

Corrélation Imagerie et vision chirurgicale de l'endométriose complexe



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CHPG

IRM

Endométriose

PROCÉDURES

CLASSIFICATIONS

Protocole

L'échographie endovaginale doit rester la première méthode d'évaluation de l'EPP

L'IRM est recommandée en seconde intention pour la cartographie préopératoire d'une EPP (grade A)

Préparation digestive

Vessie modérément remplie

Compression abdominale

Agents anti-peristaltiques (glucagon)

L'opacification vaginale et rectale sont considérés comme des options

Aucune recommandation concernant l'injection de gadolinium, l'imagerie de diffusion, l'imagerie de susceptibilité magnétique

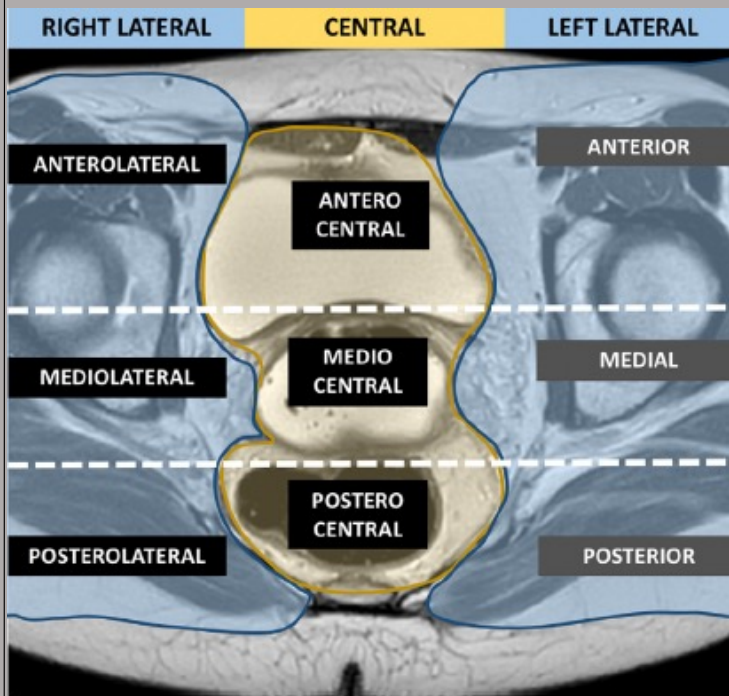
REVUE

Recommandations de la Société européenne d'imagerie génito-urinaire : IRM de l'endométriiose pelvienne  

Marc Bazot, Nishat Bharwani, Cyrille Huchon, Karen Kinkel-Trugli, Teresa Margarida Cunha, Algesira Guerra, Lucia Manganaro, Laura Bunesch, Aki Kido, Kaori Togashi, Isabelle Thomassin-Naggara et Andrea Rockall
Imagerie de la Femme, 2017-12-01, Volume 27, Numéro 4, Pages 267-279, Copyright © 2017 Elsevier Masson SAS

Deep pelvic infiltrating endometriosis: MRI consensus lexicon and compartment-based approach from the ENDOVALIRM group

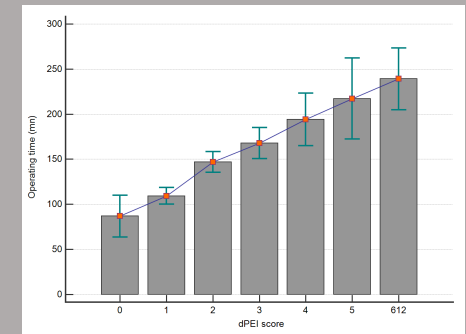
Pascal Rousset ¹, Marie Florin ², Nishat Bharwani ³, Cyril Touboul ⁴, Michèle Monroc ⁵, François Golfier ⁶, Stéphanie Nougaret ⁷, Isabelle Thomassin-Naggara ⁸; ENDOVALIRM Group



Anterolateral Distal round ligament	Anterocentral Proximal round ligament Bladder	Anterolateral Distal round ligament
Mediolateral Parametrium Ureter Uterine artery Pelvic wall : external iliac and/or obturator vessels	Mediocentral Torus and proximal uterosacral ligament(s) Posterior vaginal fornix Rectovaginal septum and anterior mesorectum Anterior and/or posterior external adenomyosis	Mediolateral Parametrium Ureter Uterine artery Pelvic wall : external iliac and/or obturator vessels
Posterolateral Distal uterosacral ligament Sacrorectogenital septum Pelvic wall - Sacral roots - Sciatic nerve - Internal iliac vessels	Postero-central Rectum and rectosigmoid junction	Posterolateral Distal uterosacral ligament Sacrorectogenital septum Pelvic wall - Sacral roots - Sciatic nerve - Internal iliac vessels
	Extrapelvic Sigmoid colon Cecum- ileum- appendix Ureters at the level of common iliac artery Abdominal wall Inguinal regions	

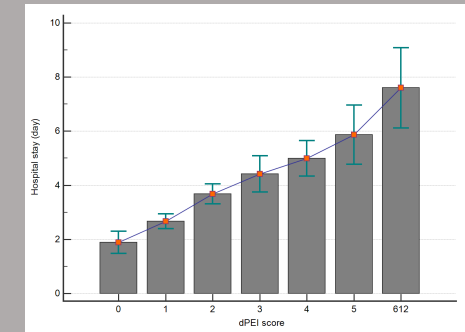
- Etude ENDOVALIRM: Validation externe multicentrique rétrospective de la classification dPEI pour prédire la complexité chirurgicale d'une endométriose profonde

Prédiction du temps opératoire:



Prédiction du temps d'hospitalisation:

- Plus long en cas d'atteinte postérocentrale, antérocentrale et extra pelvien



1 point uniquement par région

Anterolateral	Anterocentral	Anterolateral
Distal round ligament	Proximal round ligament	Distal round ligament
Mediolateral	Mediocentral	Mediolateral
Paracervix Uterus Uterine artery Pubic wall - external iliac and/or obturator vessels	Uterus and proximal uterine ligaments Proximal round ligament Rectovaginal septum and anterior mesometrium Internal and/or posterior external iliac vessels	Paracervix Uterus Uterine artery Pubic wall - external iliac and/or obturator vessels
Posterolateral	Postero-central	Posterolateral
Distal uterine ligament Intra-ovarian ligament Pubic wall Sacrospinous ligament Sacrospinous ligament Internal iliac vessels	Mesometrium and rectovaginal junction	Distal uterine ligament Intra-ovarian ligament Pubic wall Sacrospinous ligament Sacrospinous ligament Internal iliac vessels
	Extrapelvic	
	External iliac Common iliac approach External iliac vessels Internal iliac vessels Internal iliac vessels	

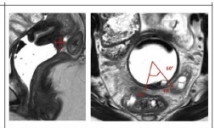
Posterior vaginal fornix

Nodule or thickening of the posterior vaginal wall.

O'clock position.

Length, thickness (double-headed arrows), transverse axis, and circumference by degree.

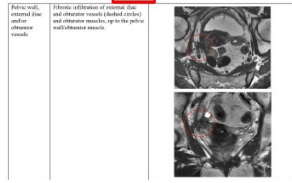
+1



Pubis

Fibrotic infiltration of osseous pelvis and obturator vessels (dashed circles) and obturator vessels, up to the pubic wall (dashed arrows).

+1



Uterus

Fibrotic infiltration with thickening of the posterior external and ligament (dashed circles) of the uterus, in the region of the paracervix or more proximally, at the level of the external iliac posterior leaf of the broad ligament.

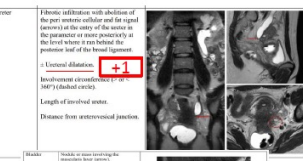
Uterine dilation.

Intra-ovarian circumference (dashed circles) > 100% (dashed arrow).

Length of cervicovaginal axis.

Distance from anteroposterior junction.

+1



Mesometrium

Thickening of mesometrium (dashed circles) involving the right or left side.

Length of mesometrium (dashed arrow).

Distance from paracervix (dashed arrow).


Distance from cervix (dashed arrow).

Distance from external iliac vessels (dashed arrow).

Distance from internal iliac vessels (dashed arrow).

Distance from external iliac vessels (dashed arrow).

+1




CLASSIFICATION dPEI

Extension faible
1 ou 2 points

Extension modérée
3 ou 4 points

Extension sévère
≥ 5 points



- Etude ENDOVALIRM: Validation externe multicentrique rétrospective de la classification dPEI pour prédire la complexité chirurgicale d'une endométriose profonde

Prédiction des complications

1 point uniquement par région

Anterolateral Distal round ligament Mediolateral Parametrium Uterus Uterine artery Pelvic wall - external iliac and/or obturator vessels	Anterocentral Proximal round ligament Bladder Mediocentral Uterus and proximal uterine ligaments Proximal uterine artery Endocervical septum and anterior neovasculation Anterior and/or posterior external iliovesicovesical	Posterolateral Distal uterine ligament Intraovarian ligament Pelvic wall Sacral roots Sacral nerve Internal iliac vessels
	Postero-central Uterus and rectovaginal junction Extrapelvic sigmoid colon Current iliovesicovesical approach Entry of the broad of ovum into the uterine abdominal wall Regional lymphatics	Posterolateral Distal uterine ligament Intraovarian ligament Pelvic wall Sacral roots Sacral nerve Internal iliac vessels

Posterior vaginal fornix
 Nodule or thickening of the posterior vaginal wall.
 O'clock position.
 Length, thickness (double-headed arrows), transverse axis, and circumference by degree.

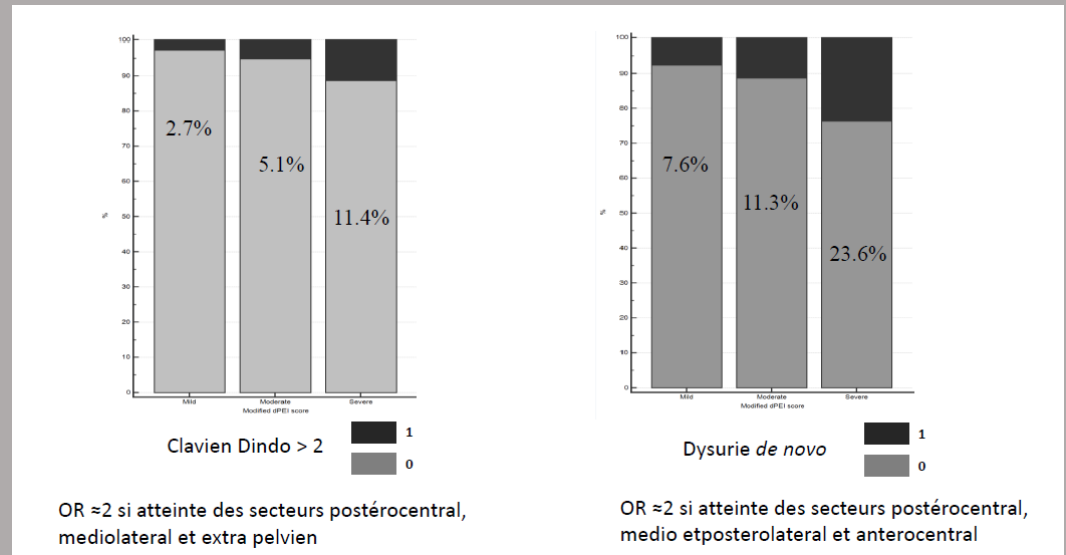
Rectovaginal Junction
 Fibrotic adhesion with obliteration of the rectovaginal junction and the sigmoid colon in the uterine or the bladder or the peritoneal or more posteriorly at the level of the rectovaginal junction. Distance from the broad ligament.

Uterus
 Fibrotic adhesion with obliteration of the posterior cul-de-sac and the sigmoid colon in the uterine or the bladder or the peritoneal or more posteriorly at the level of the rectovaginal junction. Distance from the broad ligament.

Bladder
 Nodule or thickening of the bladder wall, right or left, or in situ.
 Length of the nodule, right or left, or in situ.
 Distance from the rectovaginal junction, right or left, or in situ.
 Distance from the rectovaginal junction, right or left, or in situ.

CLASSIFICATION dPEI

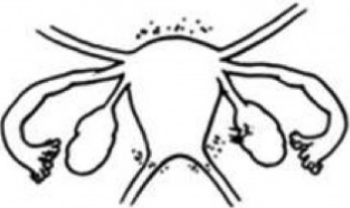
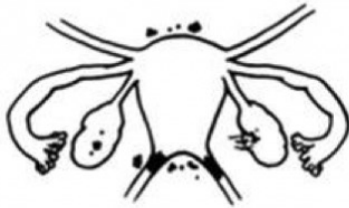




- Extension faible: 1 ou 2 points
- Extension modérée: 3 ou 4 points
- Extension sévère: ≥ 5 points



Chirurgie endométriose

CLASSIFICATIONS

Classification r-ASRM

STAGE I (MINIMAL)			STAGE II (MILD)			STAGE III (MODERATE)		
								
PERITONEUM			PERITONEUM			PERITONEUM		
Superficial Endo	- 1-3cm	- 2	Deep Endo	- >3cm	- 6	Deep Endo	- >3cm	- 6
R. OVARY			R. OVARY			CULDESAC		
Superficial Endo	- < 1cm	- 1	Superficial Endo	- < 1cm	- 1	Partial Obliteration		- 4
Filmy Adhesions	- < 1/3	- 1	Filmy Adhesions	- < 1/3	- 1	L. OVARY		
TOTAL POINTS		4	L. OVARY			Deep Endo	- 1-3cm	- 16
			Superficial Endo	- < 1cm	- 1	TOTAL POINTS		26
			TOTAL POINTS		9			
<hr/>			<hr/>			<hr/>		
STAGE III (MODERATE)			STAGE IV (SEVERE)			STAGE IV (SEVERE)		
								
PERITONEUM			PERITONEUM			PERITONEUM		
Superficial Endo	- > 3cm	- 4	Superficial Endo	- > 3cm	- 4	Deep Endo	- > 3cm	- 6
R. TUBE			L. OVARY			CULDESAC		
Filmy Adhesions	- < 1/3	- 1	Deep Endo	- 1-3cm	- 32**	Complete Obliteration		- 40
R. OVARY			Dense Adhesions	- < 1/3	- 8**	R. OVARY		
Filmy Adhesions	- < 1/3	- 1	L. TUBE			Deep Endo	- 1-3cm	- 16
L. TUBE			Dense Adhesions	- < 1/3	- 8**	Dense Adhesions	- < 1/3	- 4
Dense Adhesions	- < 1/3	- 16*	TOTAL POINTS		52	L. TUBE		
L. OVARY						Dense Adhesions	- > 2/3	- 16
Deep Endo	- < 1 cm	- 4				L. OVARY		
Dense Adhesions	- < 1/3	- 4				Deep Endo	- 1-3cm	- 16
TOTAL POINTS		30				Dense Adhesions	- > 2/3	- 16
						TOTAL POINTS		114

*Point assignment changed to 16

**Point assignment doubled

Classification ENZIAN

#Enzian
(Classification of Endometriosis)

PERITONEUM

P Peritoneum

■ Sum of all diameters

P1 $\Sigma < 3$ cm

P2 $\Sigma 3-7$ cm

P3 $\Sigma > 7$ cm

OVARY

O Ovary

■ Sum of all diameters

left right

O1 $\Sigma < 3$ cm

O2 $\Sigma 3-7$ cm

O3 $\Sigma > 7$ cm

TUBE

T Tubal ovarian condition

■ Adhesions
■ Motility
■ Patency test

left right

T1 Pelvic sidewall

T2 Pelvic sidewall
Uterus

T3 Pelvic sidewall
Uterus
Bowel, USL

DEEP ENDOMETRIOSIS

A Rectovaginal space
Vagina
Retrocervical area

■ Largest diameter

A1 < 1 cm

A2 $1-3$ cm

A3 > 3 cm

B Sacrouterine ligg.
Cardinal ligaments
Pelvic sidewall

■ Largest diameter

left right

B1 < 1 cm

B2 $1-3$ cm

B3 > 3 cm

C Rectum

■ Largest diameter

C1 < 1 cm

C2 $1-3$ cm

C3 > 3 cm

F (Location)

Location


- Diaphragm
- Lung
- Nerve

F_A Denomyosis

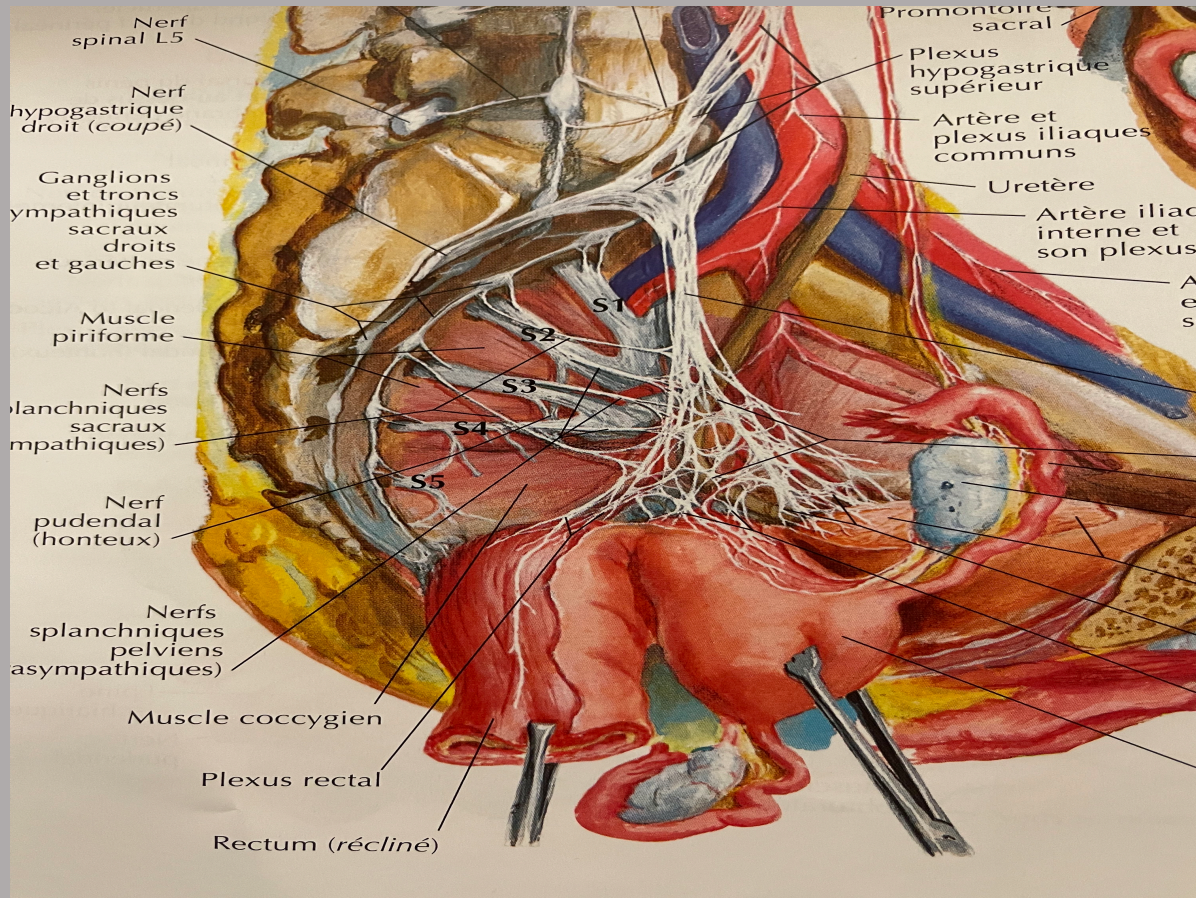
F_B Bladder

F_I Intestinum

F_U Ureter



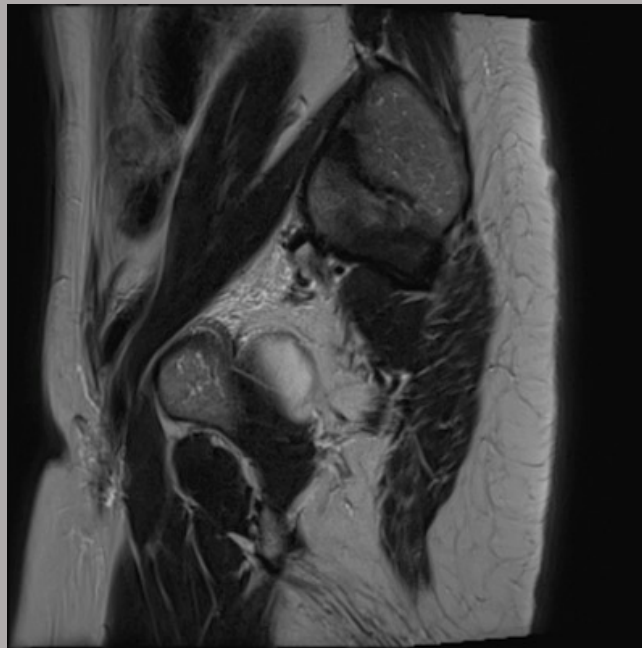
Neuropelvéologie

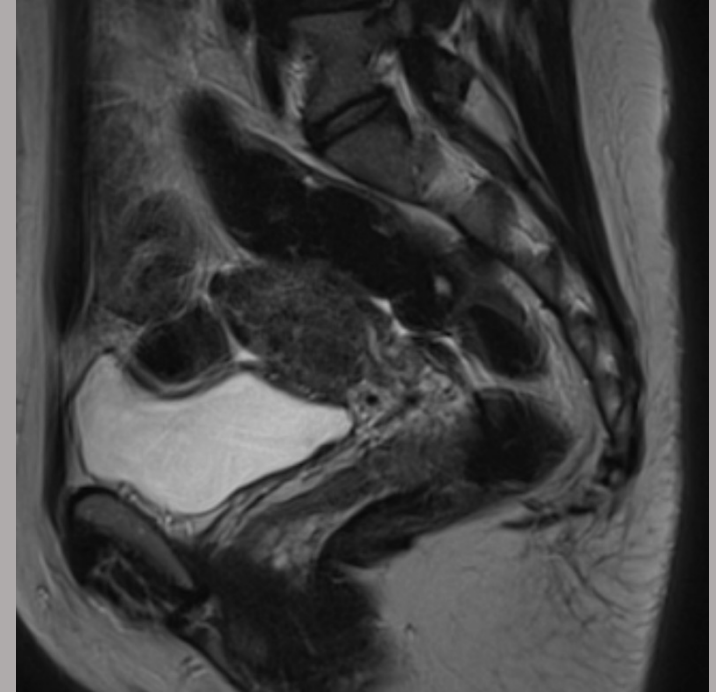
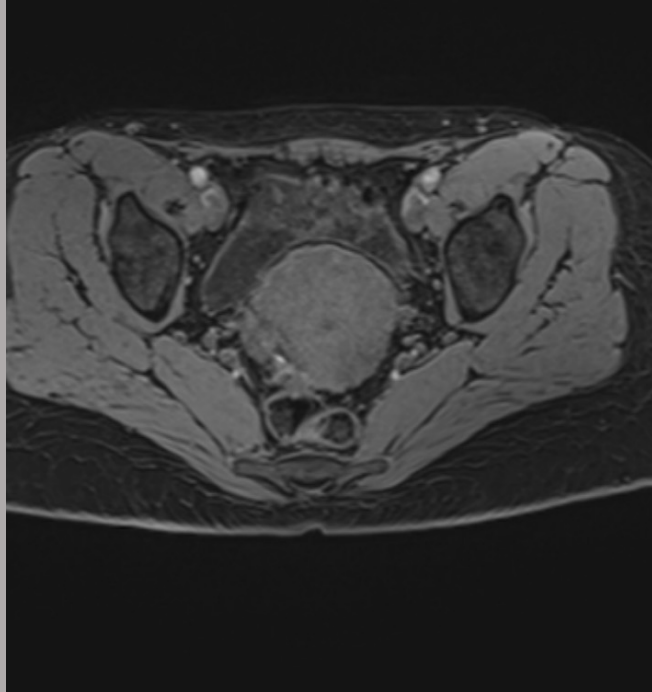
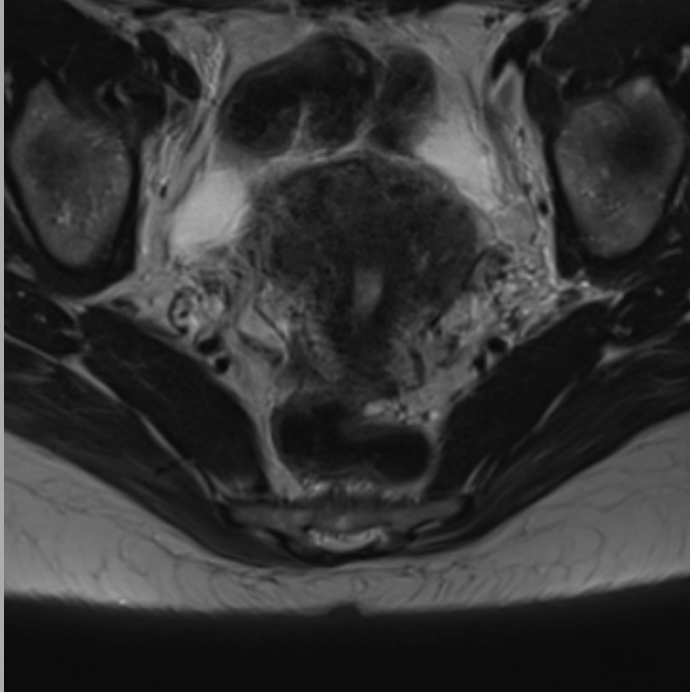


Mme FAL

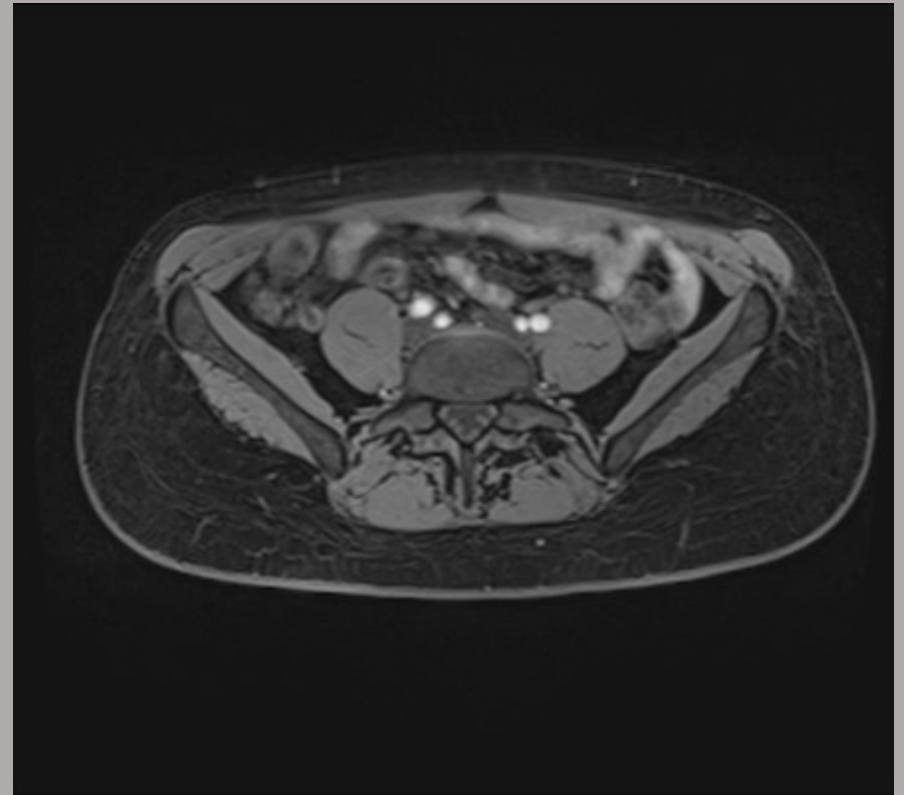
- Age: 43 ans
- Atcds chir:
- Désir de grossesse:0
- Clinique:
 - Dysménorrhées : 0 /10
 - douleurs pelviennes chroniques : 8 /10 Dyspareunies : 8 /10
 - Douleur mobilisation utérine : **sévère**
Douleur mobilisation cervicale : sévère
Volume utérin : Normal
- Procédure: Hystérectomie IA S et resection endo sup post et ant

IRM: Adénomyose utérine. Nodule endométriosique du torus uterinus associée à un nodule endométriosique du ligament utérosacré droit.

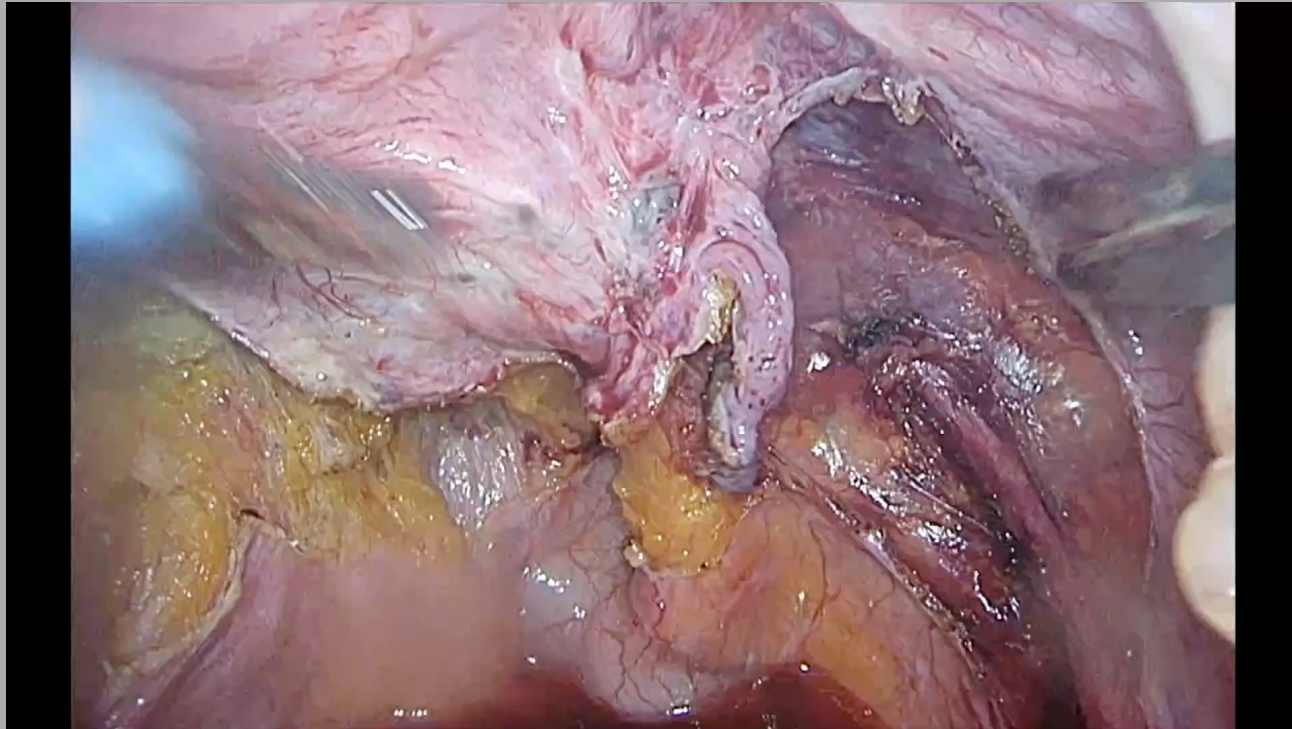




IRM: Adénomyose utérine. Nodule endométriosique du torus uterinus associée à un nodule endométriosique du ligament utérosacré droit.



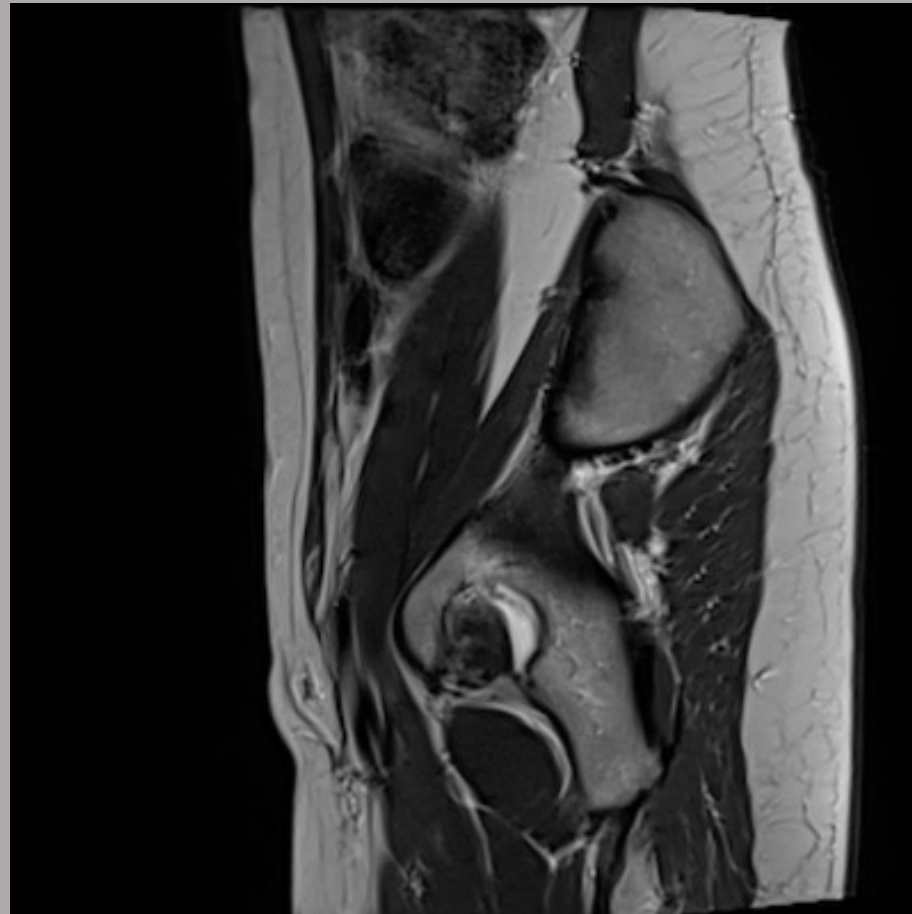
Resection endo post et htt



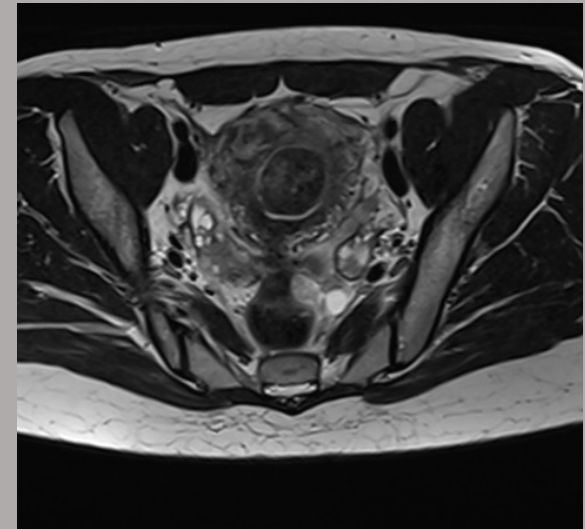
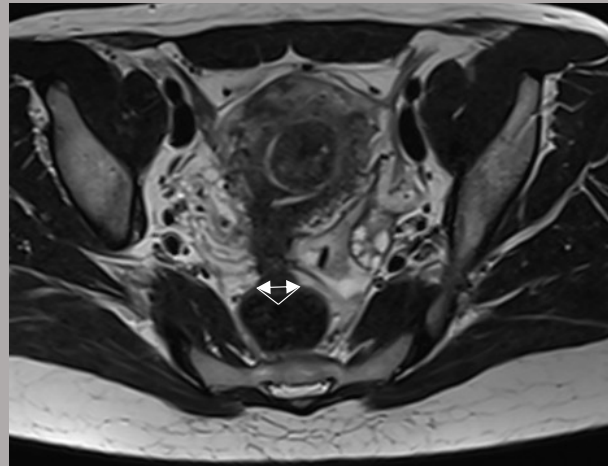
Mme DJ

- Age: 42 ans
- Désir de grossesse: NON G1P1
- Clinique:
 - Disménorrhées : **Sans TRT, 10 /10**
douleurs pelviennes chroniques : Sans TRT, 8 /10 Dyspareunies : **Sans TRT, 8 /10**
 - Type de dyspareunies : Intromission, Profonde
 - Ménorragies : très abondantes, caillots, serviettes/heure, nuit Métrorragies : abondants
Nodule vaginal : **Douleur +++**, **Fornix**, **Envahit le vagin**, **Fixe, 2 cm**, **contact osseux droite**
Douleur mobilisation utérine : **sévère**
Douleur mobilisation cervicale : sévère
Volume utérin : Normal
Syndrome myo fascial : **Modéré, Sévère**
- Procédure: **COELIOSCOPIE ROBOT ASSISTÉE POUR ENDOMETRIOSE PROFONDE HYSTÉRECTOMIE ÉLARGIE - URÉTÉROLYSE BILATÉRALE - CONSERVATION DES NERFS HYPOGASTRIQUES INFÉRIEURS RÉSECTION D'UNE ENDOMÉTRIOSE RECTOVAGINALE RÉTROPÉRITONÉALE RÉSECTION RECTALE DISCOÏDE**

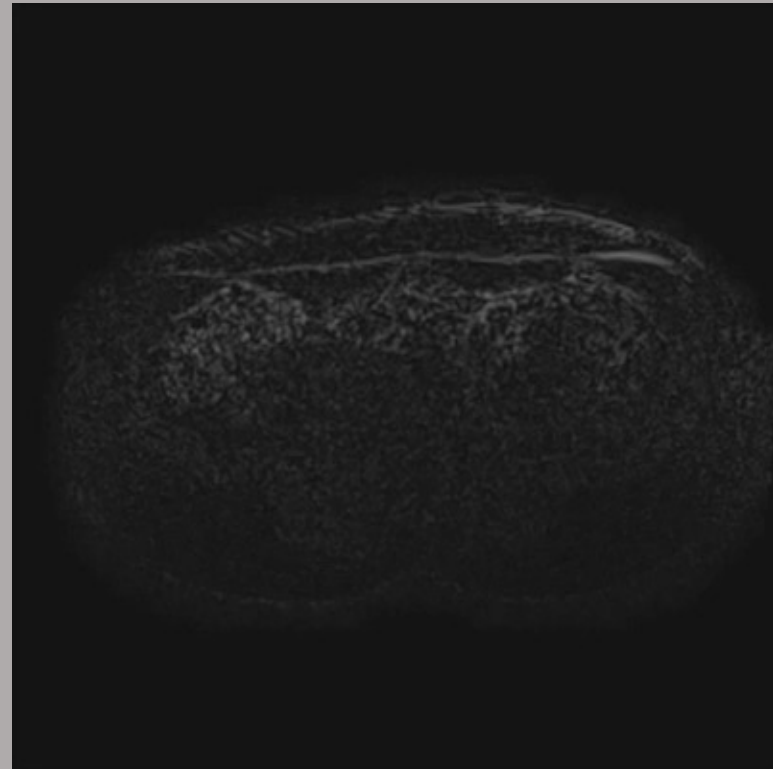
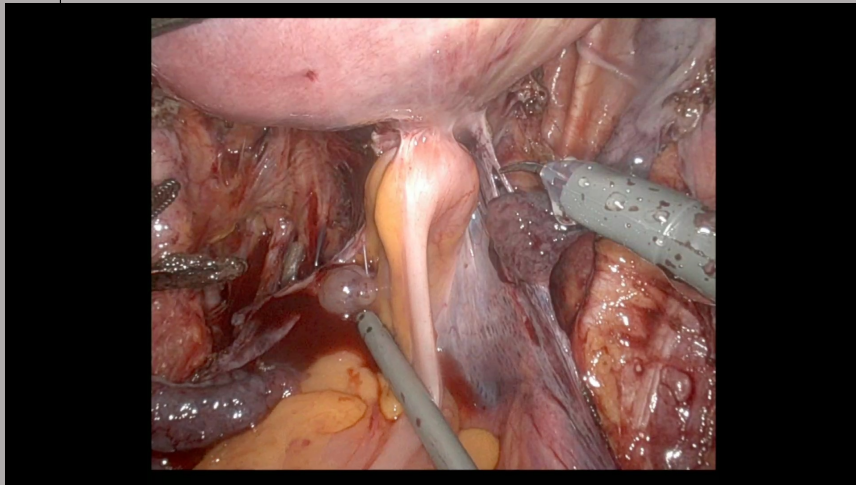
IRM: Endométriose profonde intéressant torus, ligaments utéro-sacrés, paramètre droit et recto-sigmoïde sur 36 mm et symphyse complète du Douglas. Myome FIGO 2 antérieur de 34 mm avec liseré de sécurité de 6 mm.



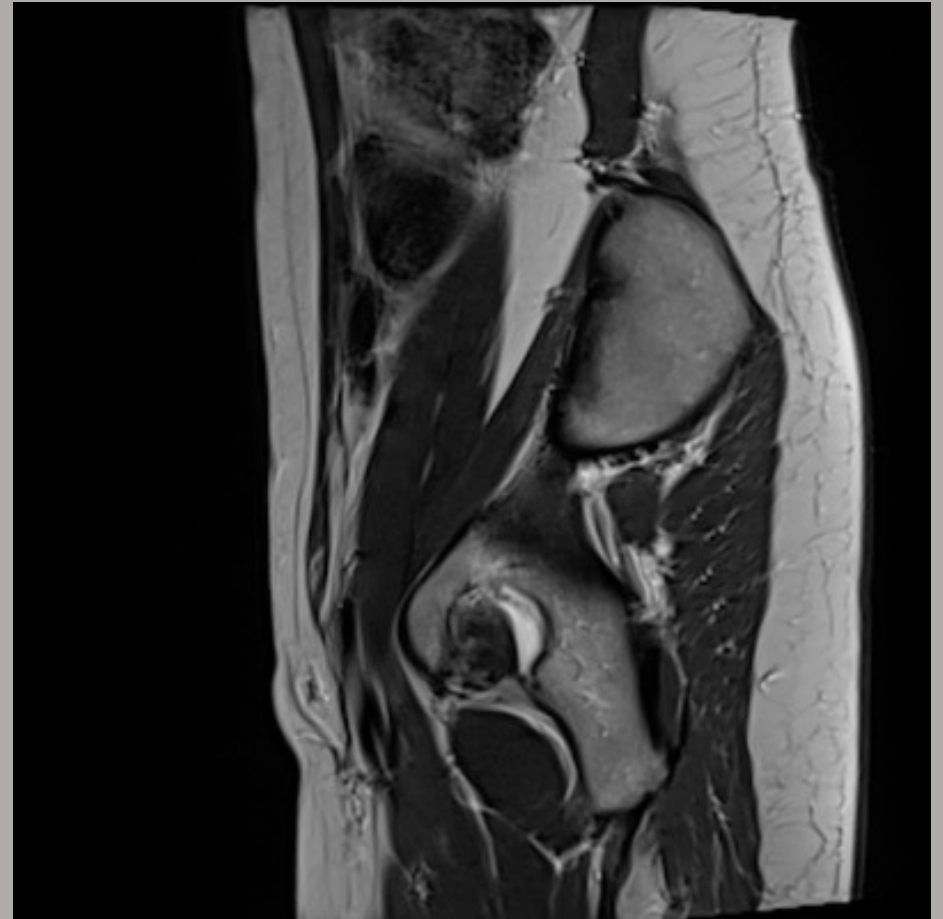
IRM: Endométriose profonde intéressant torus, ligaments utéro-sacrés, paramètre droit et recto-sigmoïde sur 36 mm et symphyse complète du Douglas. Myome FIGO 2 antérieur de 34 mm avec liseré de sécurité de 6 mm.



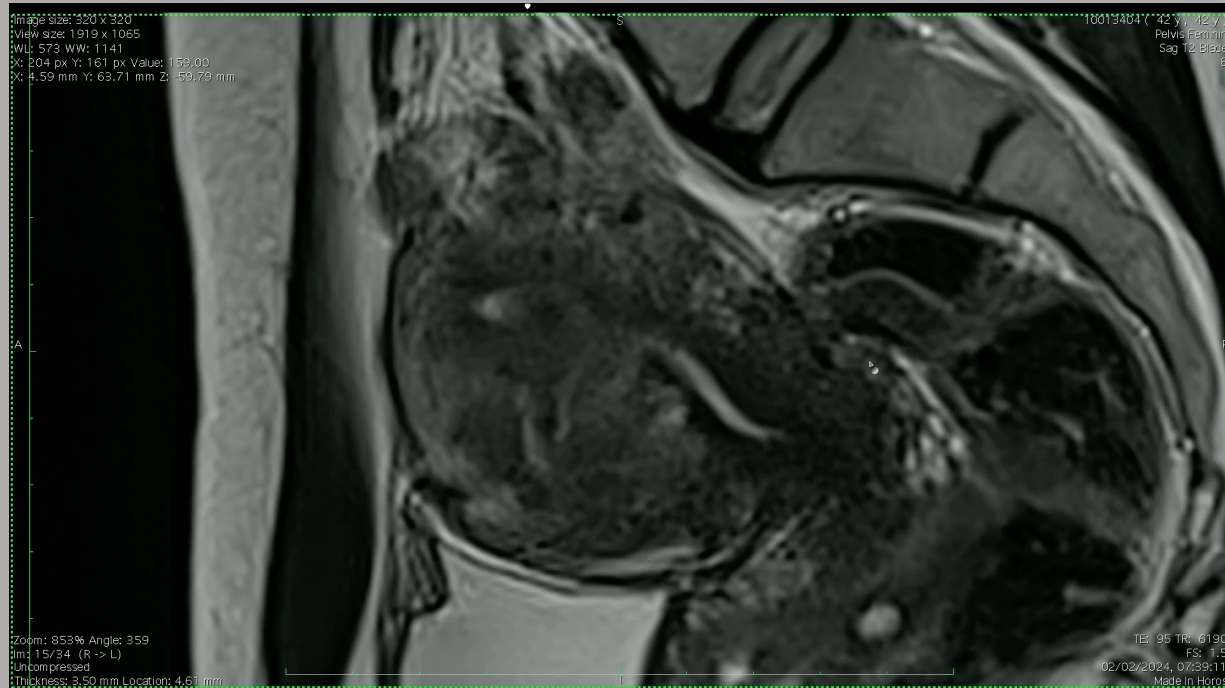
Dissection pararectale shaving RV



Colpotomie dissection us



Résection rectale discoïde



Mme CC

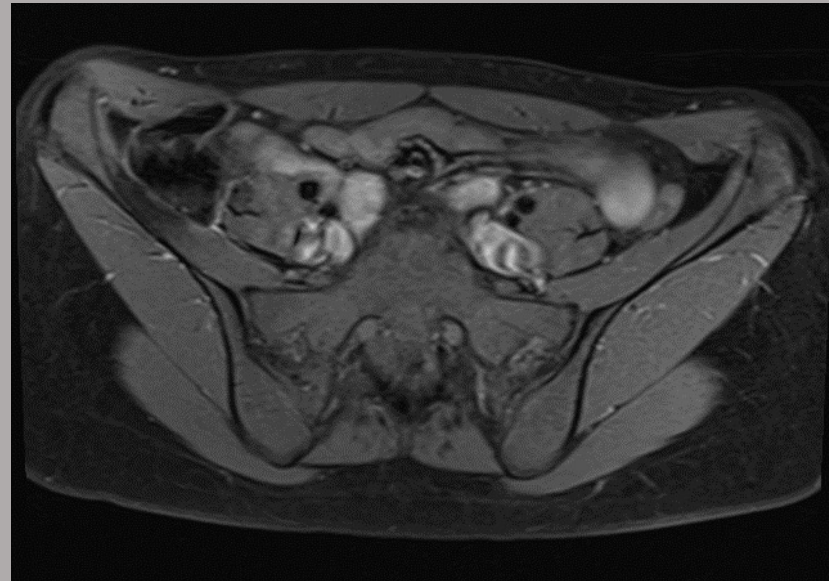
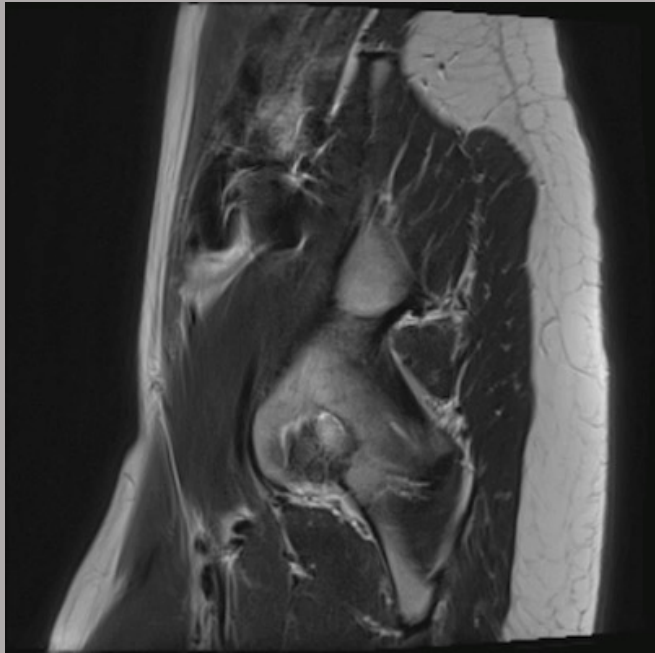
- Age: 26 ans
- Atcds chir:
- Désir de grossesse: oui
- Clinique:
 - Dysménorrhées : **Sans TRT, 8 /10**
douleurs pelviennes chroniques : Sans TRT, 5 /10
Dyspareunies : **Sans TRT, 3, 4 /10**
Type de dyspareunies : Intromission
 - Ménorragies : très abondantes, caillots, serviettes/heure, nuit
 - Nodule vaginal : **Douleur +++**, **Fixe, 1 cm**
Douleur mobilisation utérine : **sévère**
Douleur mobilisation cervicale : modérée

AMH : 6 ng/ml

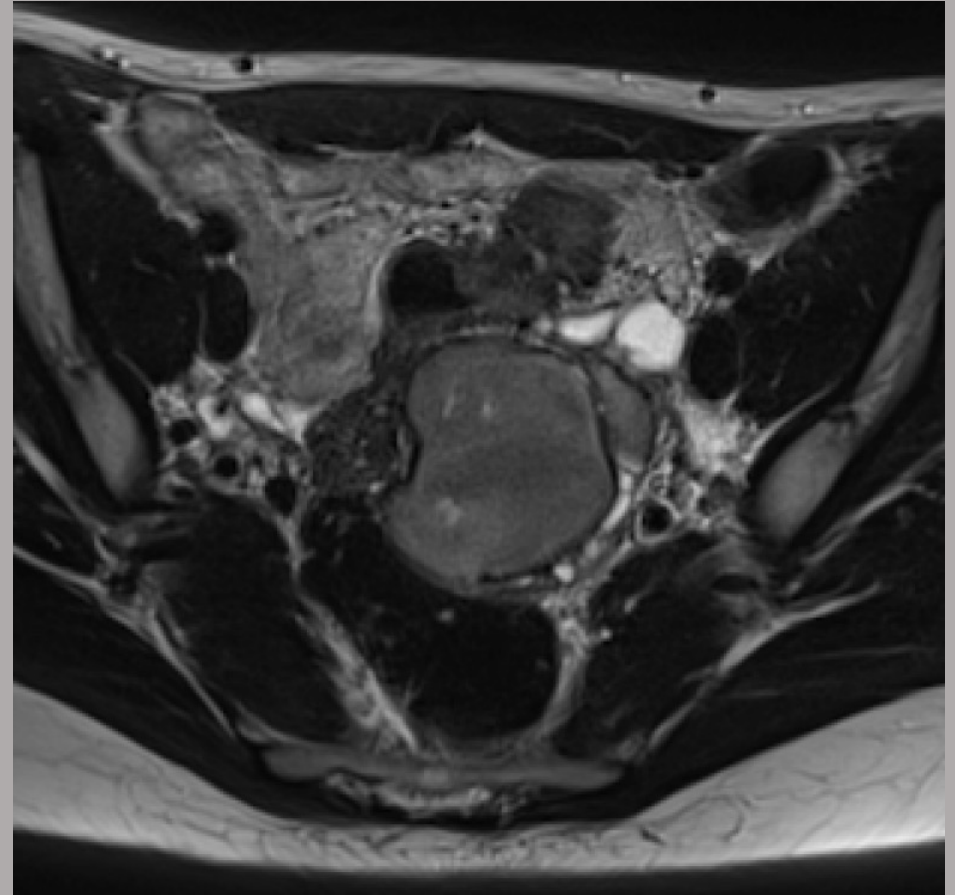
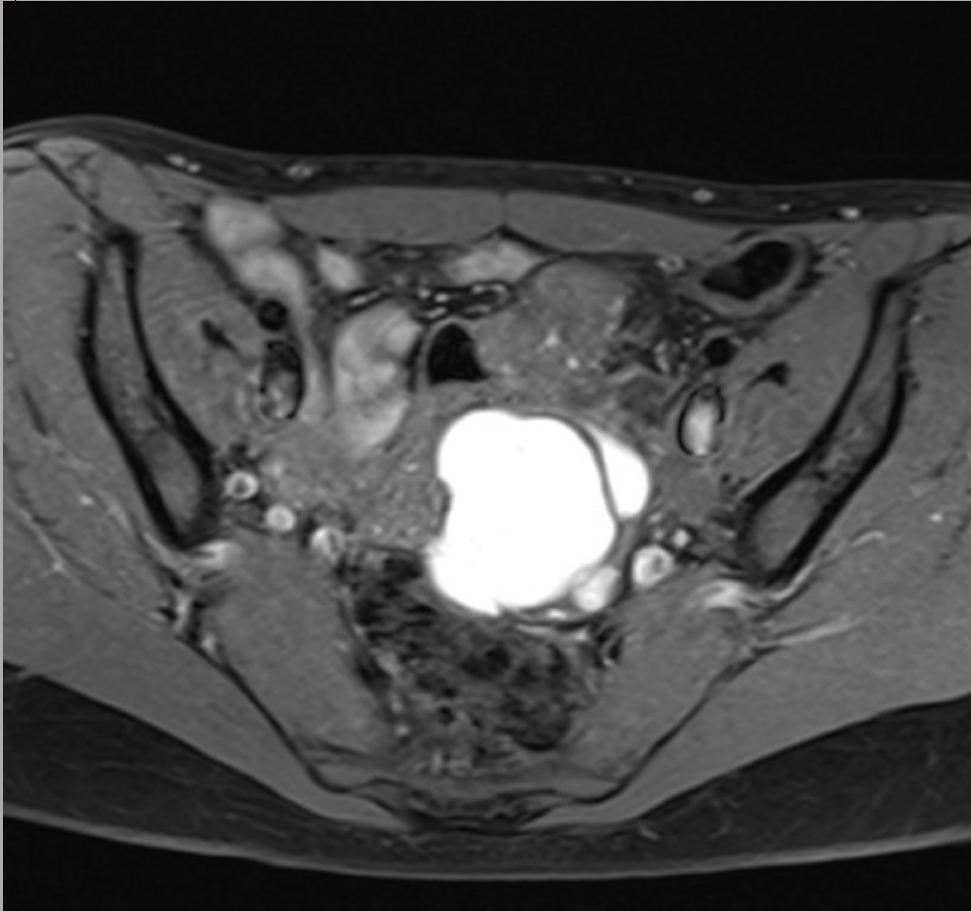
Compte des follicules antraux Droite : >10 Compte des follicules antraux Gauche : >10 Hystérographie : Normale

- Procédure chir:
 - **COELIOSCOPIE ROBOT ASSISTÉE POUR ENDOMETRIOSE PROFONDE RÉSECTION ENDOMÉTRIOSE PROFONDE RECTOVAGINALE RÉTROPÉRITONÉALE - SHAVING PRÉRECTAL - ADHÉSIOLYSE HYSTÉROSCOPIE EPREUVE TUBAIRE - URÉTÉROLYSE BILATÉRALE CONSERVATION DES NERFS HYPOGASTRIQUES INFÉRIEURS BILATÉRAUX RÉSECTION SEGMENTAIRE SIGMOÏDIENNE**

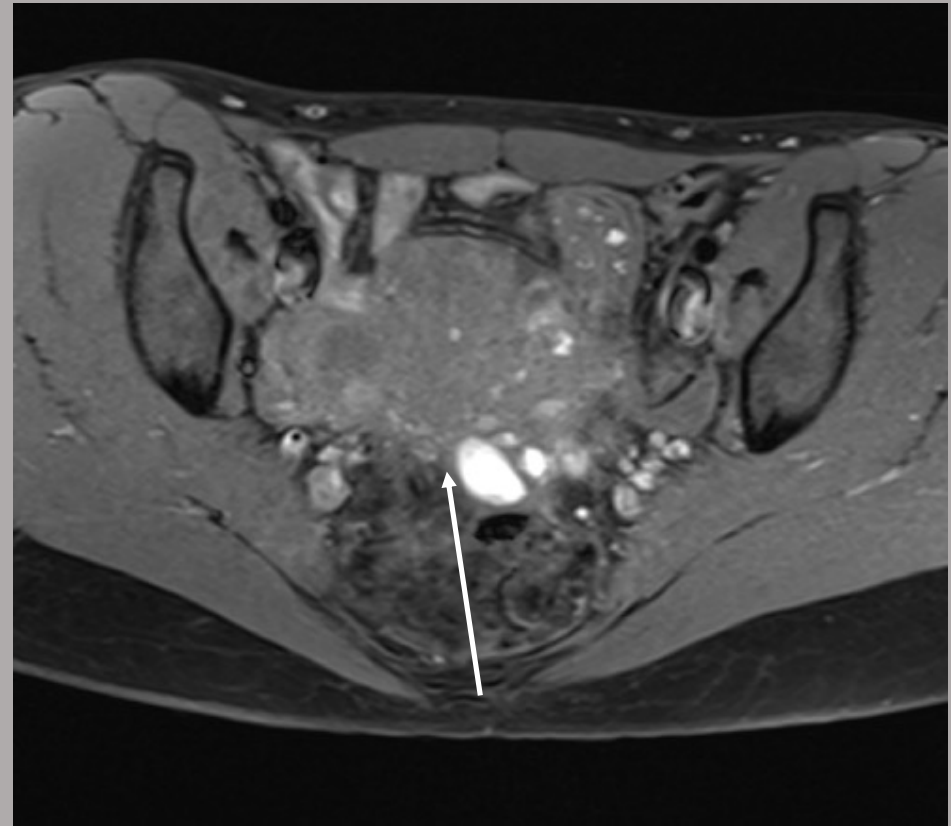
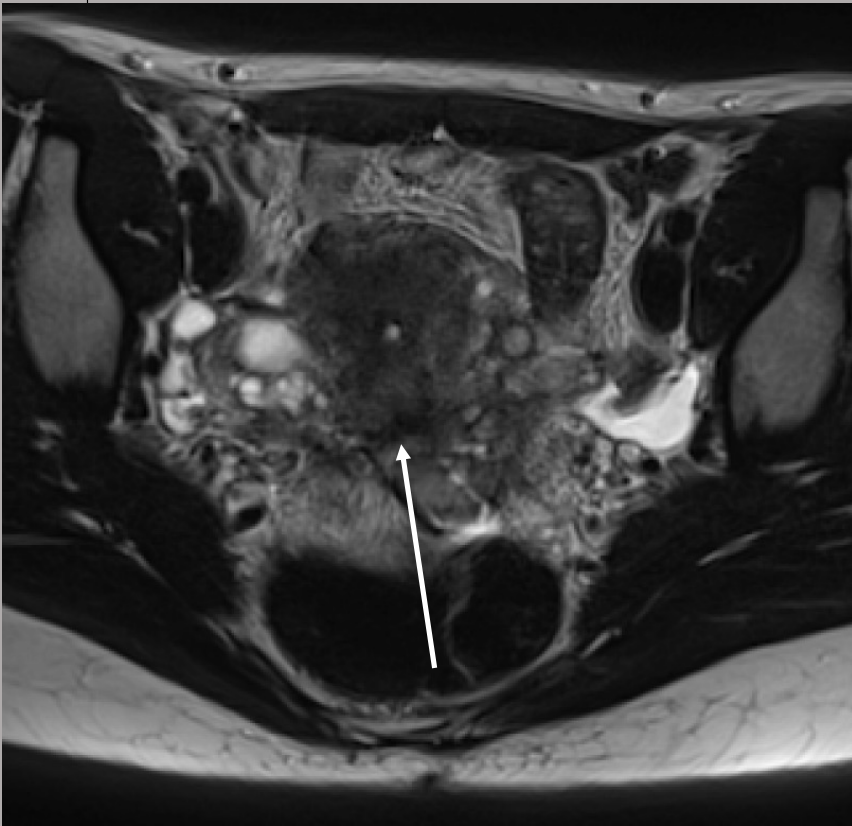
IRM



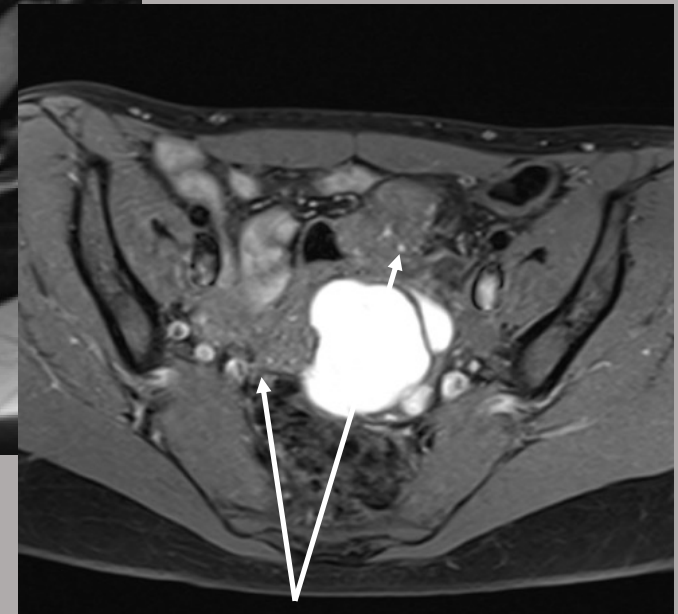
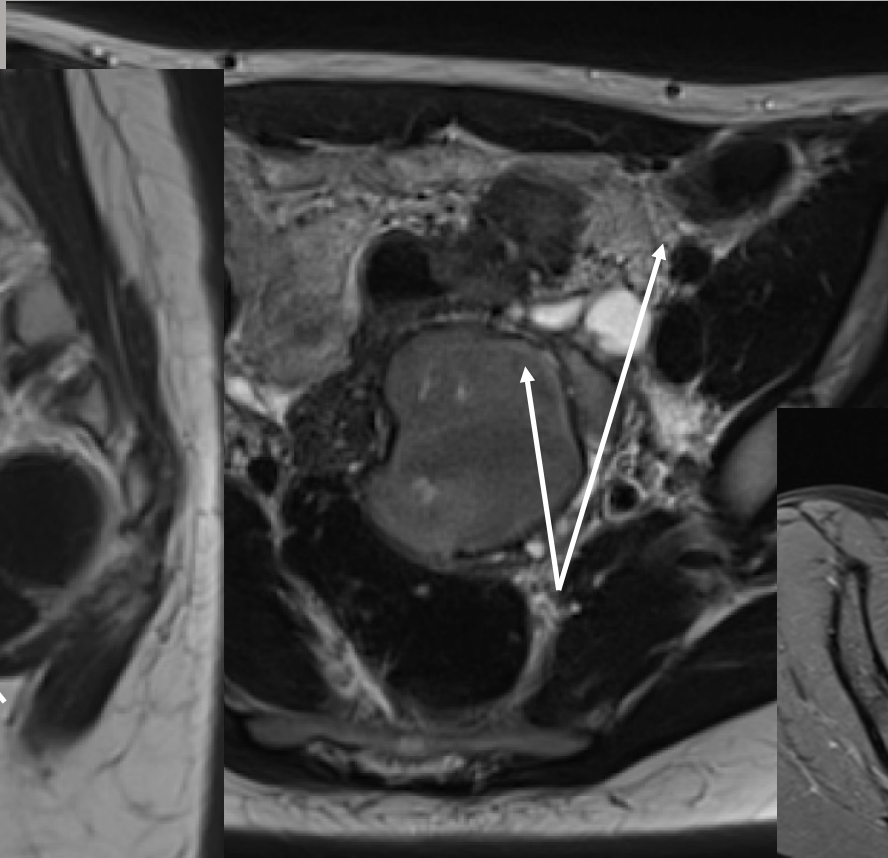
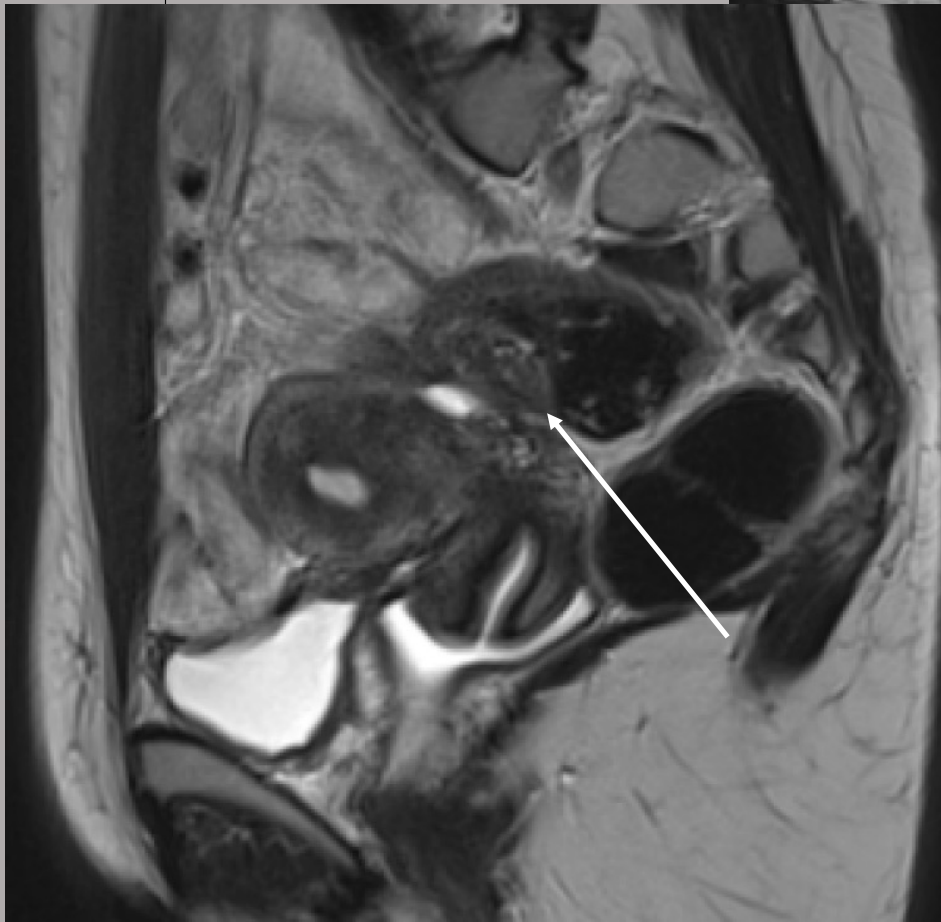
IRM endométrïomes hématosalpinx



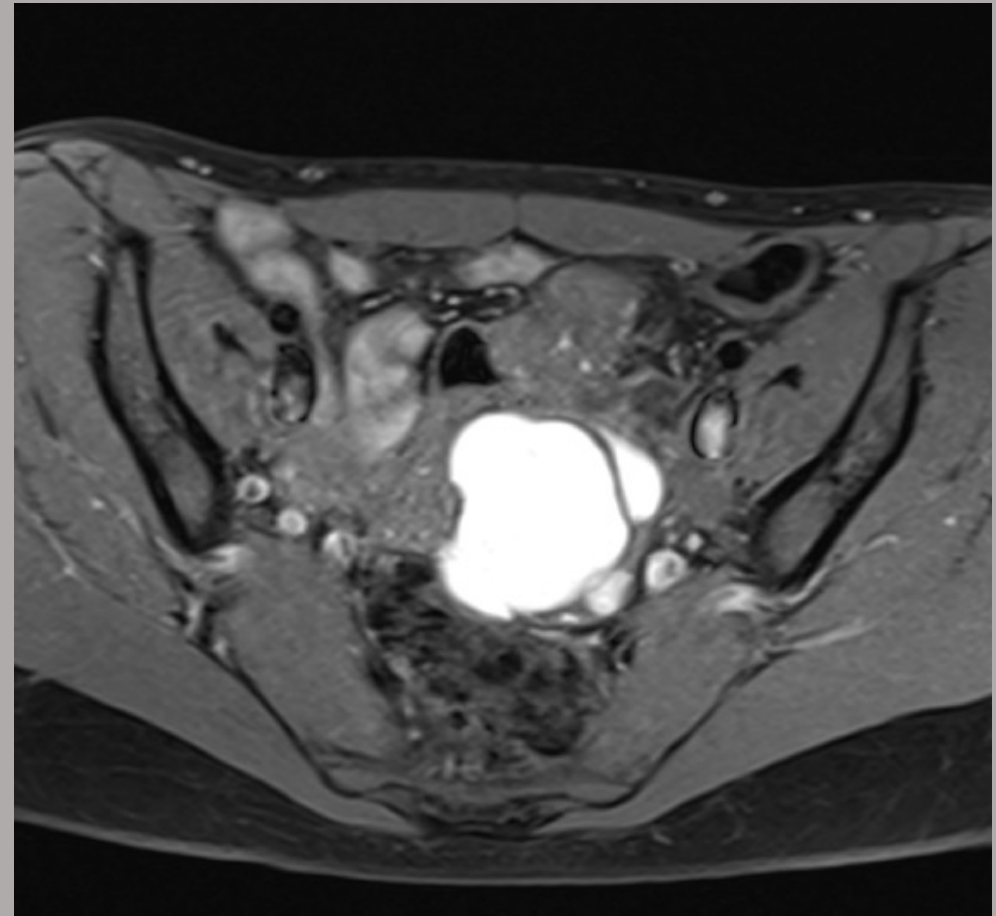
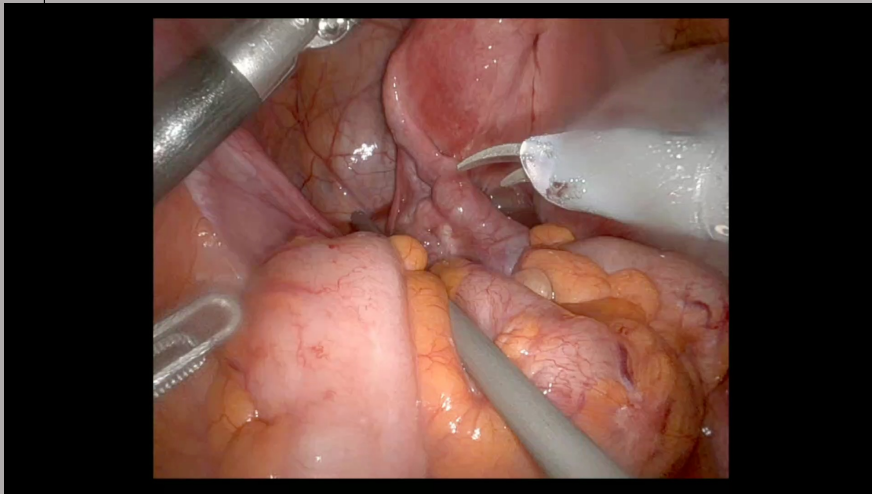
IRM: torus LUS ligament rond gauche



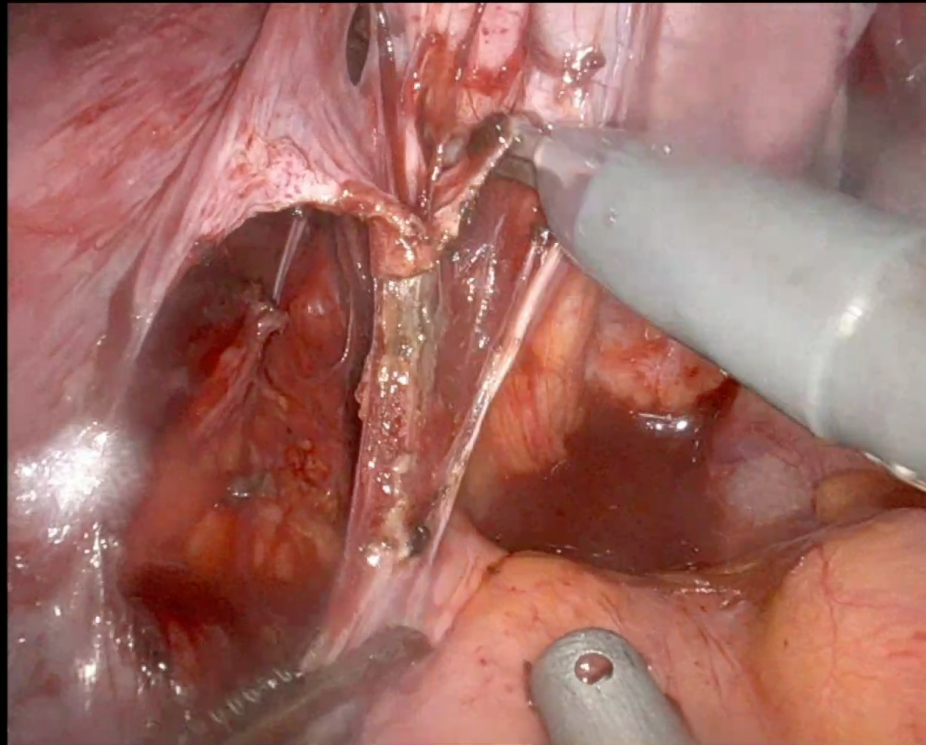
IRM: atteinte digestive transmurale



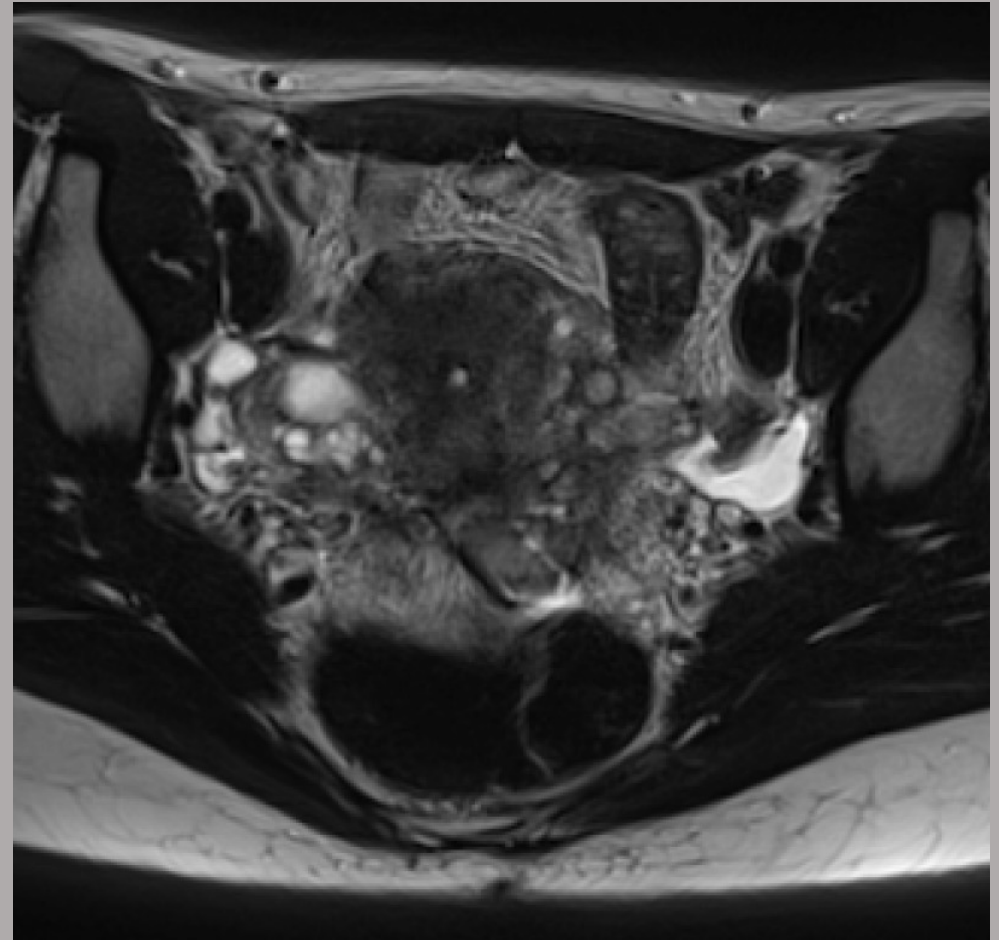
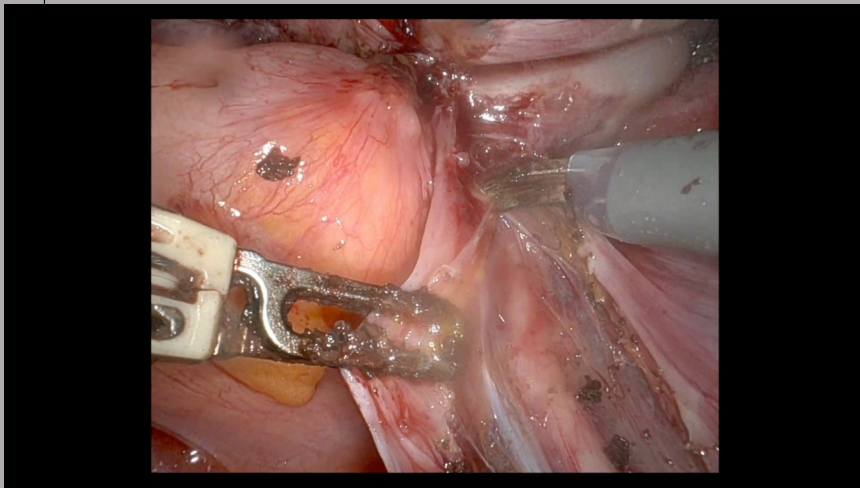
Exposition, plastie tubaire gauche



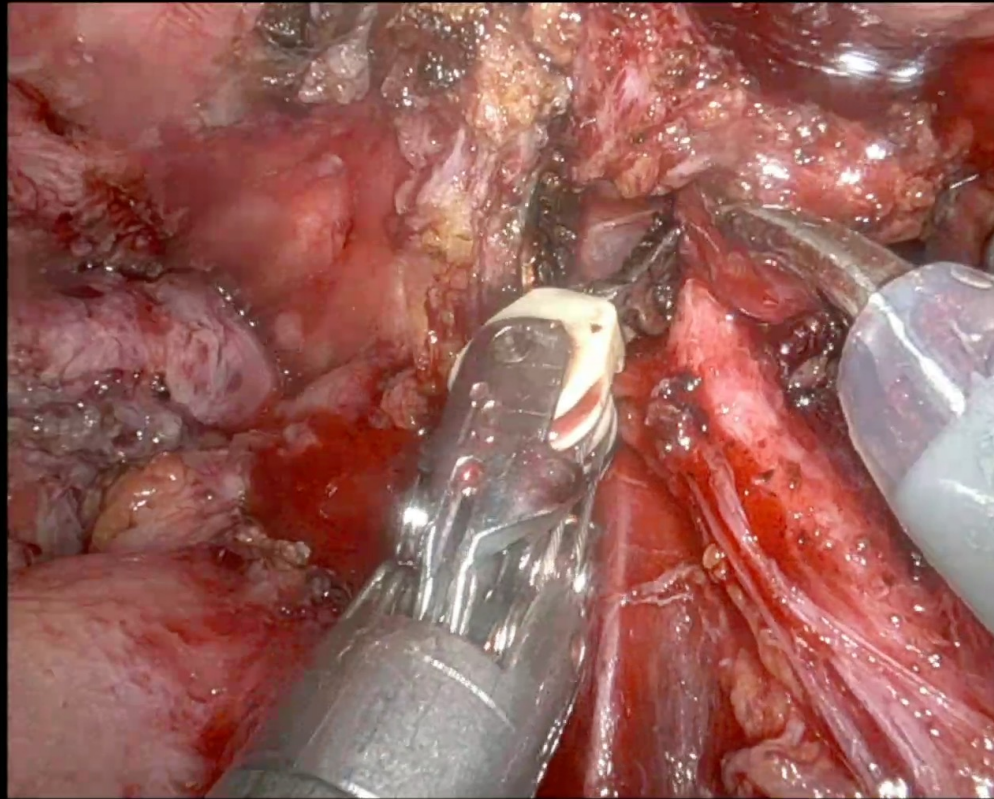
Décollement ovaire Gauche, résection epp



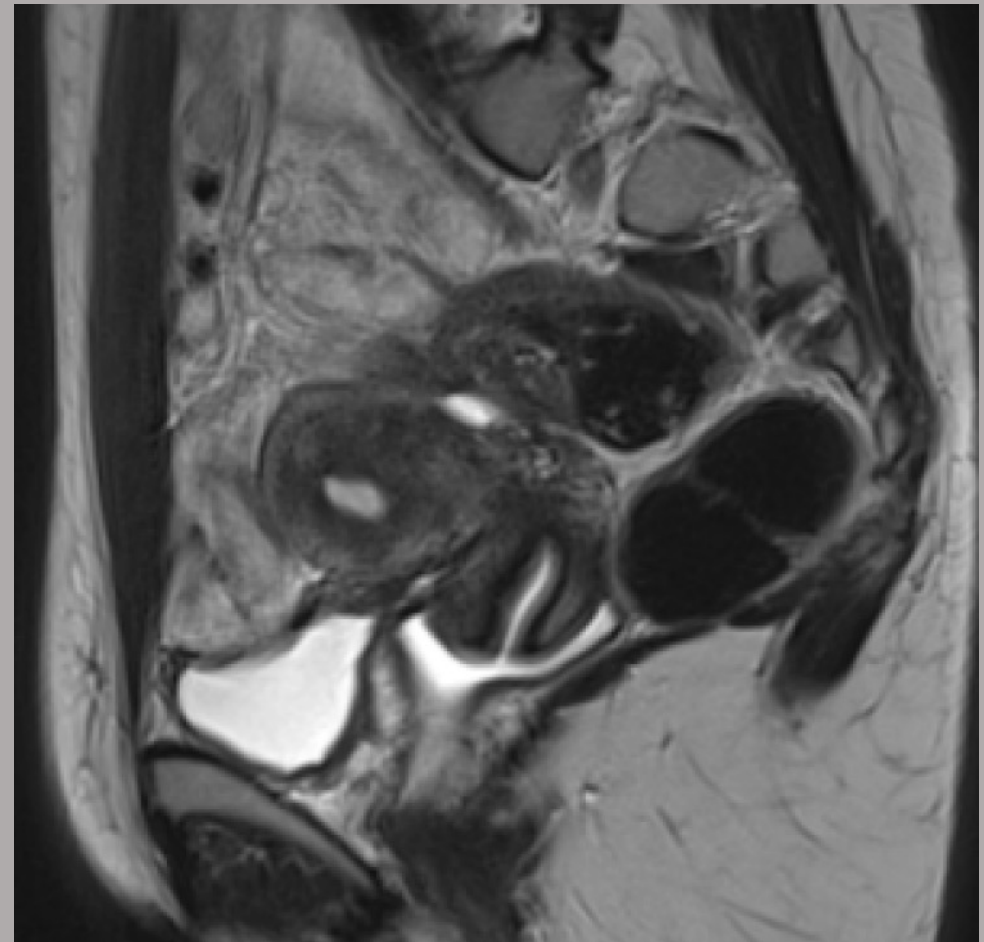
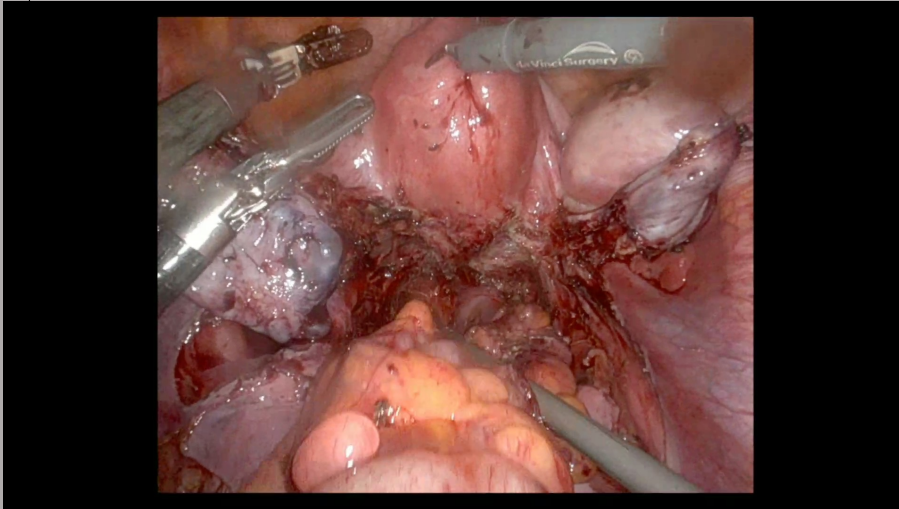
Uretérolyse et résection epp dt, shaving RV



Urétérolyse dt, rapport ovaire et epp

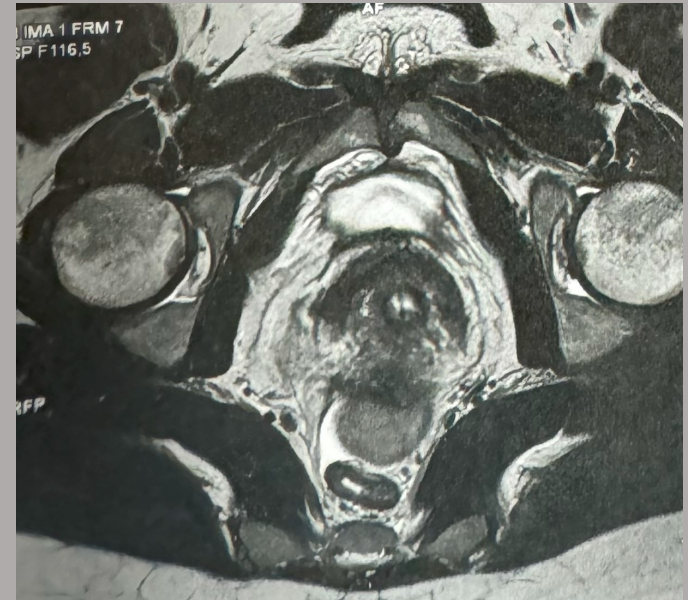
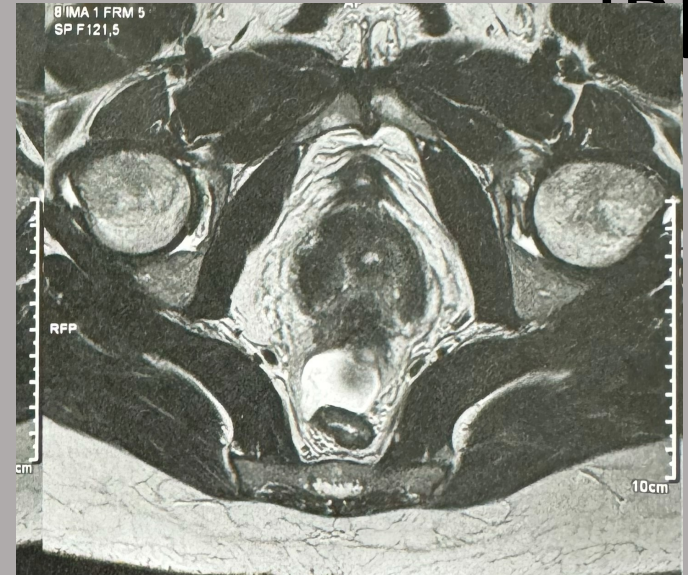
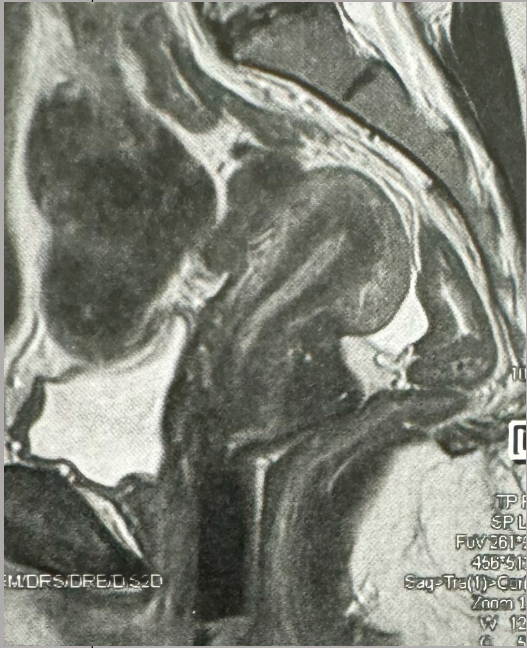


Bilan avant résection digestive

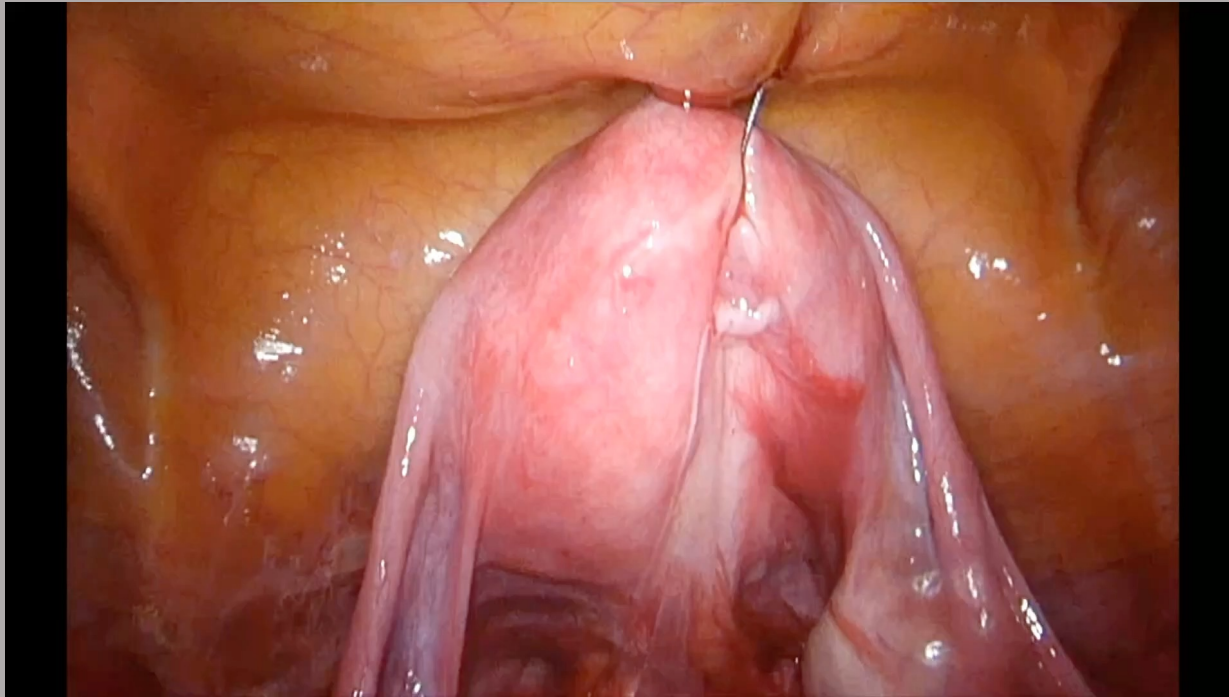


Mme ST

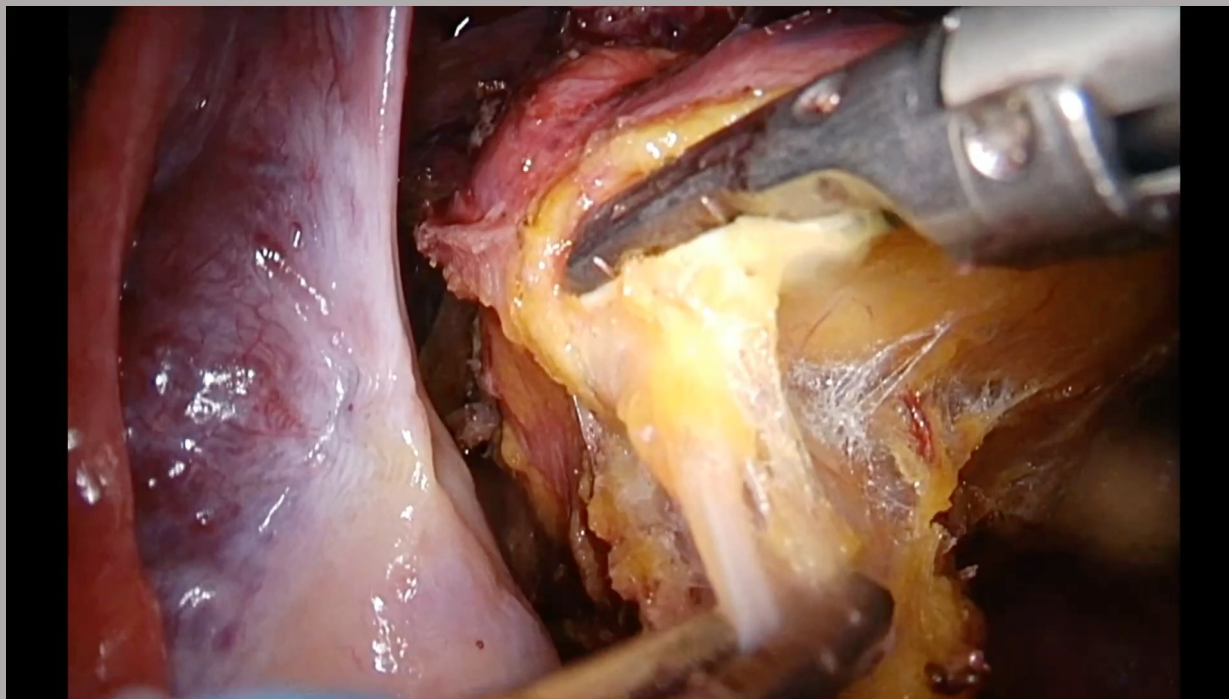
- Age: 32 ans
- Atcds chir: 0
- Désir de grossesse: Non
- Clinique:
 - douleurs pelviennes chroniques : 8 /10
 - Dyspareunies : 10 /10
 - Plaisir : Altération de la qualité
 - Libido : Altération de la qualité
 - Sport : Aucun
 - Ménorragies : moyennement abondantes
- Procédure:
 - **COELIOSCOPIE POUR ENDOMETRIOSE RÉSECTION DE NODULE RECTOVAGINAL RÉTROPÉRITONÉAL - URÉTÉROLYSE BILATÉRALE CONSERVATION DES NERFS HYPOGASTRIQUES INFÉRIEURS - COLPECTOMIE PARTIELLE**



Abord nodule



Résection nodule



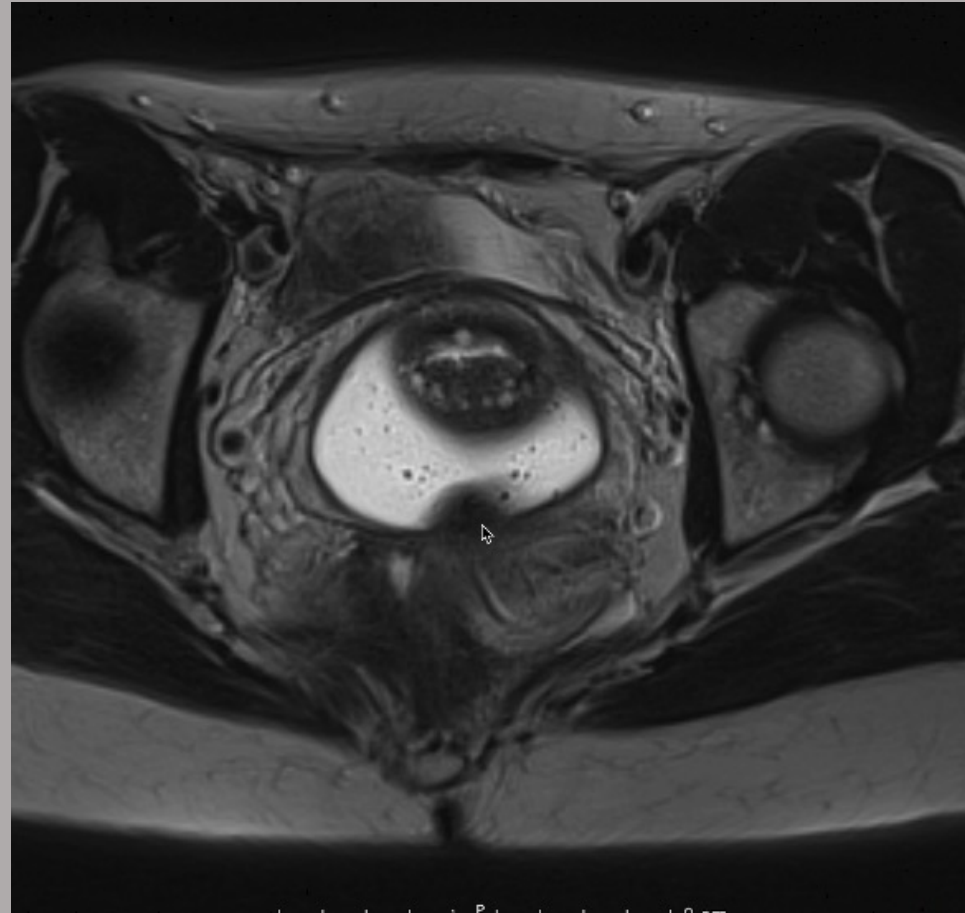
Mme ZM

- Age: 41 ans
- G3P3
- Désir de grossesse: NON
- Clinique:
 - Dysménorrhées : **Sans TRT, 8 /10**
 - douleurs pelviennes chroniques : Sans TRT, 5 /10 Dyspareunies : **Sans TRT, 9 /10**
 - Type de dyspareunies : Intrusion, Profonde
 - Plaisir : Altération de la qualité
 - Libido : Altération de la qualité
 - Sport : Aucun
 - Ménorragies : très abondantes, caillots, serviettes/heure, nuit Métorragies : abondants
 - Diarrhée : oui
 - Constipation : oui
 - Ballonnements : Intense
 - Dyschésie : oui
 - Rectorragies : non
 - Impériosités mictionnelles : non
 - Hématurie : non
 - Lombalgies : oui
 - Fatigue : Intense
- Nodule vaginal : **Douleur +++**, **Postérieur**, **Fornix**, **Envahit le vagin, 1 cm**
Douleur mobilisation utérine : **sévère**
Douleur mobilisation cervicale : sévère
Volume utérin : Normal
- Procédure: EPP postérieure

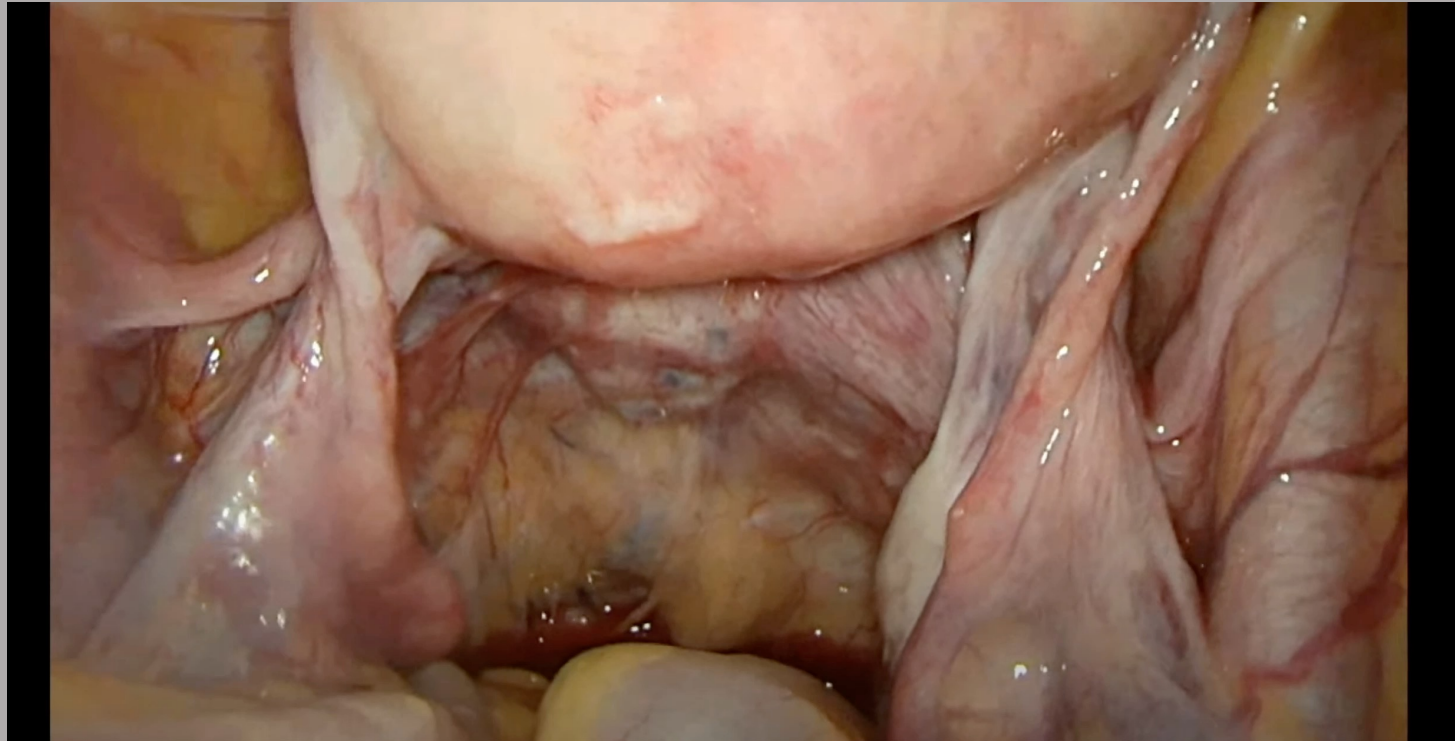
IRM: net épaissement de la zone jonctionnelle antérieure:
adénomyose interne, nodule du culs de sac vaginal postérieur et de la
cloison rectovaginal



IRM: net épaissement de la zone jonctionnelle antérieure: adénomyose interne, nodule du culs de sac vaginal postérieur et de la cloison rectovaginal



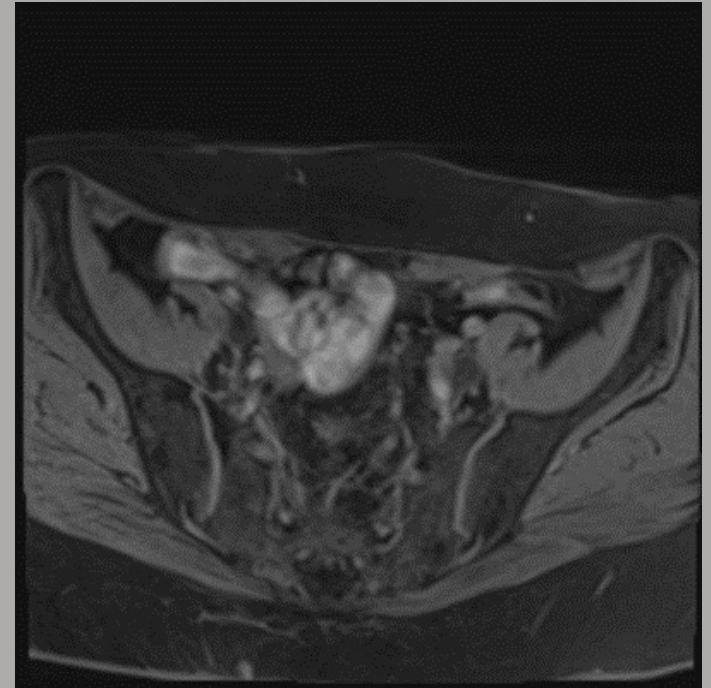
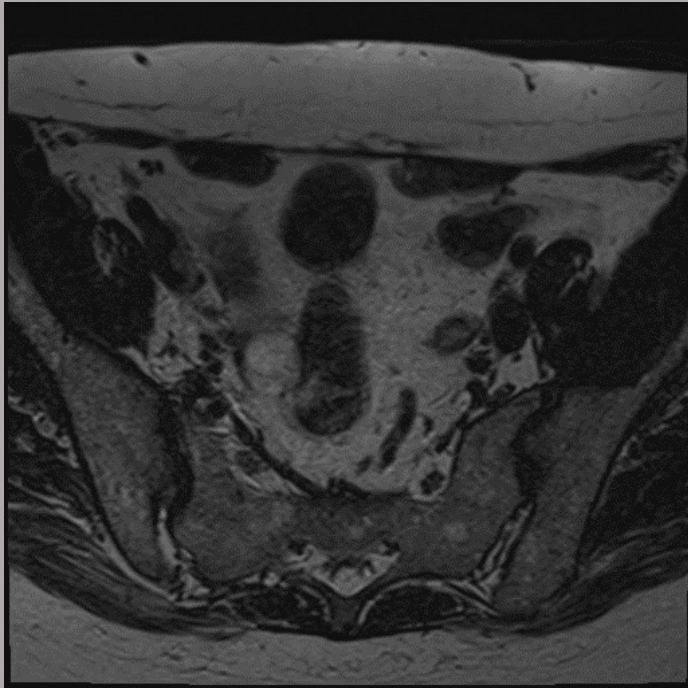
Résection nodule endométriose



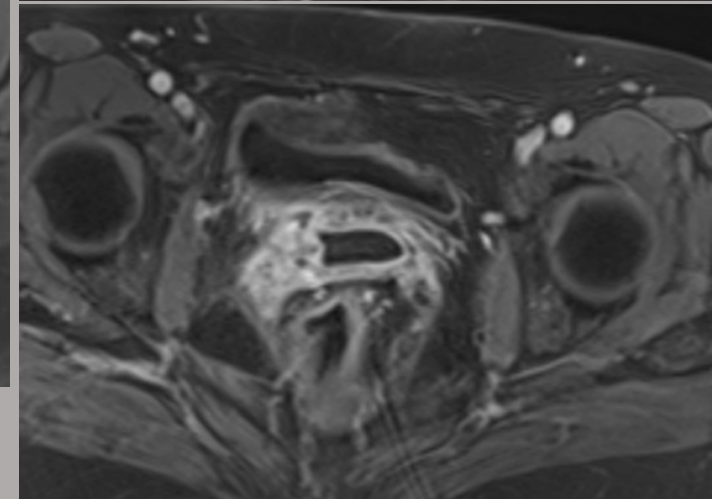
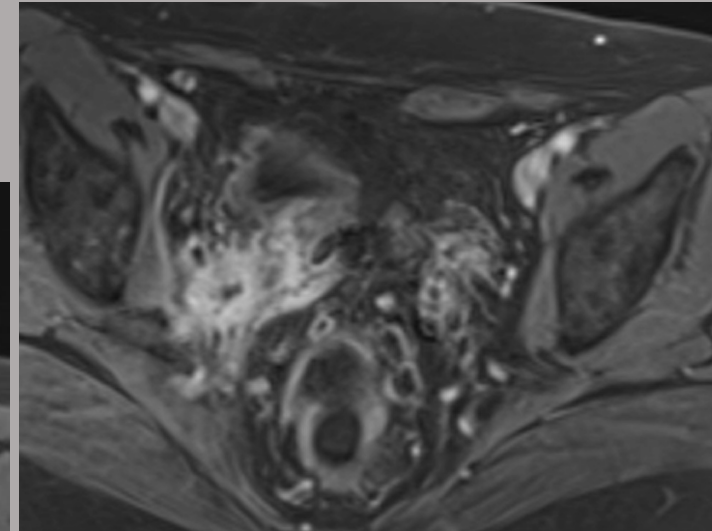
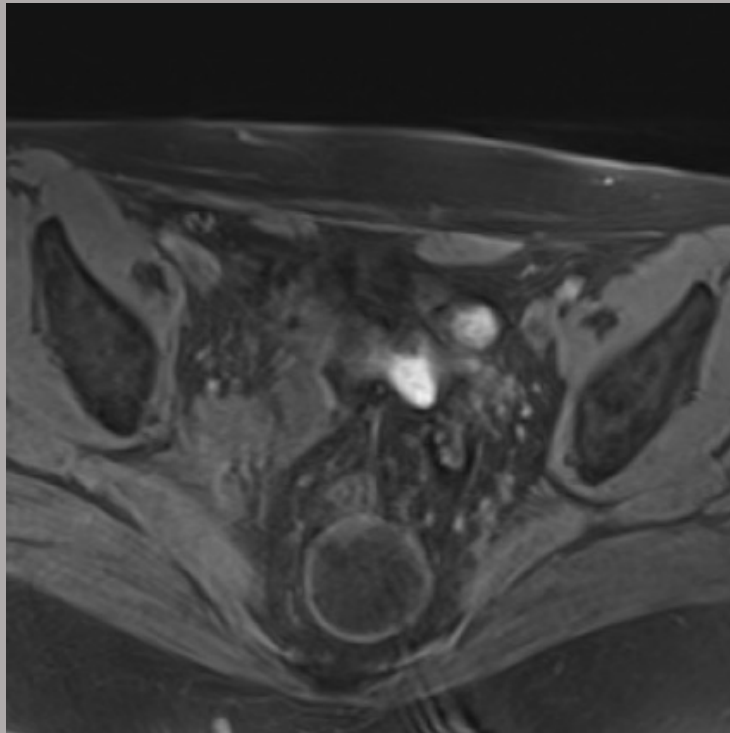
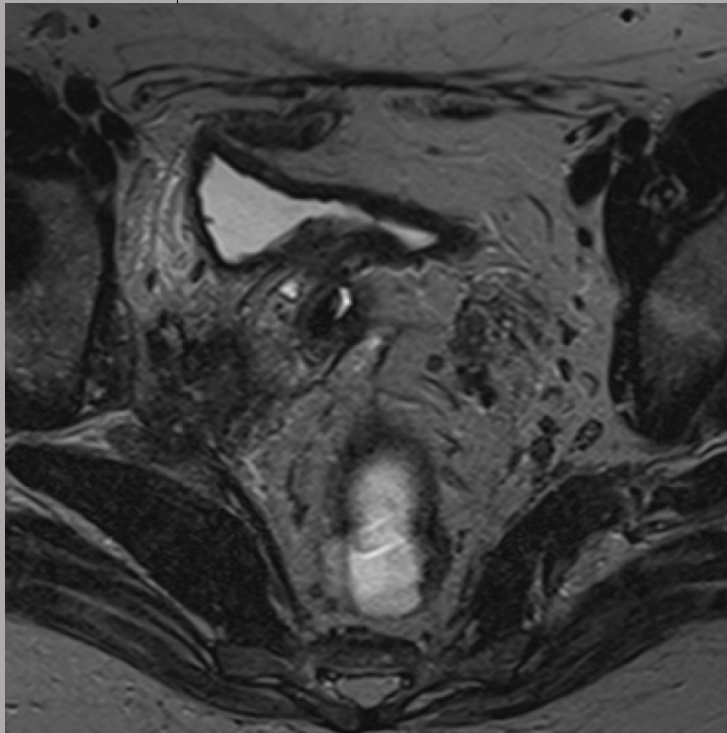
Mme PB

- Age:
- Atcds chir: Htt, Embolisation varices pelviennes droites <1an
- Désir de grossesse:
- Clinique:
 - Rejet embols/vagin
 - Sciatalgies et déficit moteur dt
 - EMG atteinte racines S2S3S4
- Procédure: Resection nodule sciatique droit

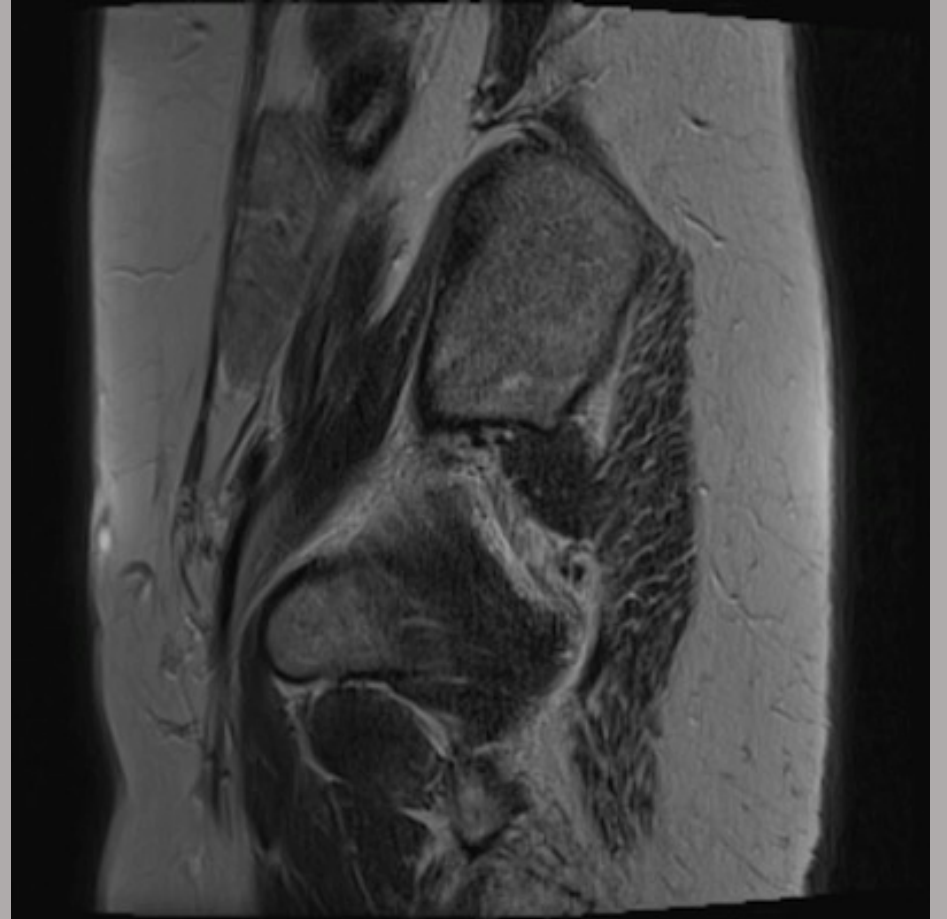
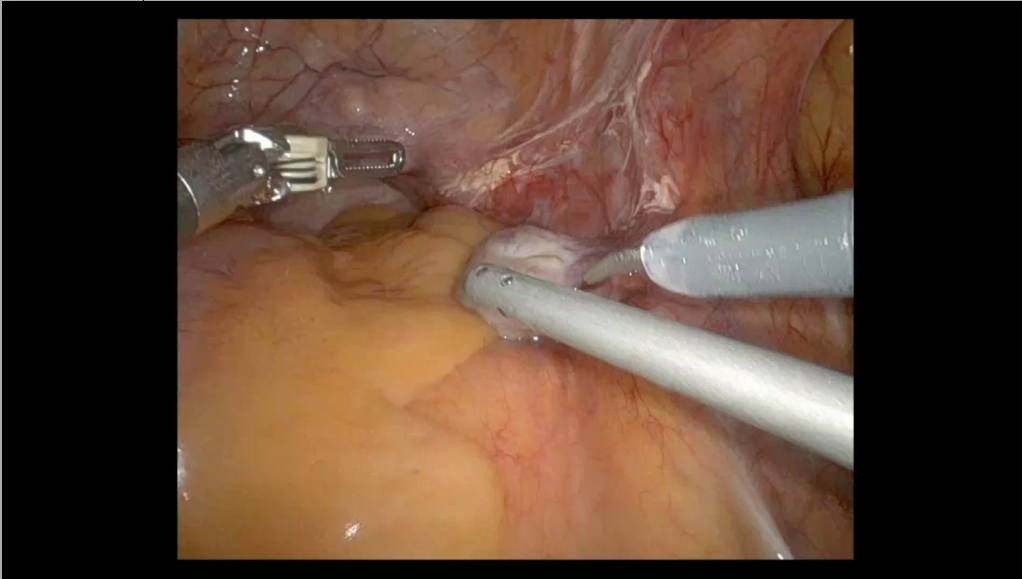
IRM



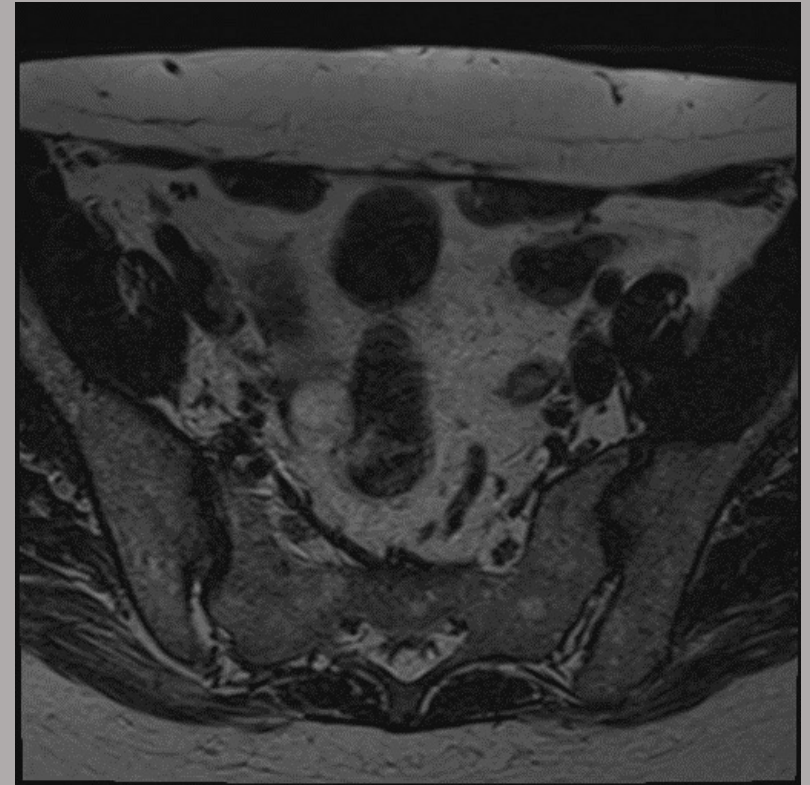
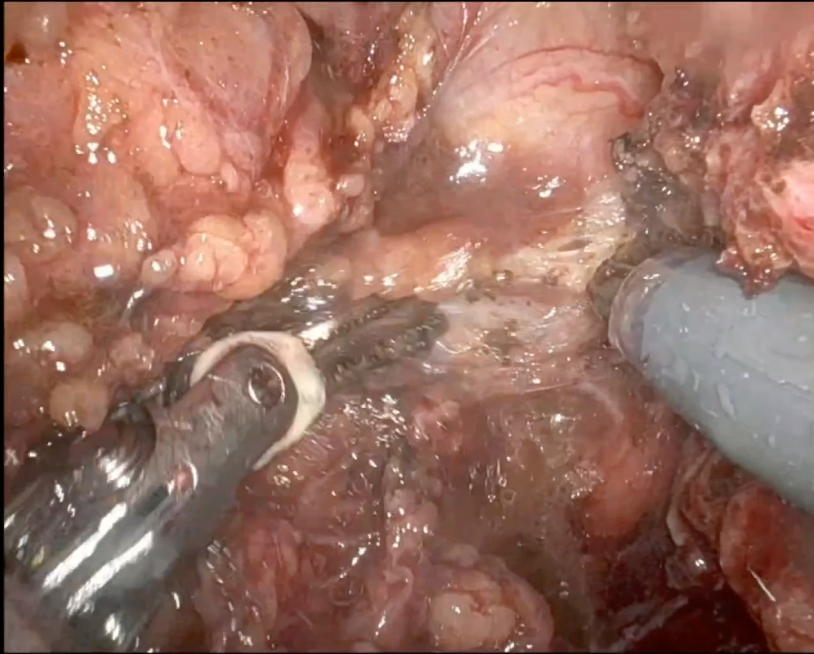
IRM masse latéro-vaginale droite



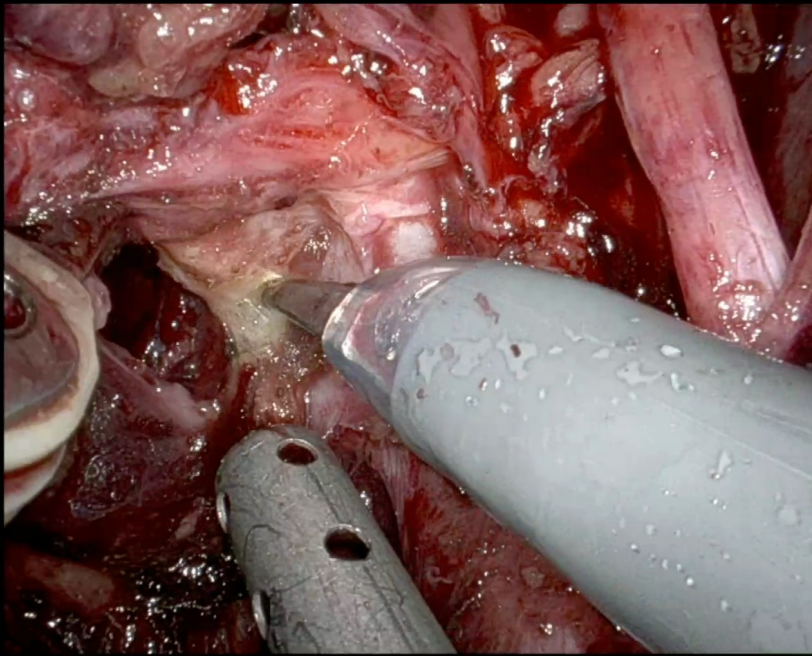
Abord



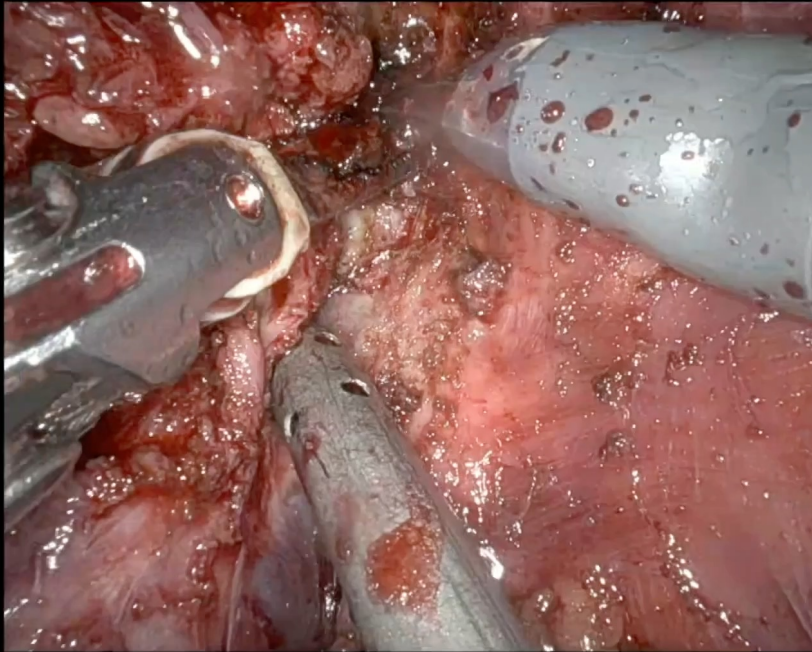
Abords latéraux



Dissection latérale



Résection nodule



Colpectomie et vue finale

