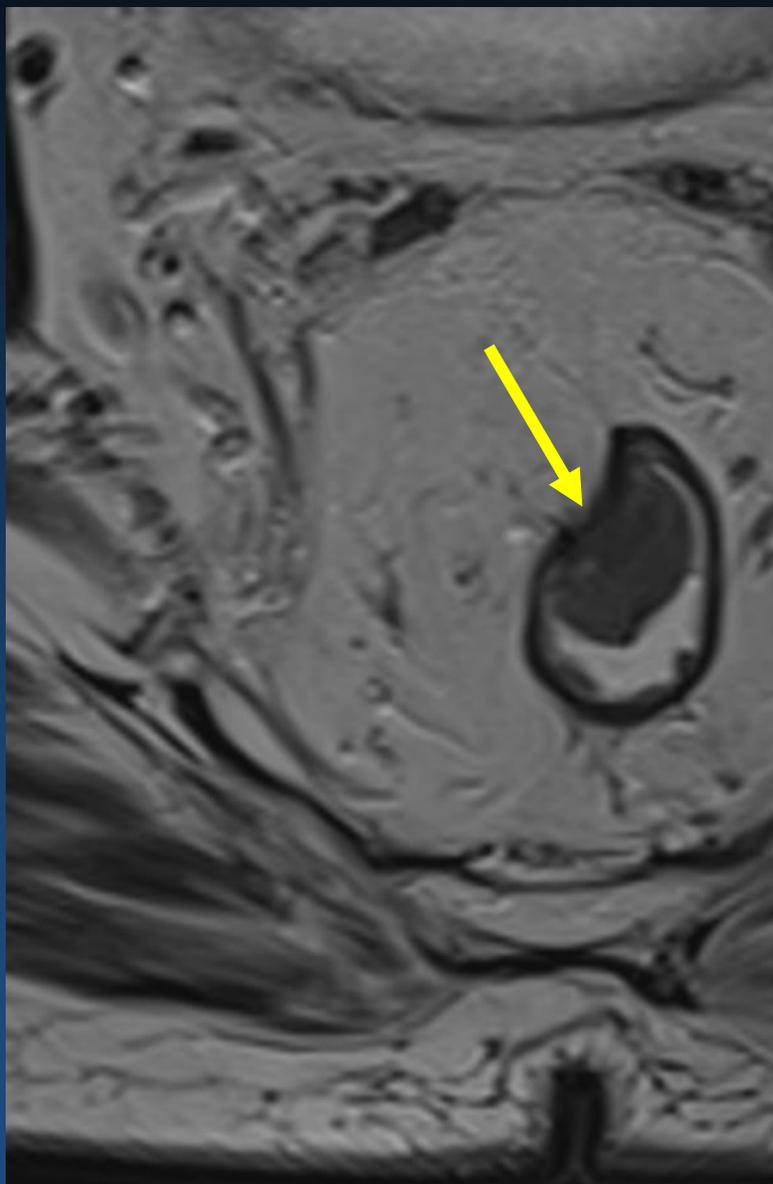
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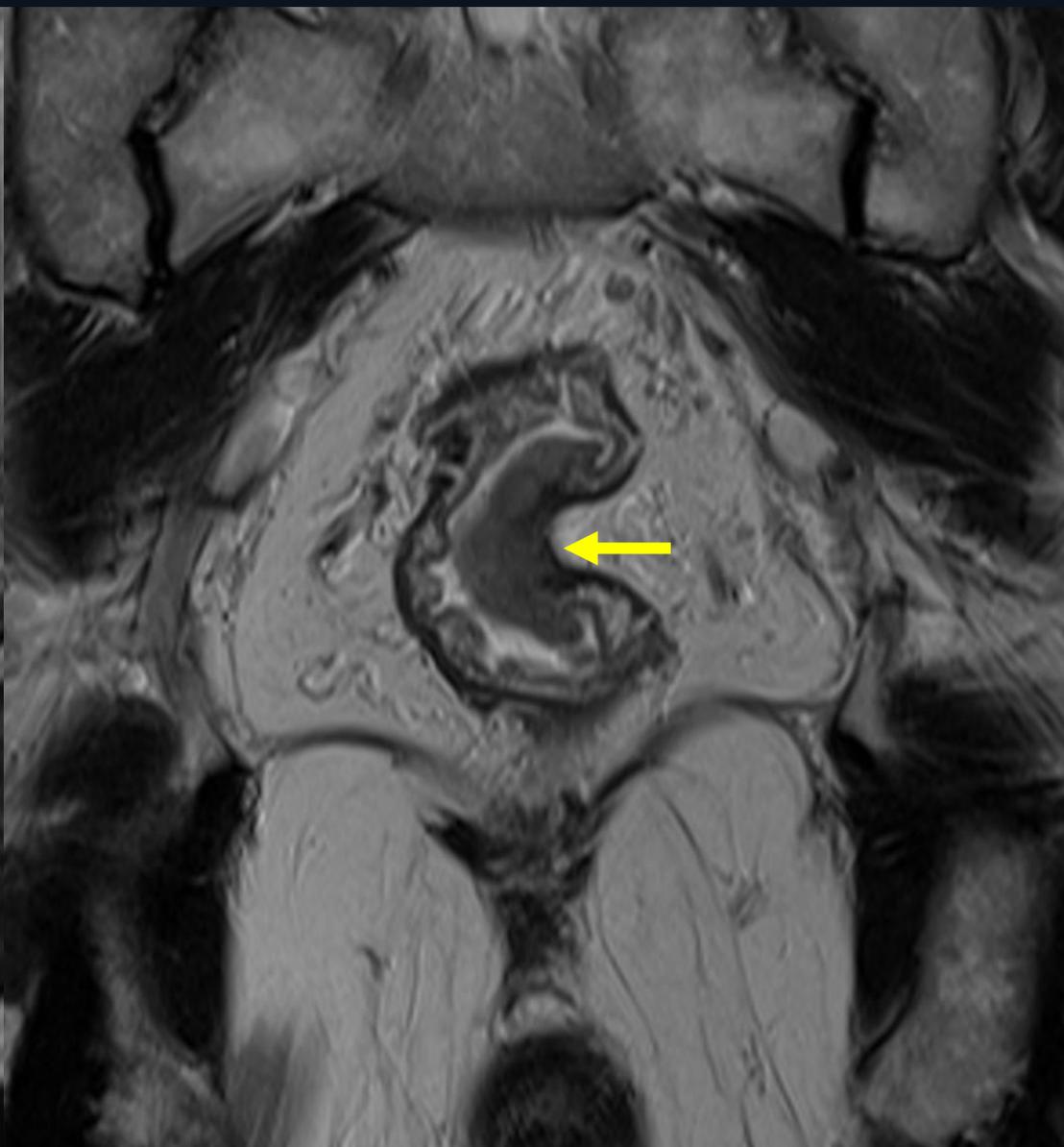
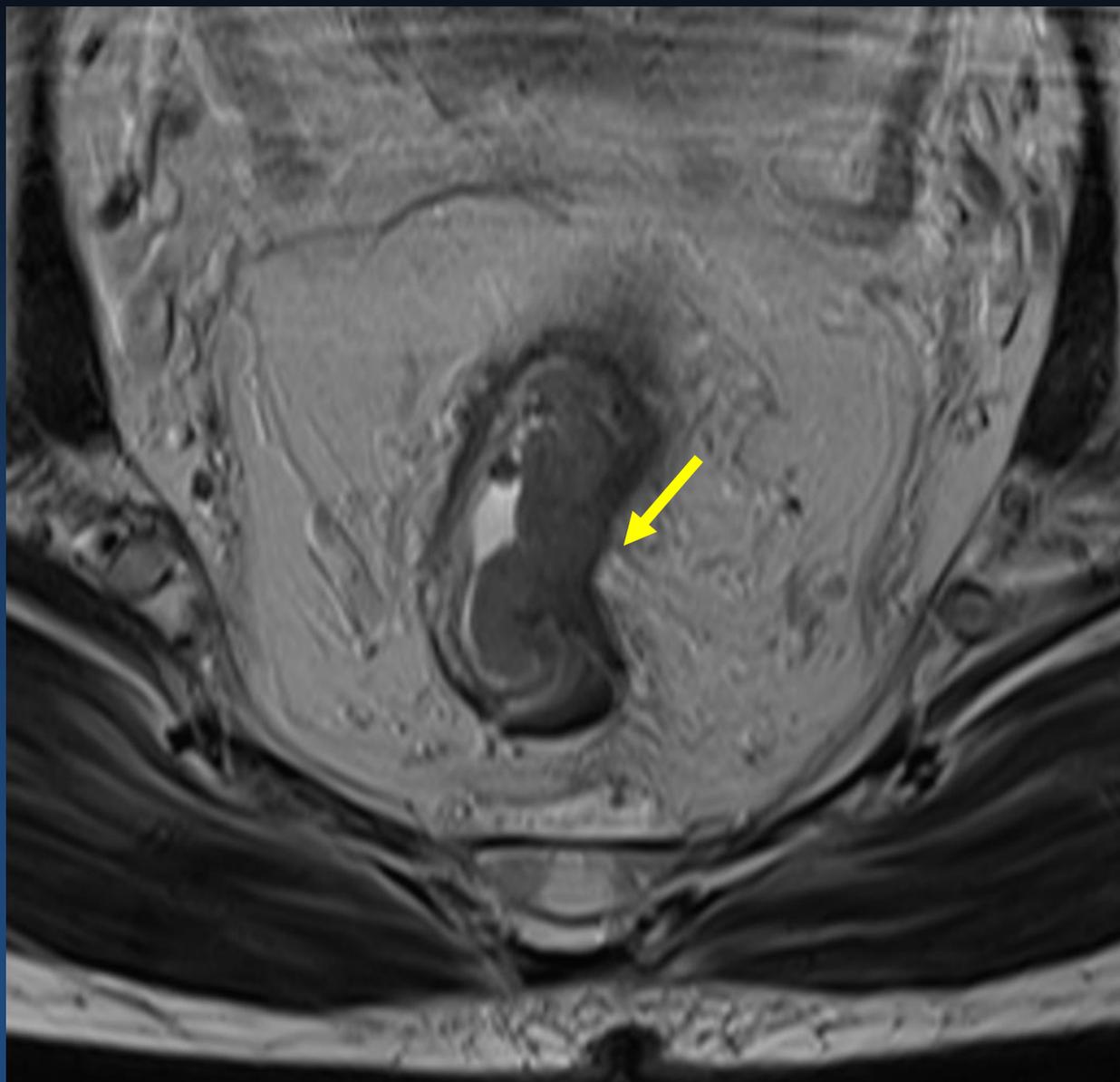
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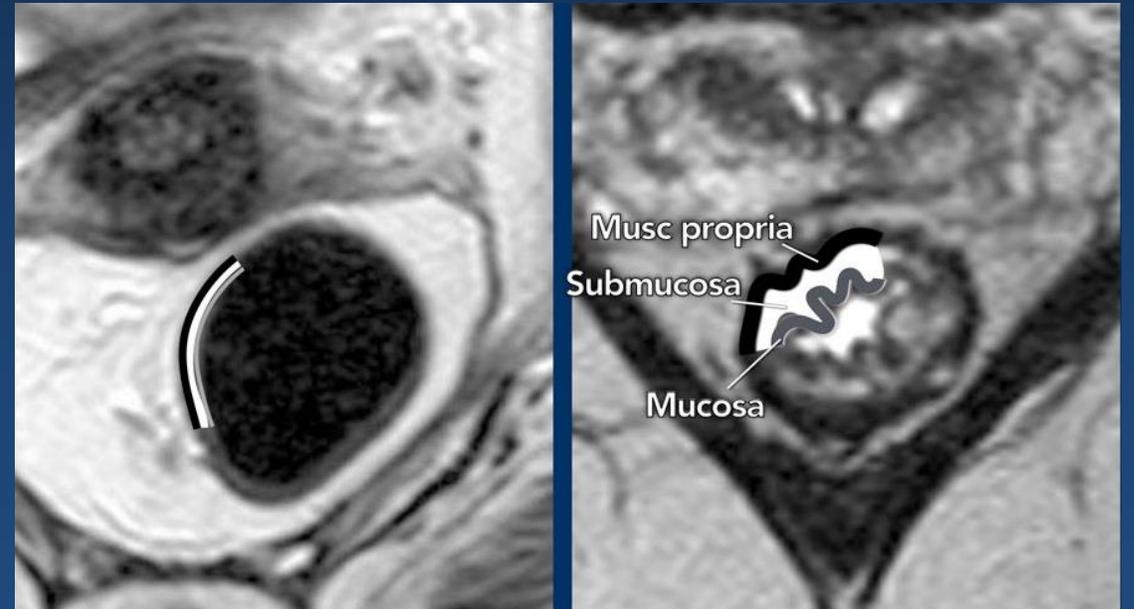


T2: invasione della muscolare propria

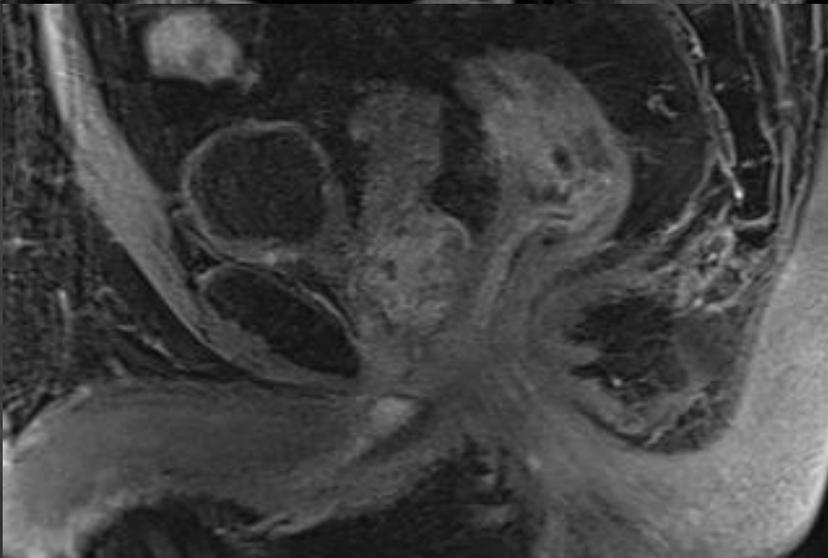
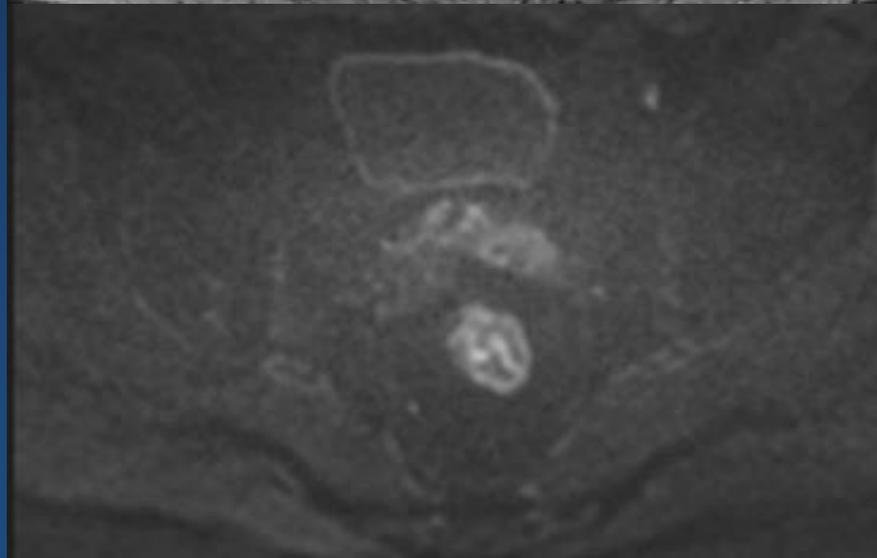
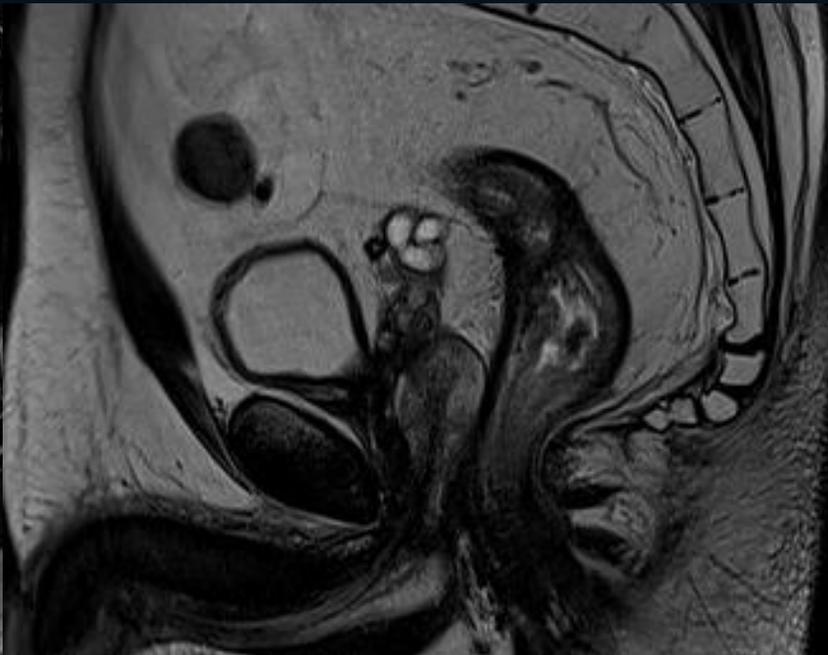
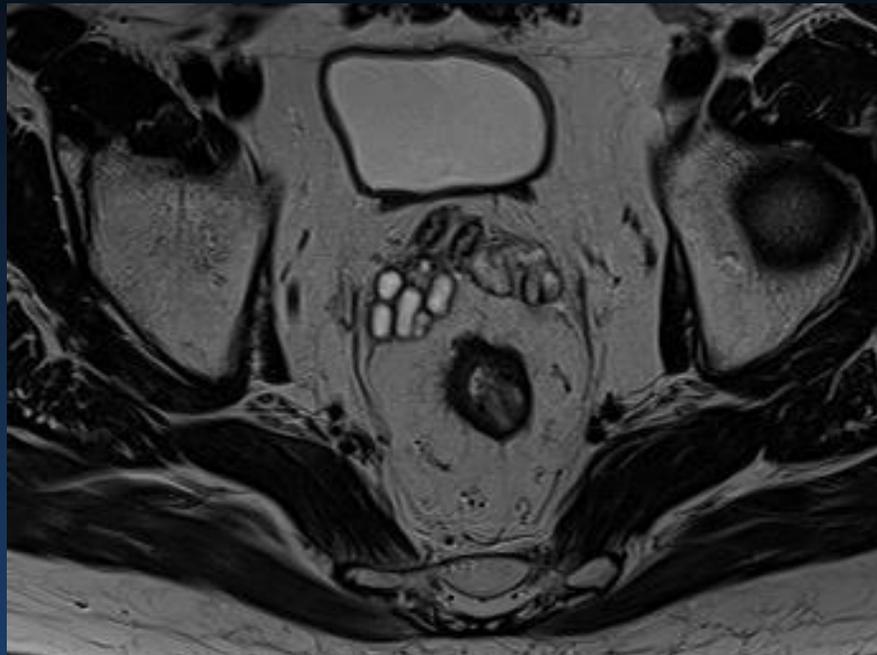


Pitfall: T1 vs T2

- RM non affidabile
- Spesso mucosa e sottomucosa sono indistinguibili alla RM
- Preservazione di un piano di clivaggio sottomucoso tra il tumore e la muscolare propria
- Ecoendoscopia più accurata

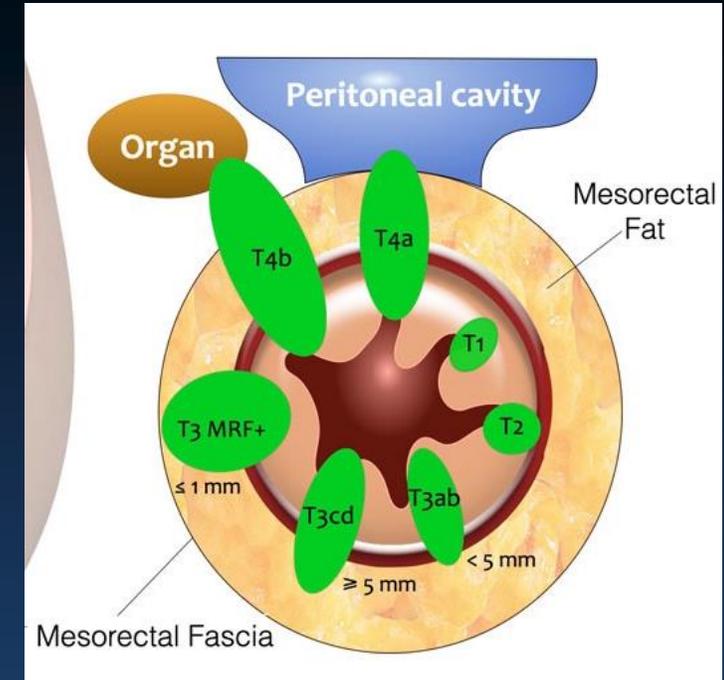


T1 vs T2?

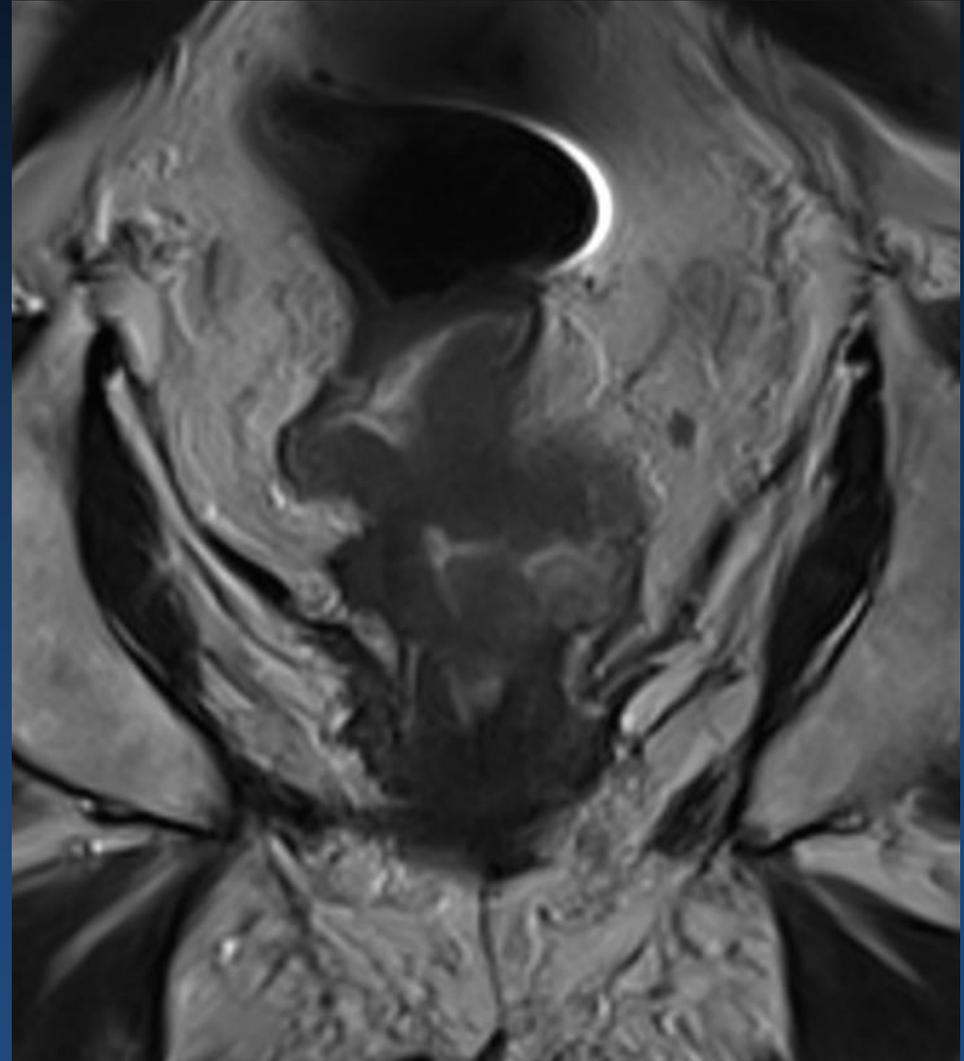
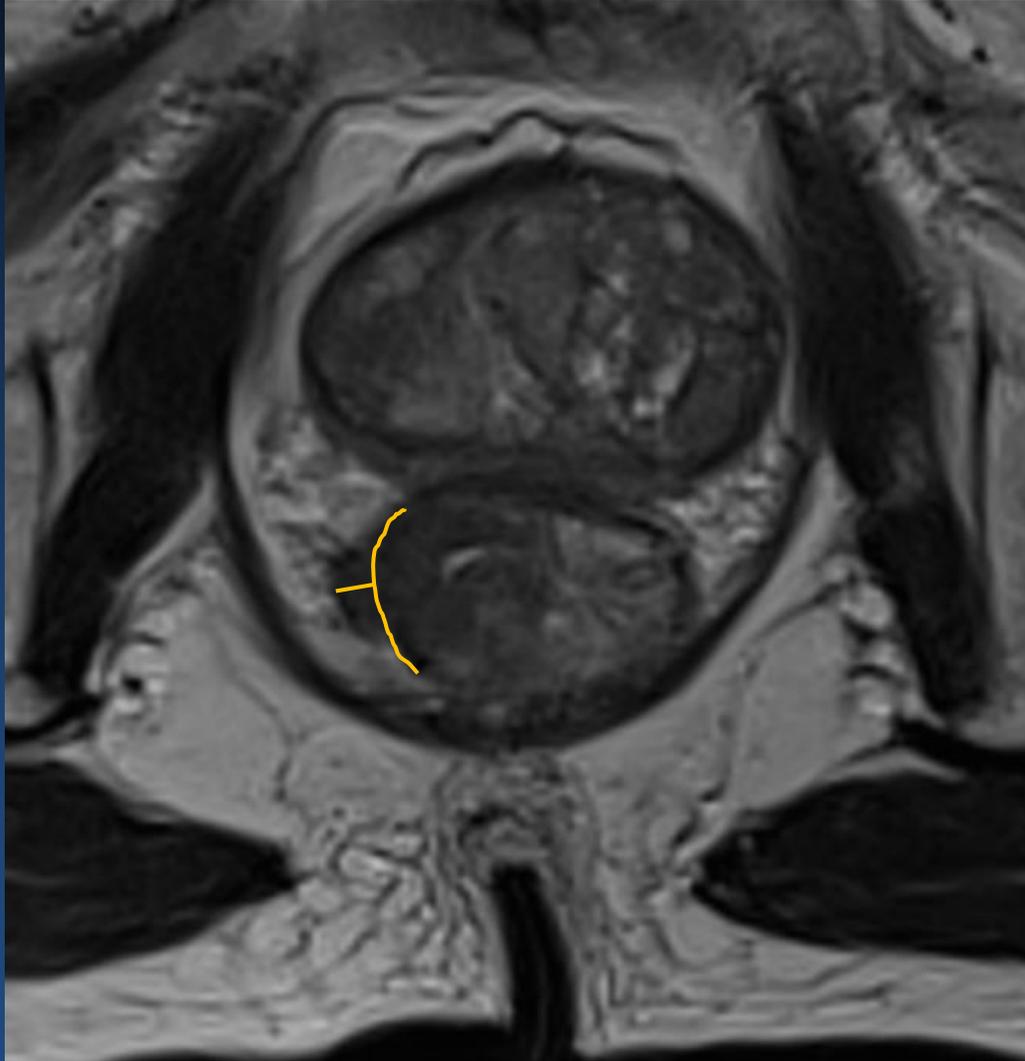


T-stage

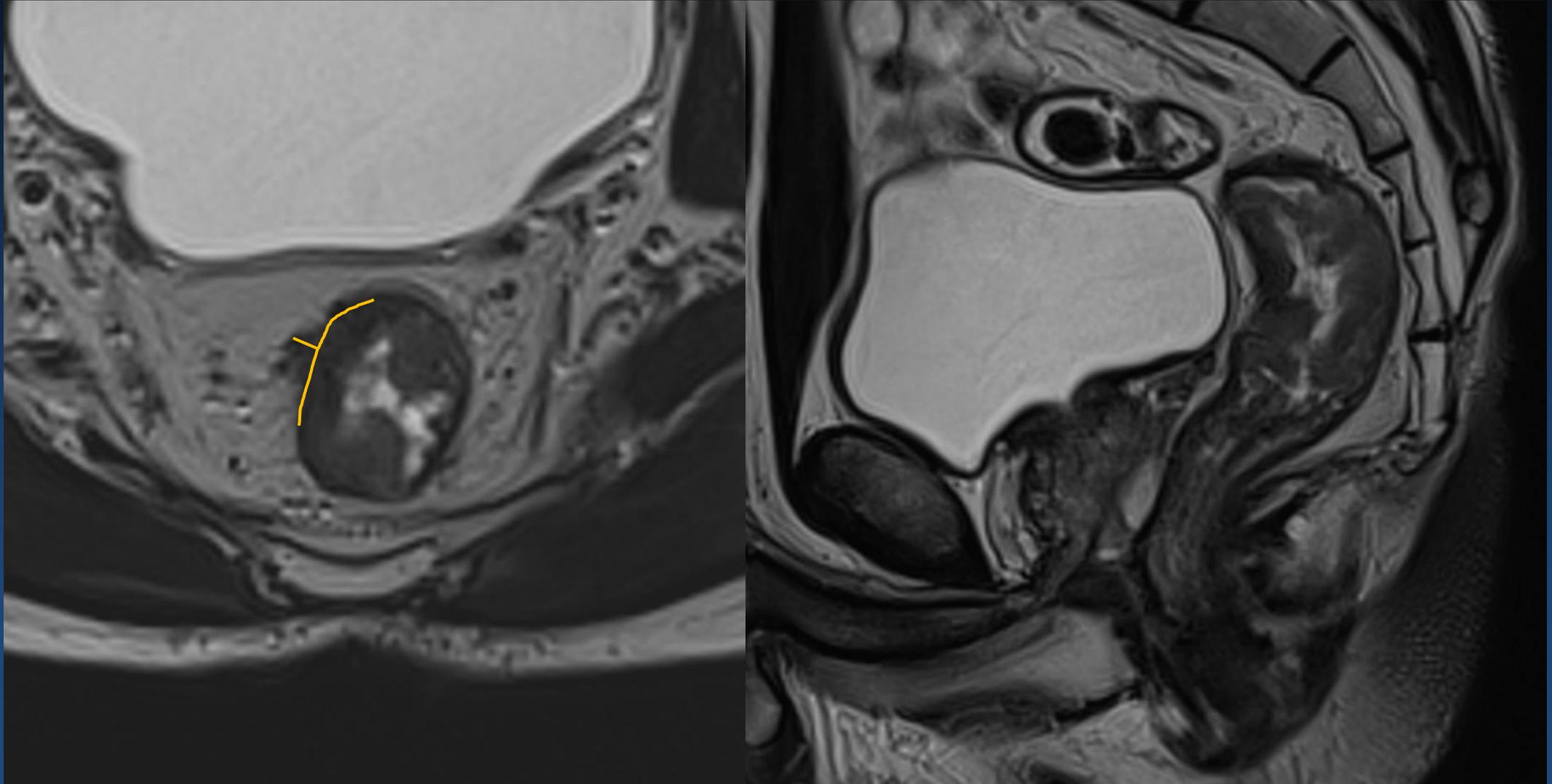
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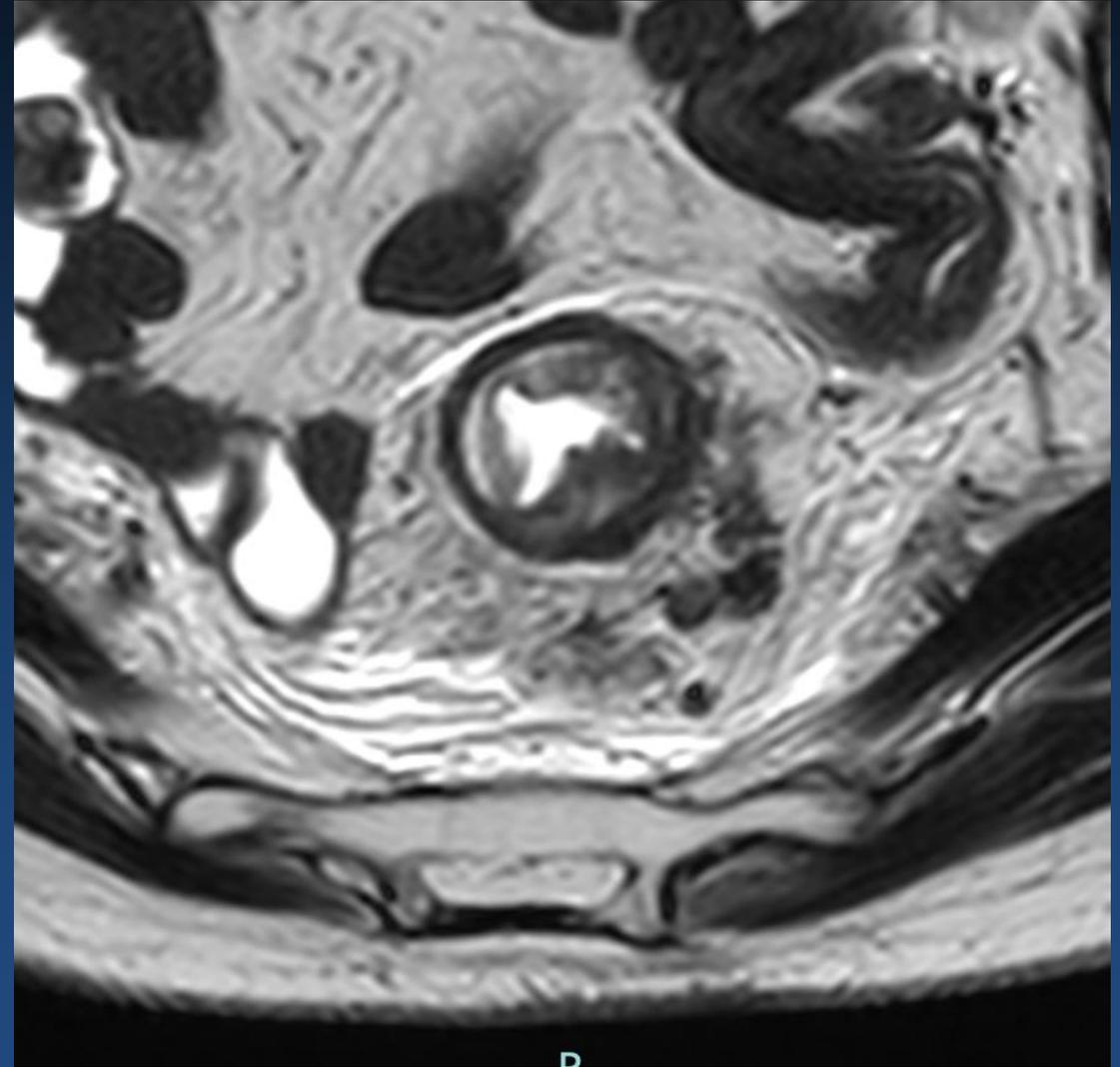
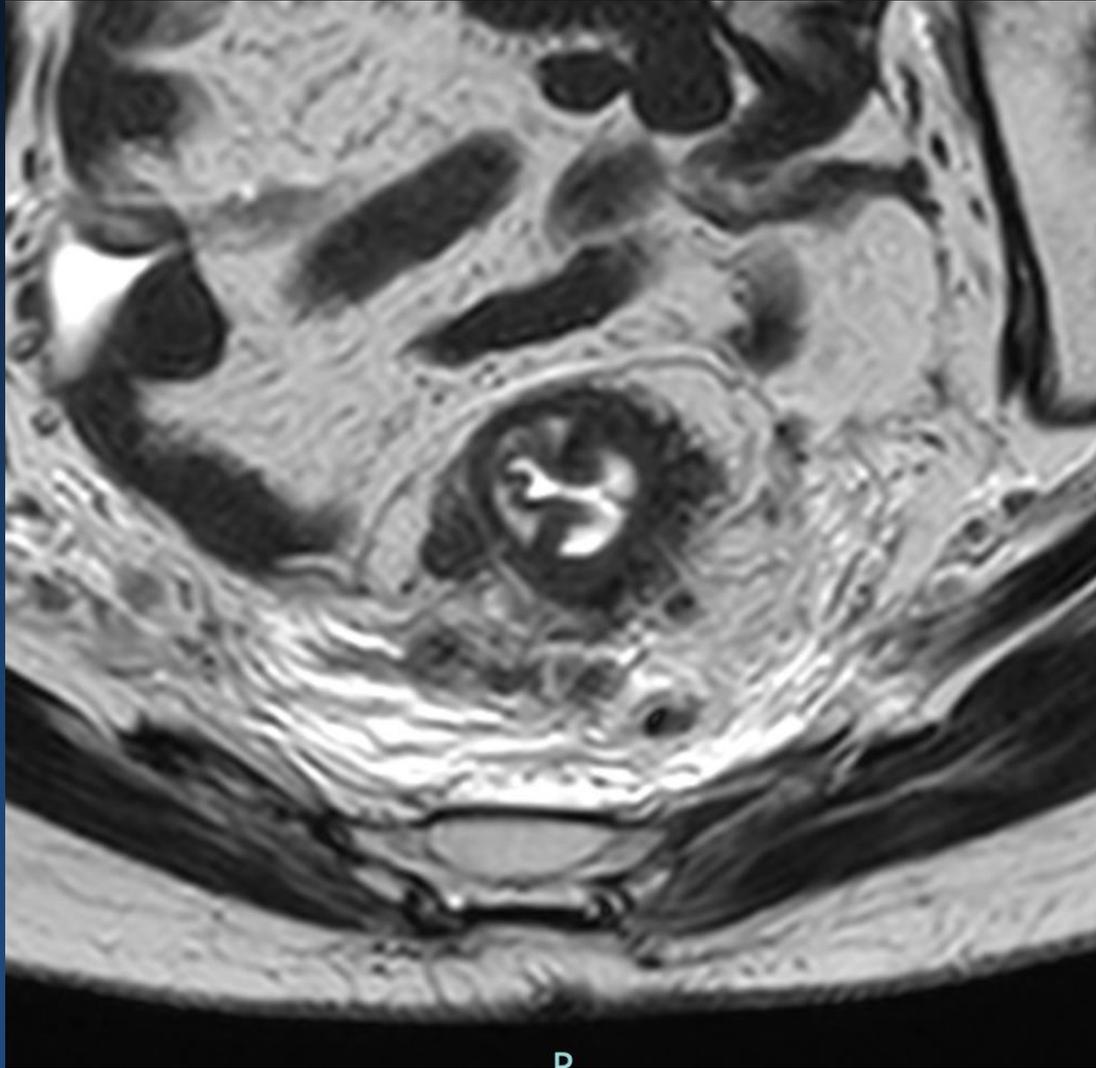
T3: Profondità di invasione extramurale



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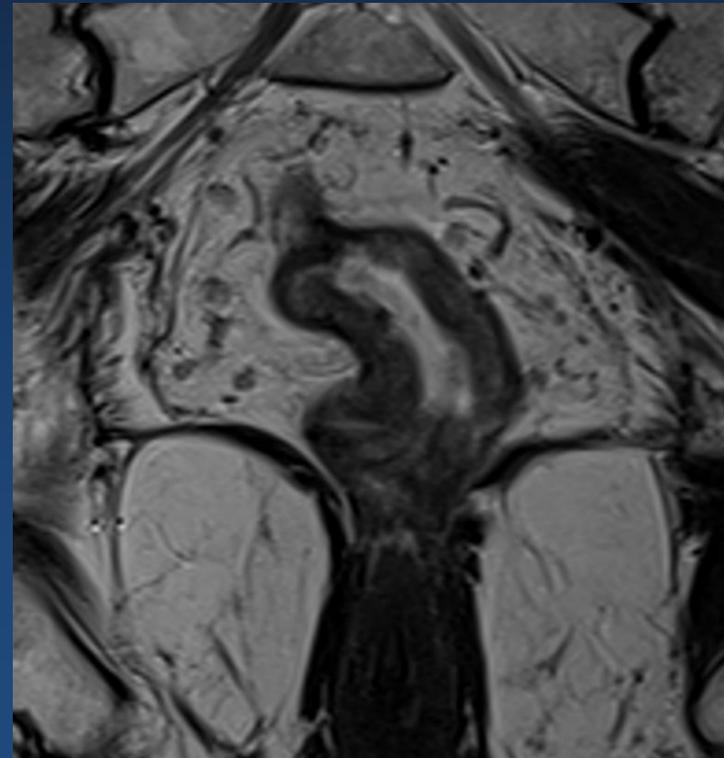
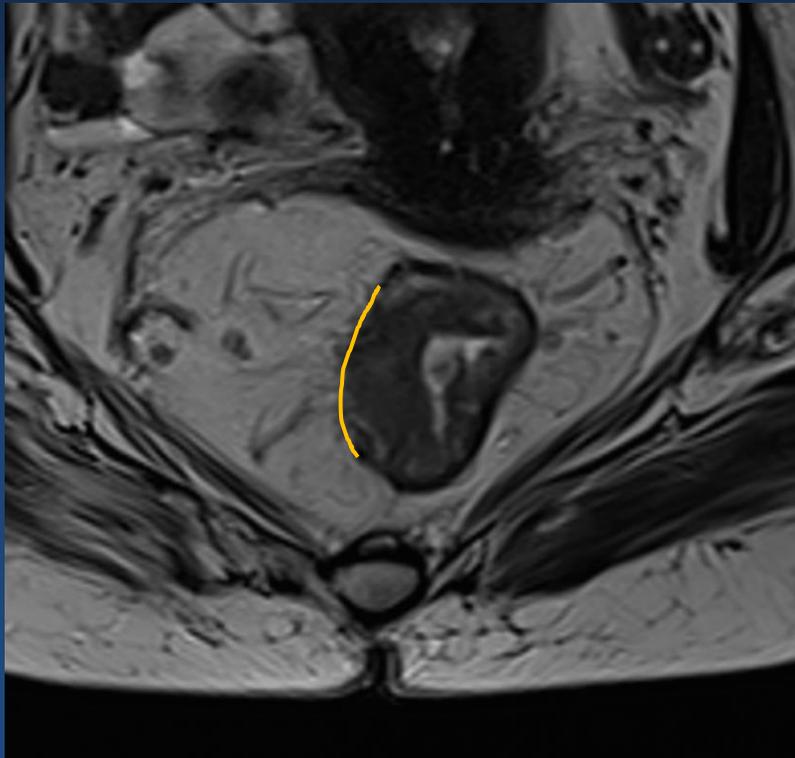


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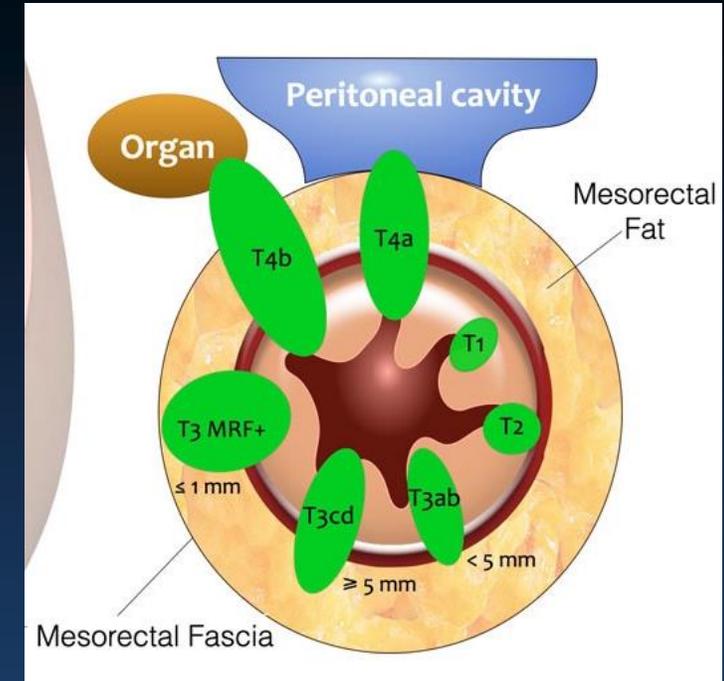
Pitfall: T2 vs early T3

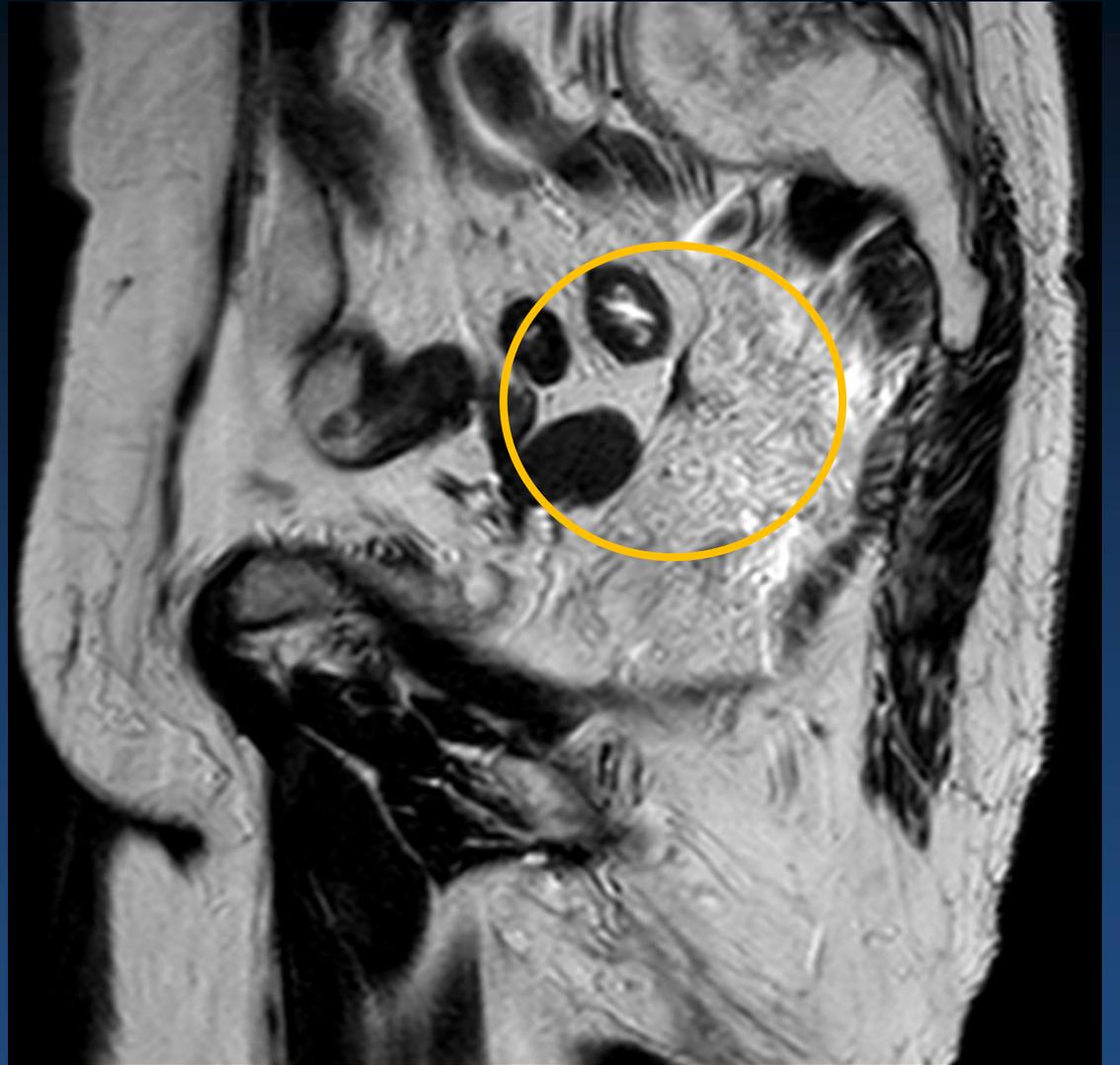
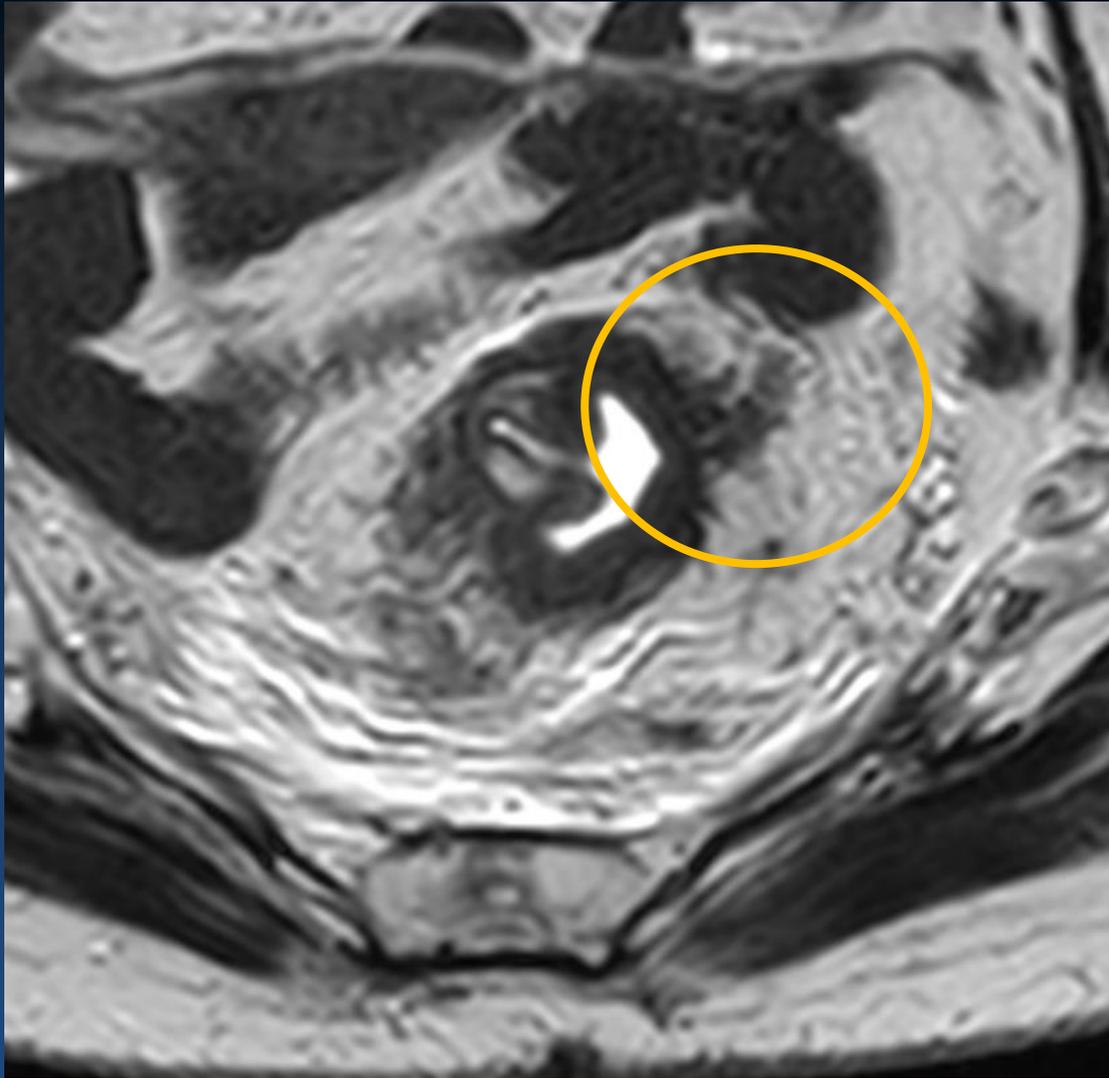
- Reazione desmoplastica peritumorale può simulare estensione extramurale
- Fini spiculature VS noduli solidi



T-stage

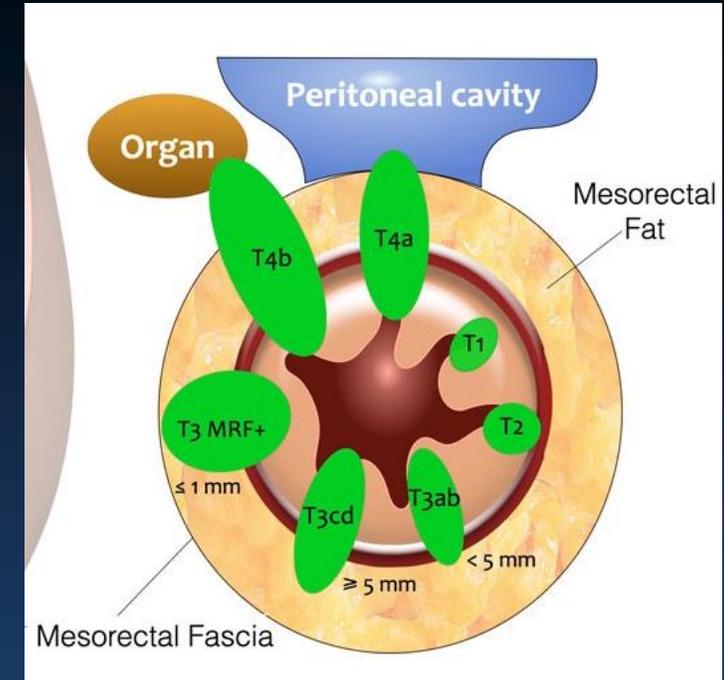
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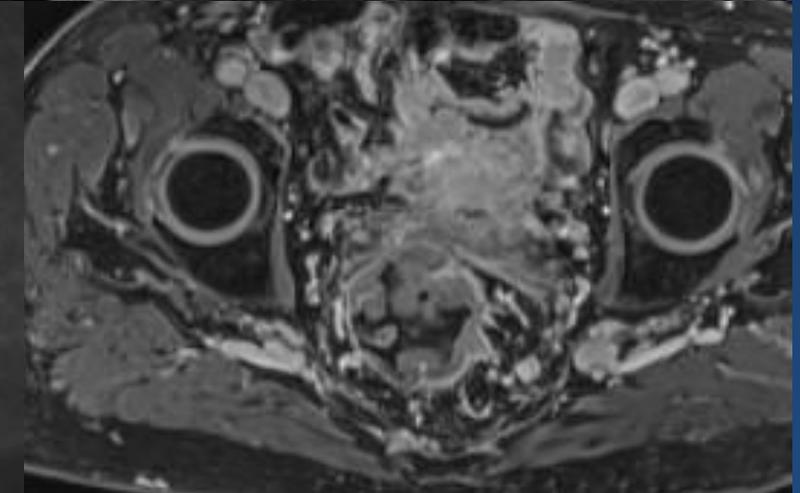
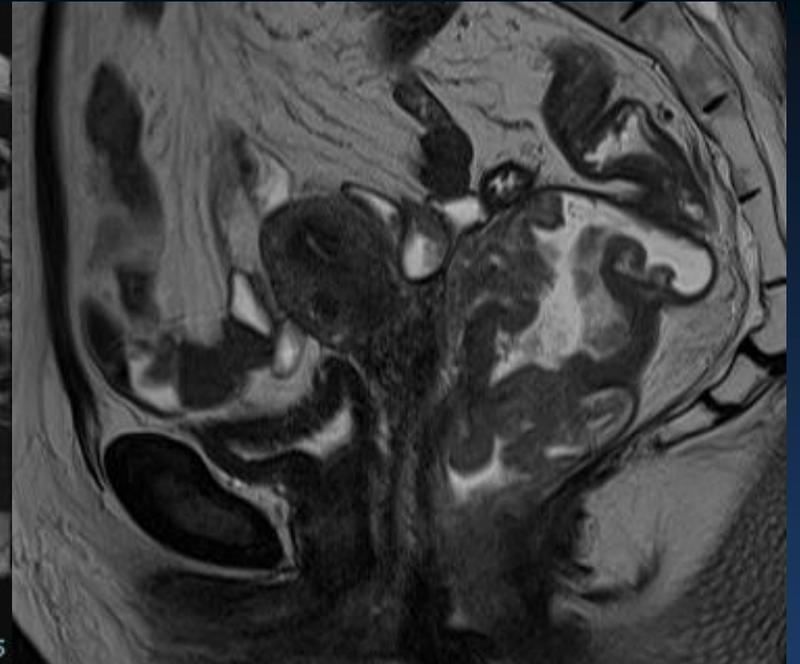


T4 b

T4b-stage

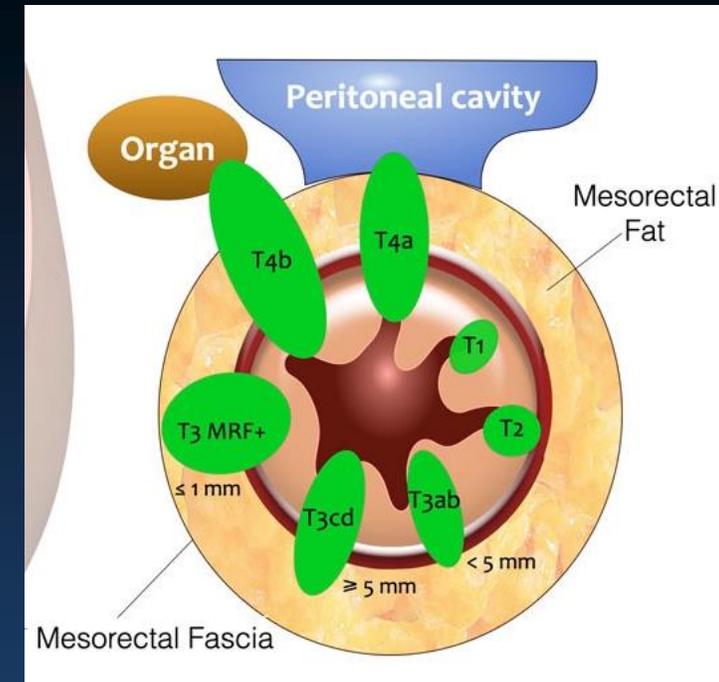
Tumor invades other organs or structures outside the meso-rectum:

- pelvic organs (incl. uterus, ovaries, vagina, prostate, seminal vesicles, bladder)
- bone
- striated/skeletal muscle (incl. external anal sphincter, puborectalis and levator ani, obturator, piriformis, and ischiococcygeus)
- ureters and urethra
- sciatic or sacral nerves
- sacrospinous/sacrotuberous ligaments
- any vessel outside the mesorectal compartment
- any loop of small or large bowel in the pelvis (separate from the primary site from which the tumor originates)
- any fat in an anatomical compartment outside the mesorectal compartment (i.e. obturator, para-iliac or ischio-rectal space)



T-stage

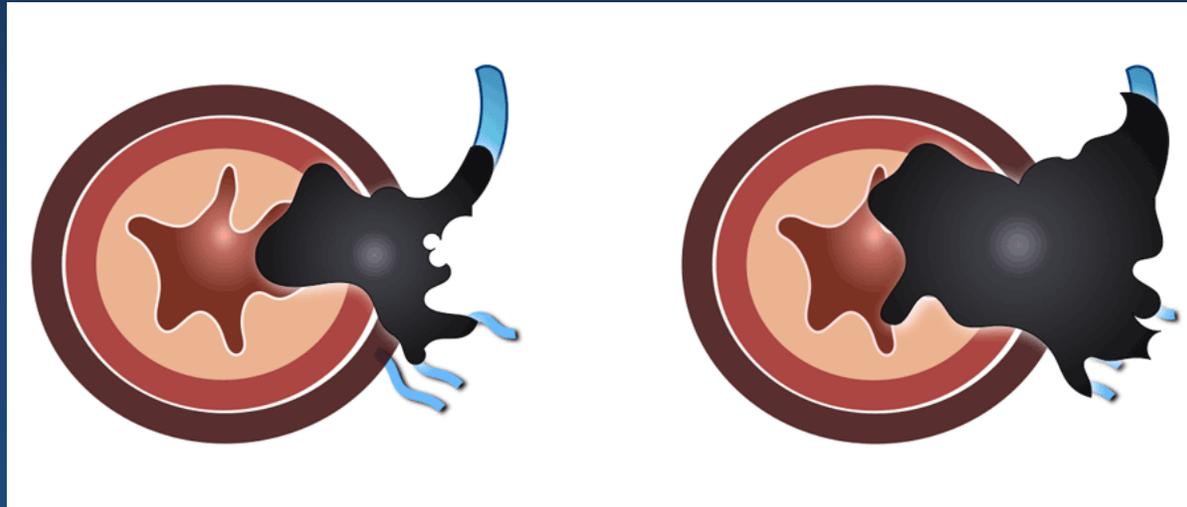
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EMVI: Extramural Vascular Invasion

Fattore di rischio per recidiva, metastasi e overall survival

- Tessuto con intensità di segnale tumorale si estende all'interno di strutture vascolari in prossimità del tumore
- Il tumore infiltra chiaramente i vasi peritumorali



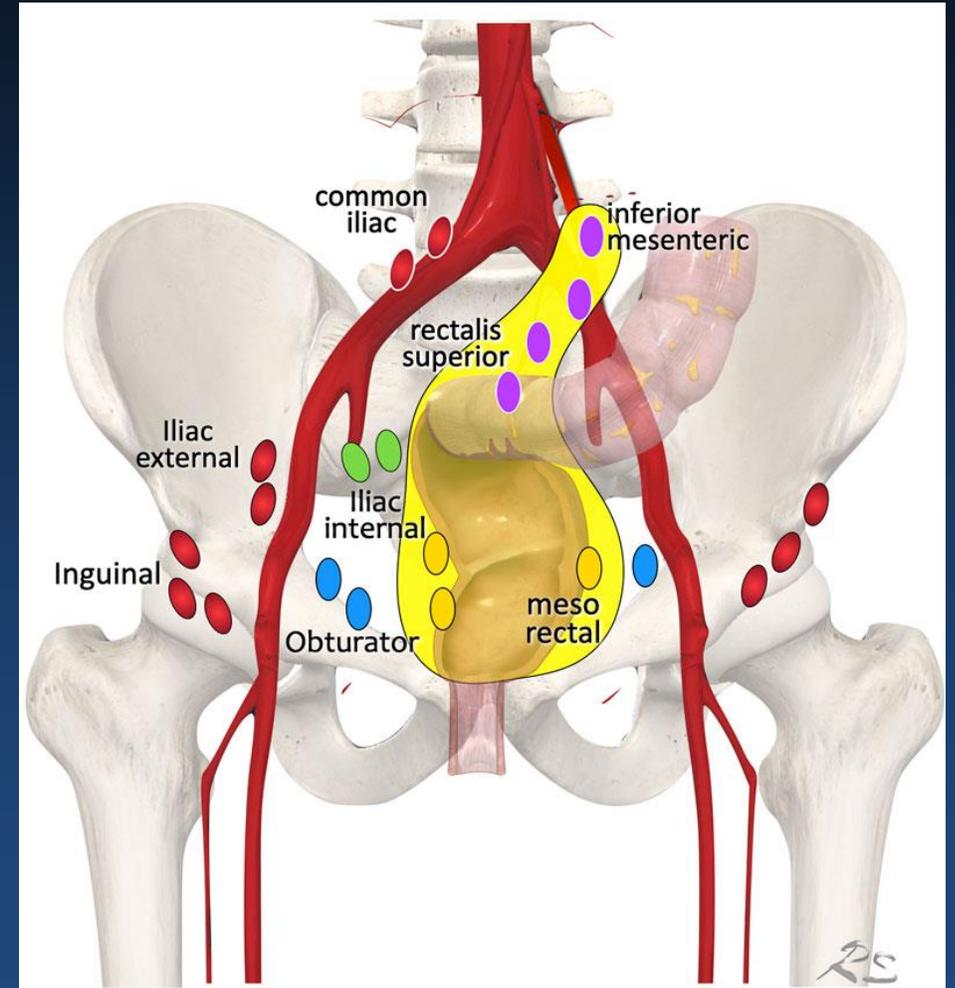
Staging

N-stage

- N0: nessun linfonodo sospetto
- N1: 1-4 linfonodi loco-regionali sospetti
- N2: > 4 linfonodi loco-regionali sospetti

Se coinvolti linfonodi extra-regionali sono da considerare metastasi linfonodali a distanza, e pertanto parte del M-stage

- ECCEZIONE: tumori del retto inferiore estesi oltre il livello della linea dentata



Staging

Criteria for Mesorectal lymph nodes

- cN0** no suspicious lymph nodes
- cN1** 1-3 suspicious lymph nodes
- cN2** ≥ 4 suspicious lymph nodes

Suspicious if

- > 9 mm
- 5-9 mm + 2 malignant characteristics
- < 5 mm + 3 malignant characteristics

Note:
Mucinous lymph nodes are always suspicious

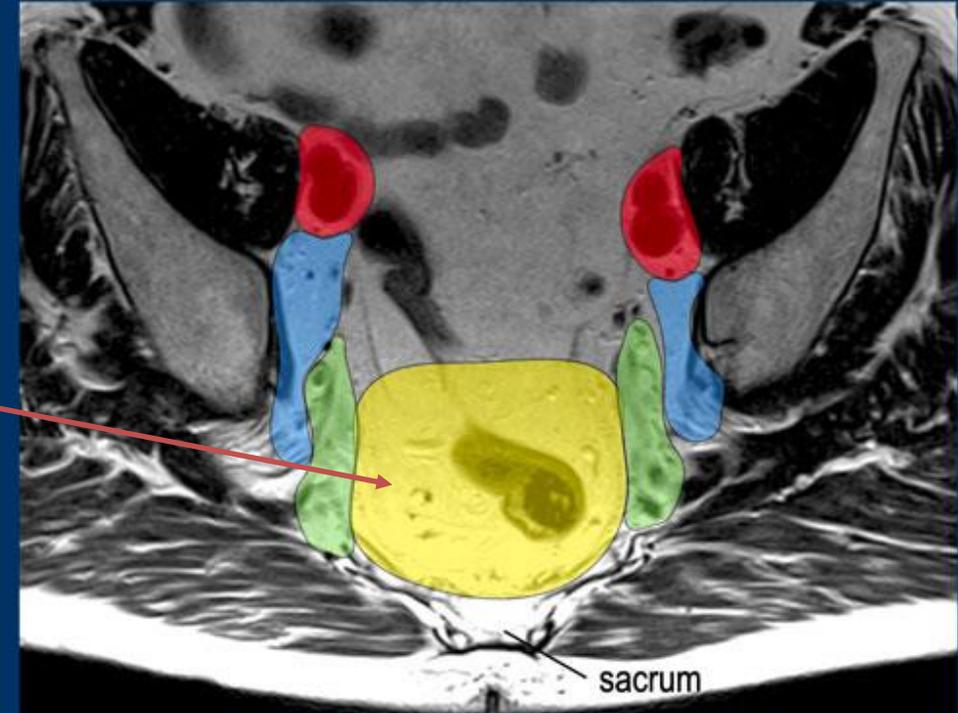
Malignant characteristics



Criteria for Lateral lymph nodes

Suspicious if

- ≥ 7 mm (obturator & internal iliac)
- Size criteria only
- Any morphology



external iliac

obturator

internal iliac

mesorectal

T3 – N2

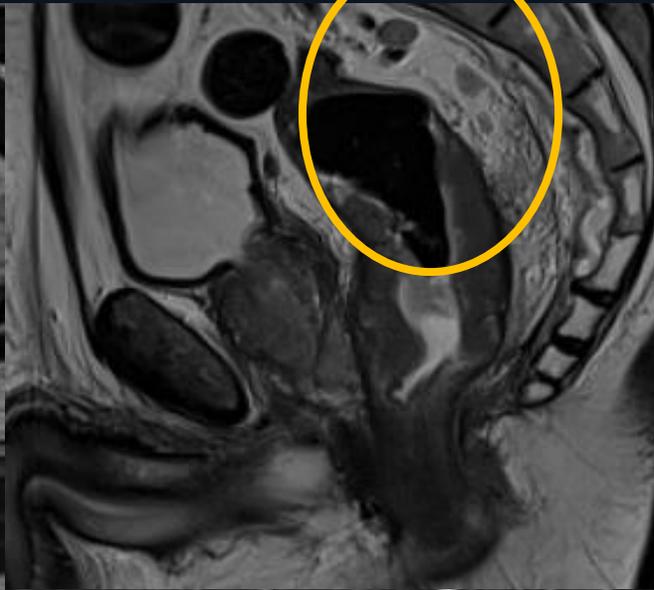
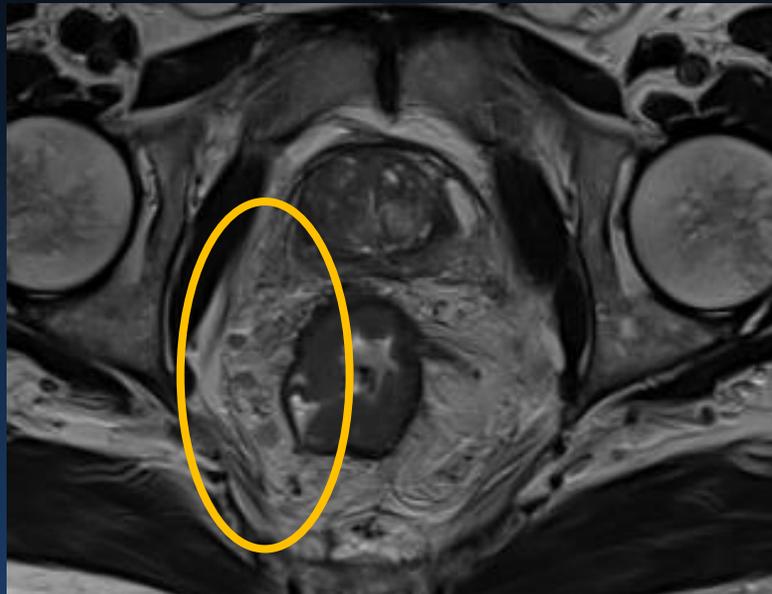


Foto 1 -

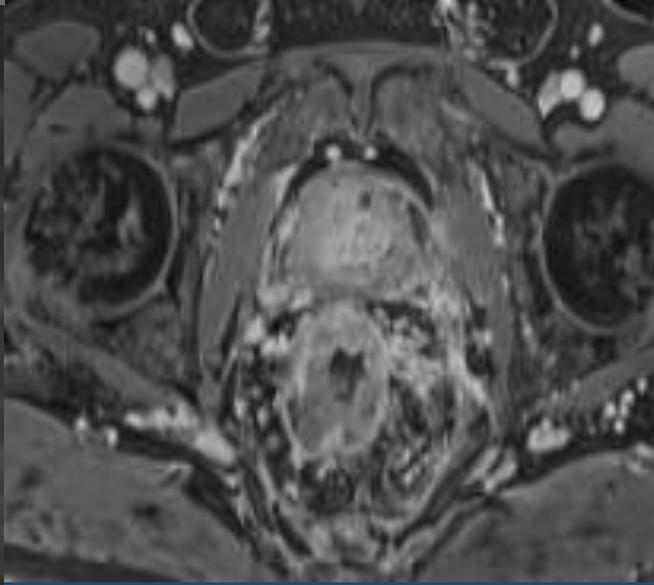
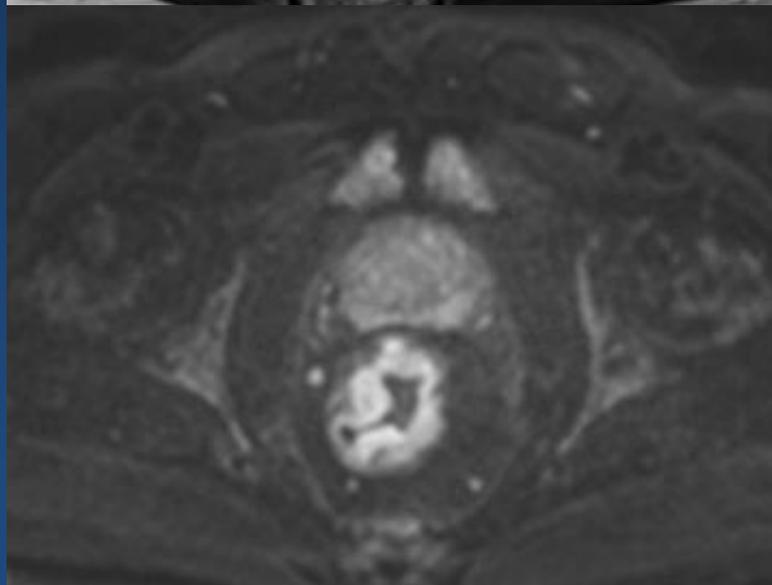


Foto 2 -



RE-Staging dopo chemio-radioterapia

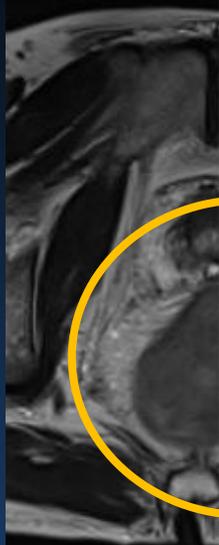


Foto 3 -



Foto 4 -

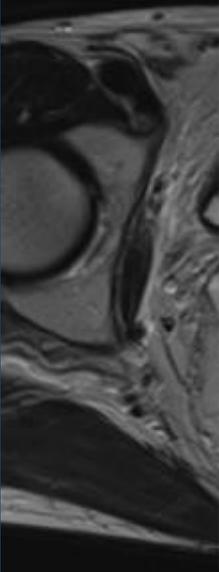
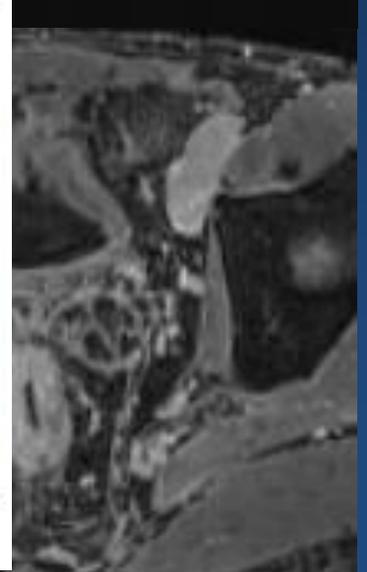
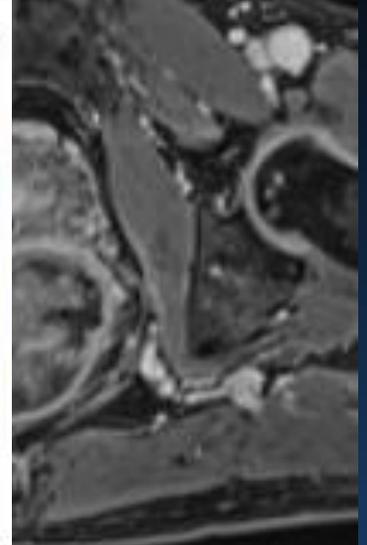


Foto 1 -



Foto 2 -





SACRO CUORE
DON CALABRIA

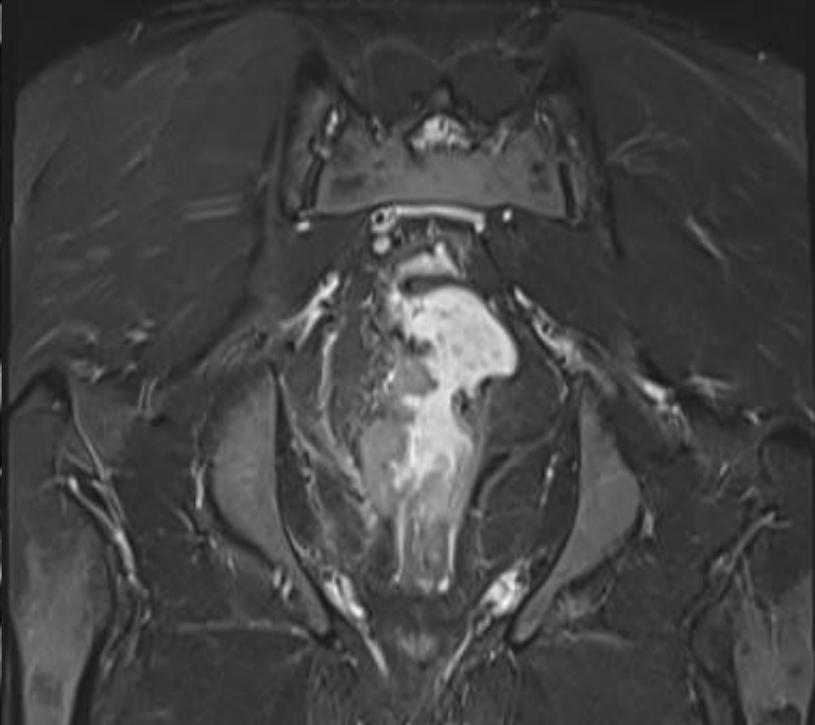
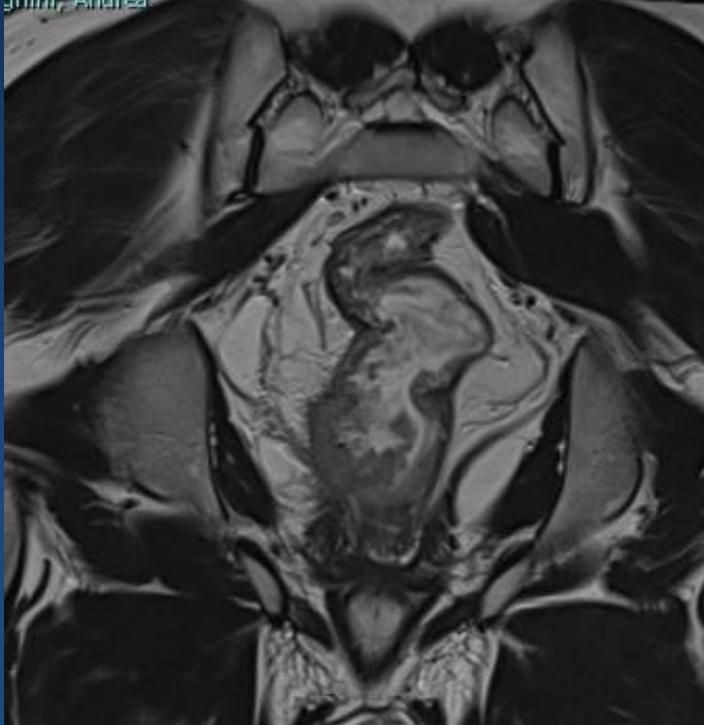
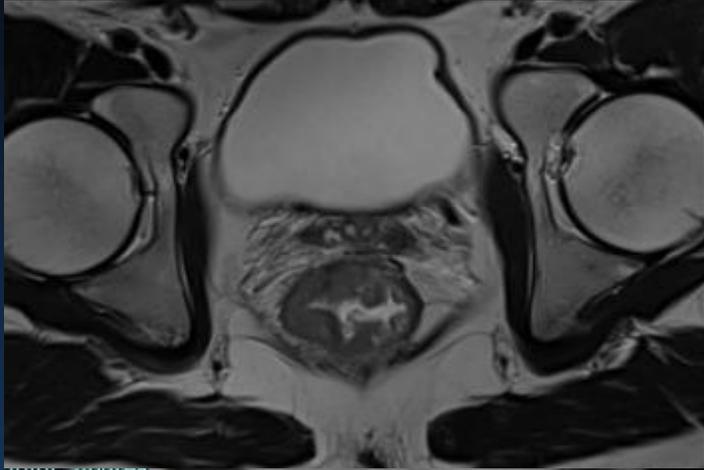


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