



HOPITAL TENON

IRIS

Imageries Radiologiques et Interventionnelles Spécialisées



CONGRÈS ANNUEL DE LA

SIFEM 2025

12>14 JUIN | CNIT FOREST PARIS

La patiente au cœur d'une imagerie responsable

Consensus ESUR / SAR :



Pr I. Thomassin-Naggara et Pr Rousset

Juin 2025

Liens d'intérêts

Remunerated lecture and board participation : General Electric, Siemens, Canon, Bard, Hologic, Guerbet, Fujifilm, Bracco, Bayer, iCAD, Incepto, GSK

Member of the board of O-RADS (American College of Radiology)

Member of the board of EUSOBI (European Society of Radiology)

President of the French women's imaging society (SIFEM)

Introduction



- Mise en place des filières de soins
- Nécessité d'une standardisation des prises en charge pour une meilleure orientation au sein des filières
 - Saisine de la DGOS >> CNP Radiologie >> SIFEM
- Labellisation HAS

NOTE DE CADRAGE



Début juin 2025

Prise en charge de l'endométriose : Actualisation de la place des examens d'imagerie et Fiches pratiques en échographie et IRM

Document de travail - [Date]

Date de la saisine : 3 octobre 2023

Demandeur : DGOS

Service(s) : SBP_DAQSS

Personne(s) chargée(s) du projet : Christine Revel (HAS), Pierre Gabach (HAS), Isabelle Thomassin-Naggara et Pascal Rousset (Radiologues SIFEM/CNP Radiologie)

Septembre 2023



Début juin 2025



European Society of
Urogenital Radiology



I. Thomassin-Naggara



P. Rousset



M. Dolciemi



L. Manganaro

ESUR MR Consensus Paper

ESUR endometriosis panel : 20 experts / 10 countries

Leaders : ITN, LM, PR, MD

Protocol, Lexicon, Reporting, Classification



A. Guerra



S. Freeman



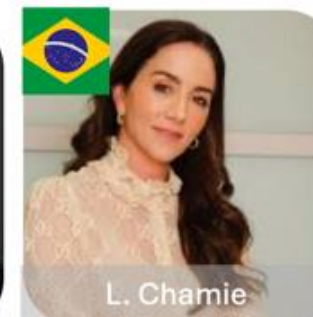
M. Bazot



S. Mansournia



P.N. Franco



L. Chamie



T. Cunha



G. Avesani



B. Gui



R. Forstner



H. Sahin



R. Woitek



N. Barwhani



S. Rizzo



E. Kermarrec



L. Brunesch



ESUR consensus MRI for endometriosis: indications, reporting, and classifications

link.springer.com

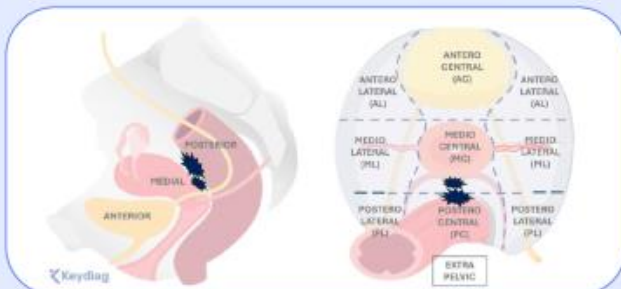
ESUR consensus MRI for endometriosis: protocol, lexicon, and compartment-based analysis

link.springer.com

ESUR consensus MRI for endometriosis: indications, reporting, and classifications

ESUR's endometriosis guidelines were last published in 2017; an update is provided to reflect advances in MRI indications, reporting, and classifications.

- MRI is advised for inconclusive/negative transvaginal ultrasound in symptomatic patients, before surgery or post-treatment if symptoms persist.
- A structured report enhances communication with surgeons and patients



Consensus MRI Multi-center

A standardized report based on a compartmental analysis of the location of endometriotic nodules, with optional drawings, is essential for comprehensive mapping and optimal communication with both patient and surgeon.

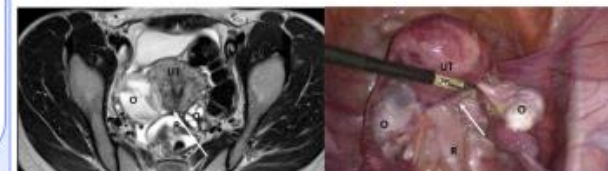
Eur Radiol (2025) Thomassin-Naggara I, Dolciemi M, Chamie LP et al; DOI: 10.1007/s00330-025-11579-0

EUROPEAN SOCIETY OF RADIOLOGY
European Radiology

ESUR consensus MRI for endometriosis: protocol, lexicon, and compartment-based analysis

Using a standard MRI protocol and adopting a standardized vocabulary with compartmental analysis is crucial for comprehensive mapping and effective communication with both the patient and the surgeon.

A uterosacral ligament must be considered abnormal if a nodule or spiculation is visible in at least 2 planes or if a bright T1W spot is detected and no thickness cut-off is considered as specific enough to diagnose an endometriotic deposit alone



Consensus MRI Multi-center

ESUR panelists proposed a consensual lexicon defining superficial, adnexal, and deep pelvic endometriosis and agreed in MR reporting features and information needed by the surgeons.

Eur Radiol (2025) Thomassin-Naggara I, Dolciemi M, Chamie LP et al; DOI: 10.1007/s00330-025-11611-3

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European Radiology

PROTOCOLE IRM : Préparation

- A jeun
- Qqsoit le jour du cycle
- Antiperistaltiques
- Vessie semi pleine
- Préparation digestive ++++
- Opacification rectale pas en 1^{ère} intention
- Opacification vaginale (<20cc)

Thomassin-Naggara et al. Springer 2025

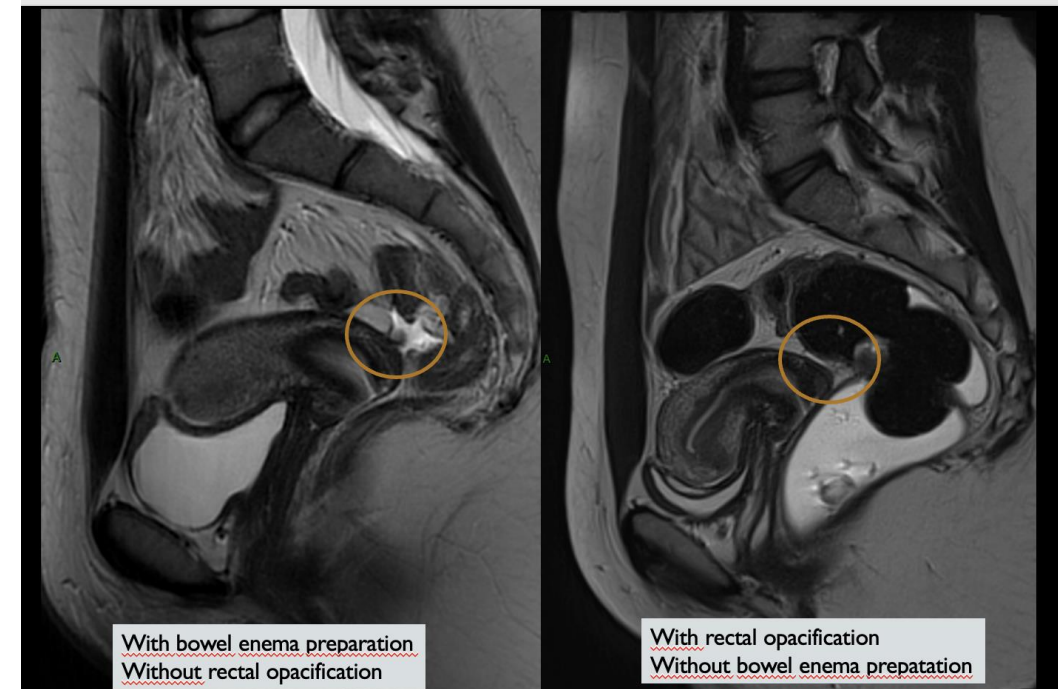
Thomassin-Naggara et al. *European Radiology* (2024) 34:7705–7715
<https://doi.org/10.1007/s00330-024-10842-0>

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UROGENITAL

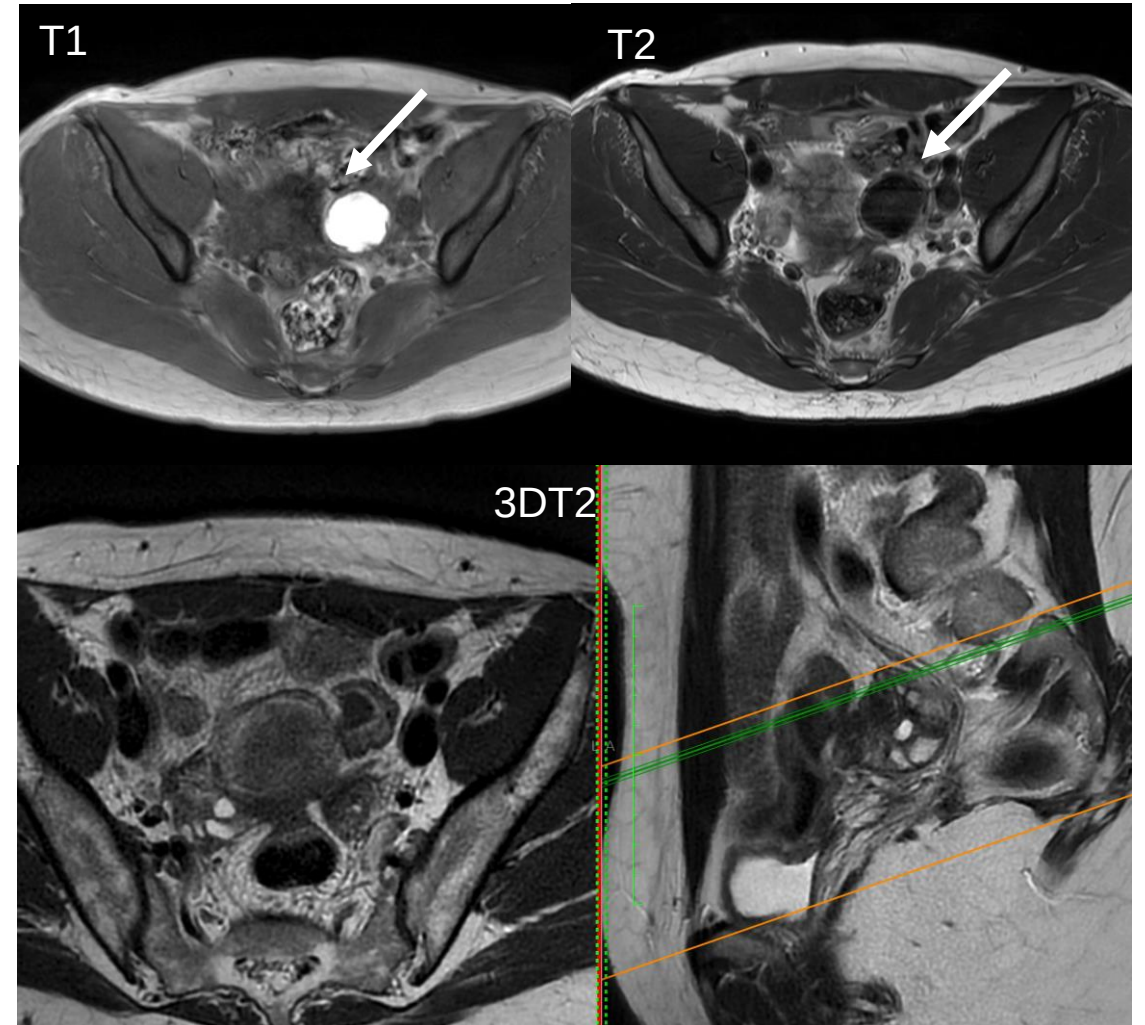
Diagnostic MRI for deep pelvic endometriosis: towards a standardized protocol?

Isabelle Thomassin-Naggara^{1,2*}, Christine Sadjo Zoua¹, Marc Bazot^{1,2}, Michele Monroc³, Horace Roman⁴, Léo Razakamanantsoa^{1,2} and Pascal Rousset⁵, for the ENDOVALIRM study group



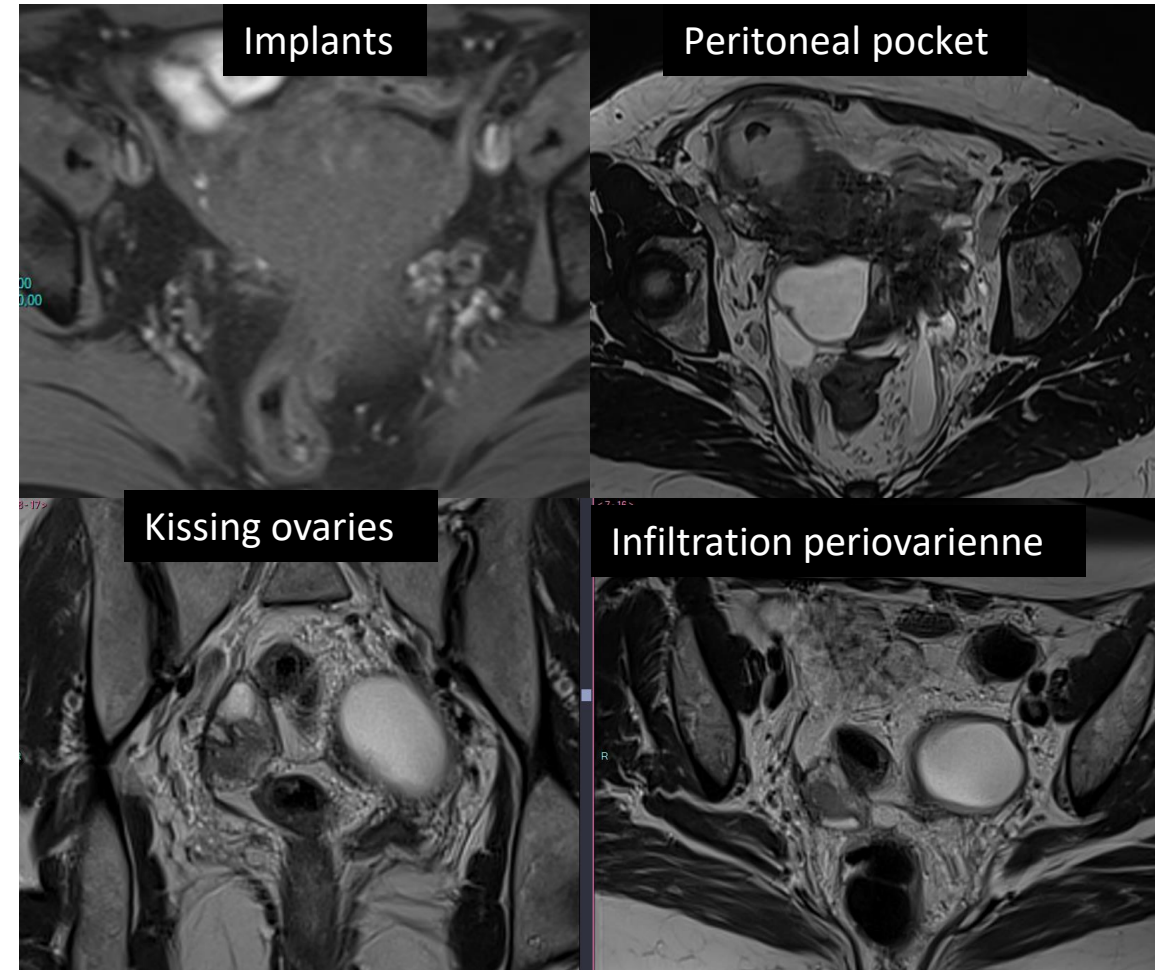
PROTOCOLE IRM : Séquences

- T2 multiplanaires
- T1 multiplanaires +/- FAT SAT
- Séquence sur les reins
- Intérêt séquence 3DT2 +++
- Injection :
 - endométriome atypique
 - paroi abdominale
 - atteinte nerveuse



LEXIQUE : Endométriose superficielle

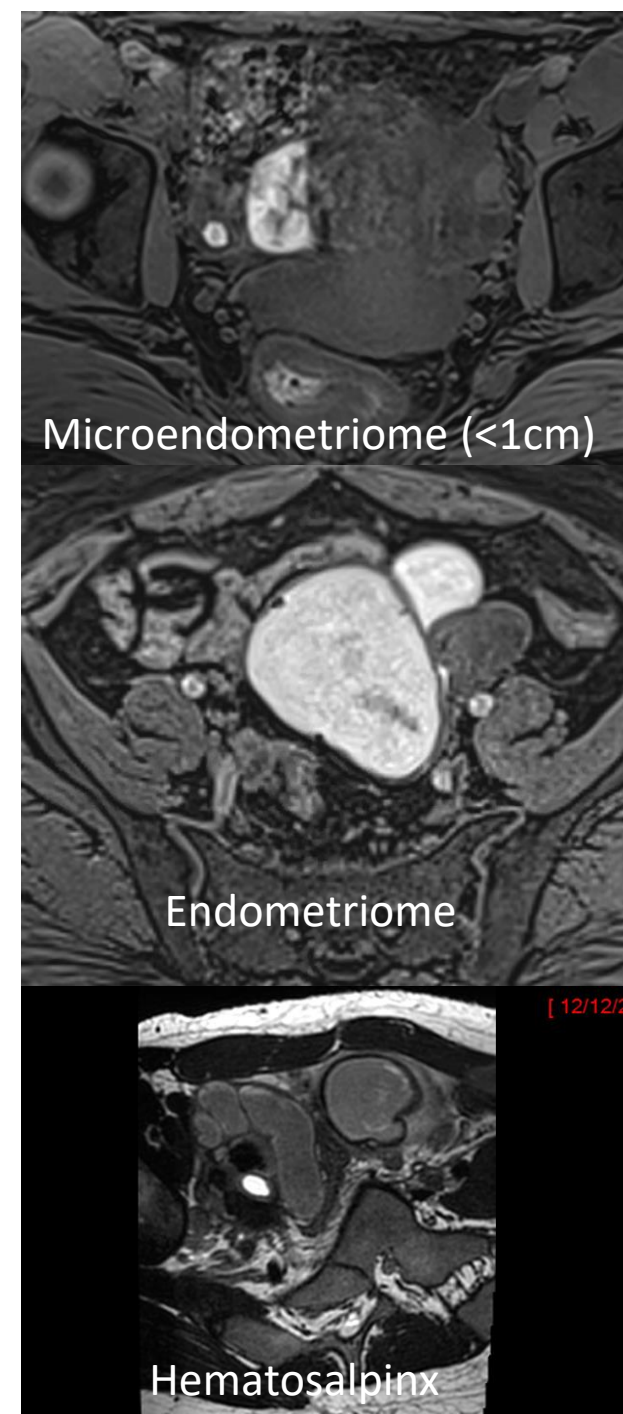
- Implants en hypersignal T1
- Adhères
- « Kissing ovaries »
- Peritoneal pocket
- Faux kyste d'inclusion
- Infiltration de la fossette ovarienne
- Atteinte du cul de sac vésico utérin



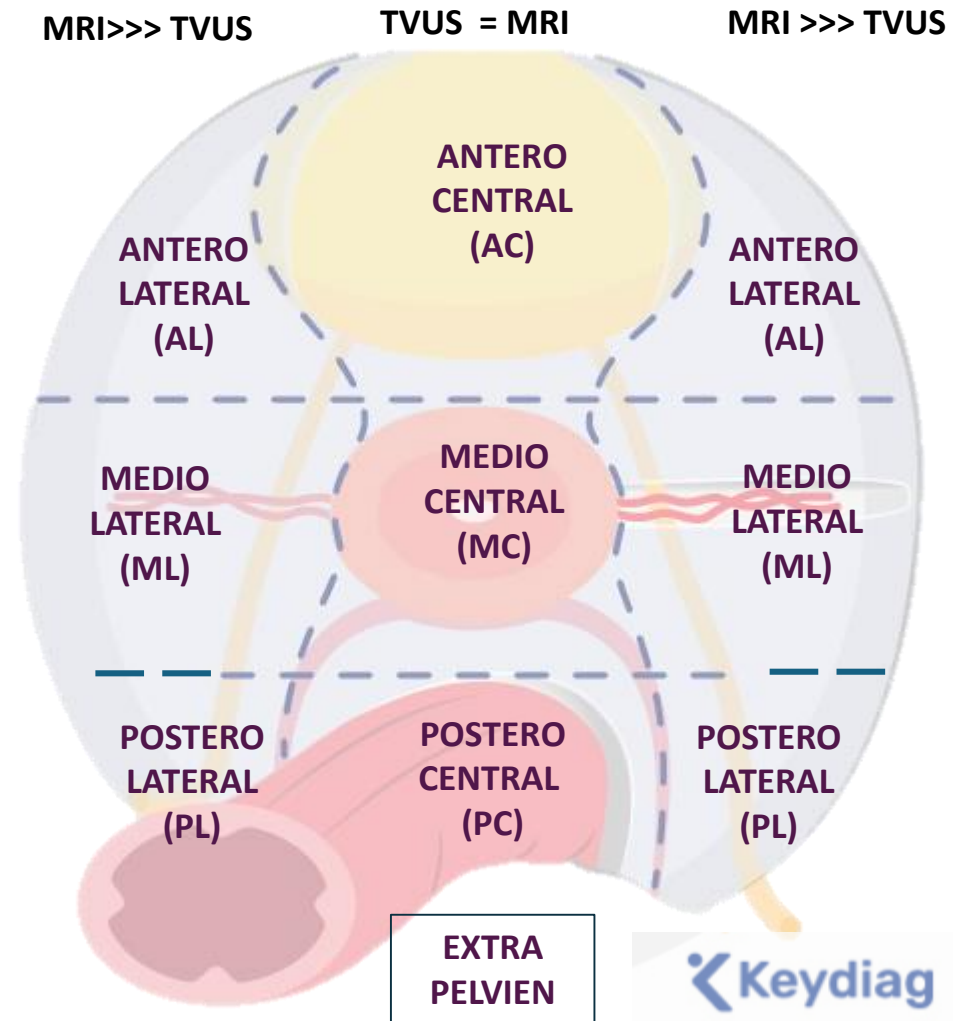
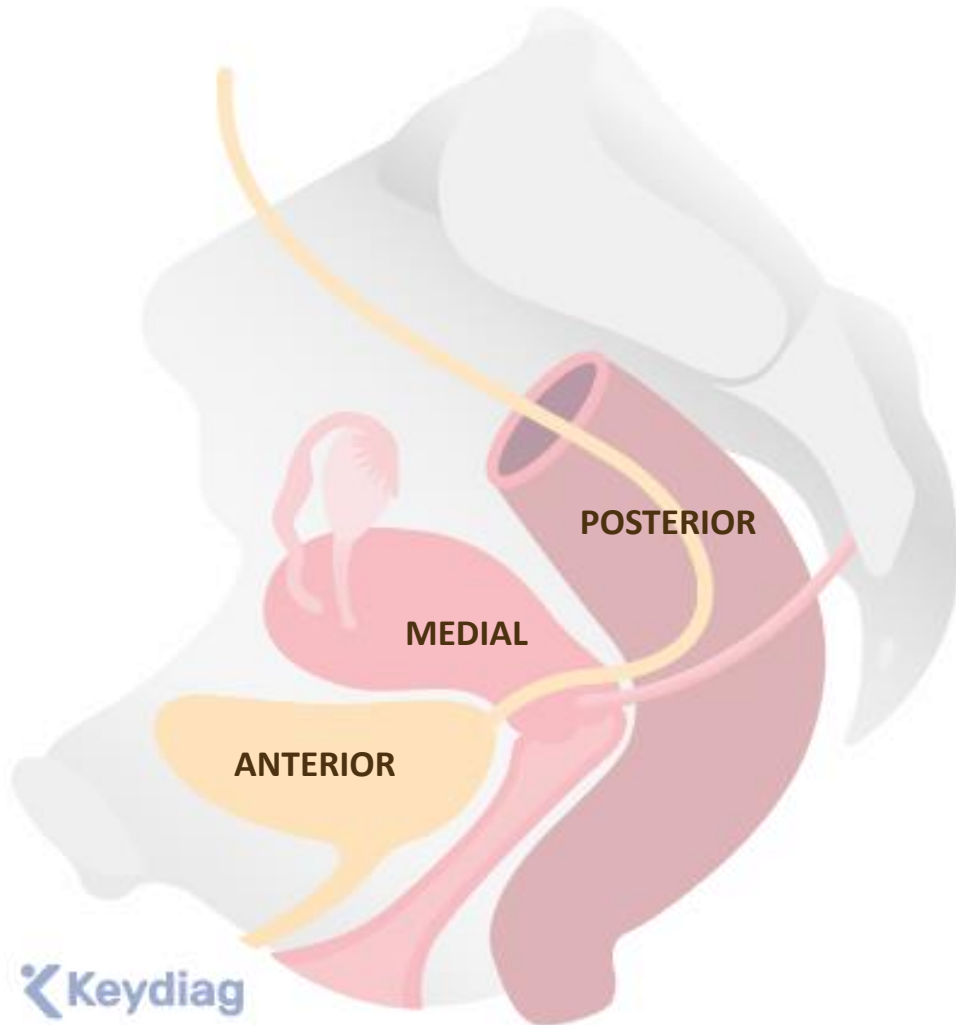
LEXIQUE : Endométriose annexielle

- Les termes **micro-endométriome** ou **implant ovarien** peuvent être utilisés pour lésion hyperintense intra-ovarienne en T1FS $\leq 1\text{cm}$ (au minimum de 3)
- Le terme **endométriome** doit être utilisé pour
 - kyste $> 1\text{ cm}$
 - avec contenu endométriosique (T2 variable, hyperT1 $\geq$ graisse sur les séquences sans saturation de la graisse augmentant après saturation)
 - homogène avec une paroi fine et sans portion tissulaire.
 - Si des séquences de diffusion sont utilisés, l'hypersignal est franc et homogène avec ADC bas et il n'existe pas de rehaussement pariétal
- Un **hematosalpinx** ou un **hydrosalpinx** sont suspectés devant des structures annexielles tubulaires dilatées remplies de liquide.

Diamètre, multiplicité, emplacement, uni/bilatéralité.
parenchyme ovarien résiduel (taille et follicules)



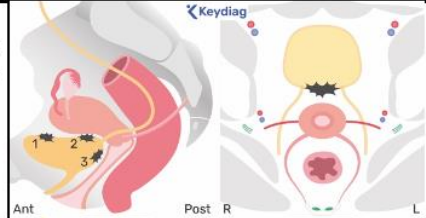
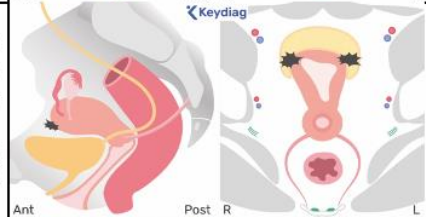
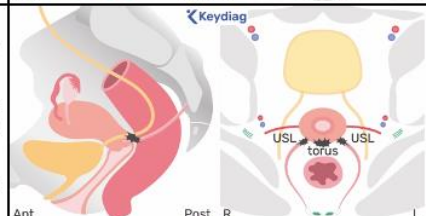
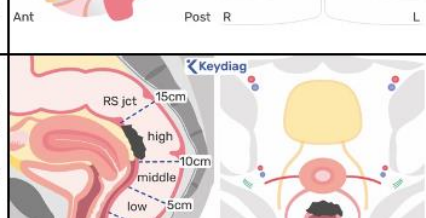
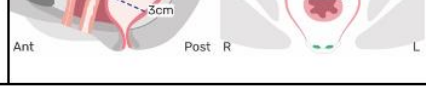
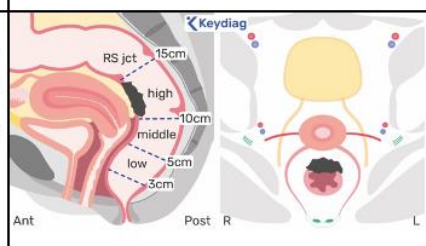
LEXIQUE : Endométriose profonde



Endométriose profonde

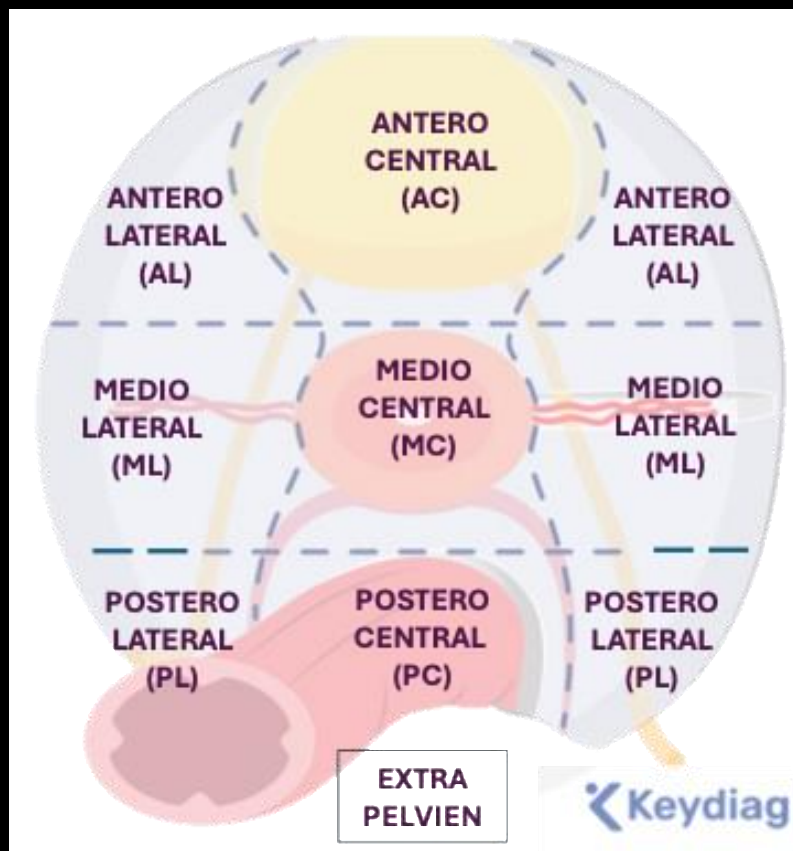
Localisations centrales

- Ligament rond proximal
 - Vessie
-
- Uterus : Myometre (« external adenomyosis »)
 - Vagin
 - Torus – Ligaments utérosacrés proximaux
 - Cul de sac de Douglas
 - Cloison rectovaginale (RVS) - Mesorectum
-
- Rectum et charnière rectosigmoïdienne

CENTRAL LOCATIONS	
ANTEROCENTRAL	Bladder: suspected - when a nodule/mass forms an obtuse angle with the bladder wall involving the muscular layer (obliteration of the hypointense wall signal in T2W) - protrudes into the lumen invading the mucosal layer - Located on dome (1), level of CVU (2) or basis (3) 
	Proximal round ligament: suspected - when ligament shows fibrotic thickening compared to the contralateral round ligament, with regular or irregular margins and occasionally a nodular appearance. - The proximal tract arises from each uterine horn and corresponds to the intrapelvic one-third of the round ligament 
MEDIOCENTRAL	Torus/Proximal Uterosacral ligament (USL): suspected - in presence of a mass or thickening in the upper/mid-portion of the posterior cervix - if there is a unilateral USL nodule or fibrotic thickening compared to the contralateral USL, with regular or irregular margins. - An "arciform abnormality" is described when the involvement of the torus uterinus affects both USLs 
	Retro uterine space or pouch of Douglas (RUP): suspected when there is a partial or complete obliteration of the retro uterine space, with / without a suspended or lateralized fluid collection 
	External adenomyosis (EA): reported in the presence of a nodular hypointense extrinsic infiltration of the outer myometrium on T2-weighted images with ill-defined borders along the anterior/posterior uterine wall. 
	Vagina: suspected if there is partial replacement of the posterior vaginal wall/ posterior vaginal fornix on T2W images, with a hypointense thickening or a mass (with or without foci of high T2W SI) behind the infero-posterior wall of the cervix 
POSTEROCENTRAL	Rectovaginal space: suspected when a nodule or mass passes the lower edge of the peritoneal reflection (typically located at the level of the posterior lip of the cervix) 
	Rectum/rectosigmoid junction (RS junction): suspected - when there is focal hypointense thickening or mass of the anterior wall of the rectum/sigmoid colon on T2W images. - Located on high, middle and/or low rectum or at the level of rectosigmoid junction 

Torus - Proximal LUS

Compartiment médiocentral

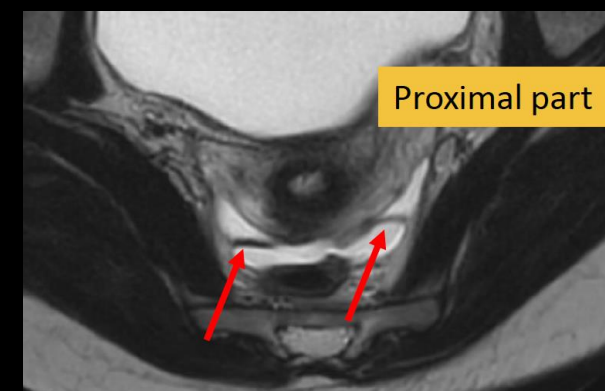
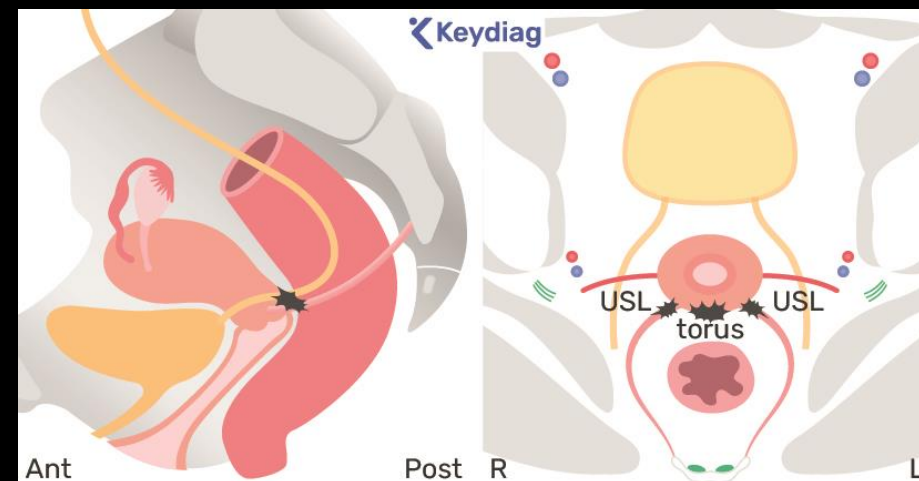


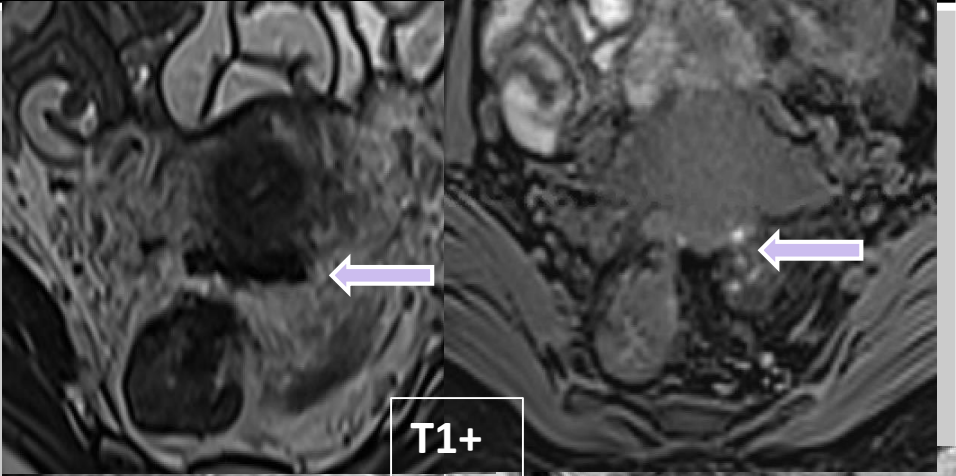
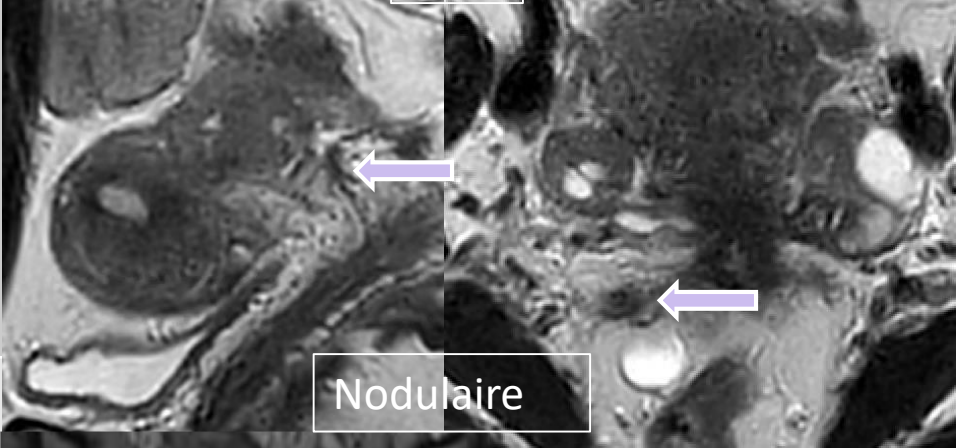
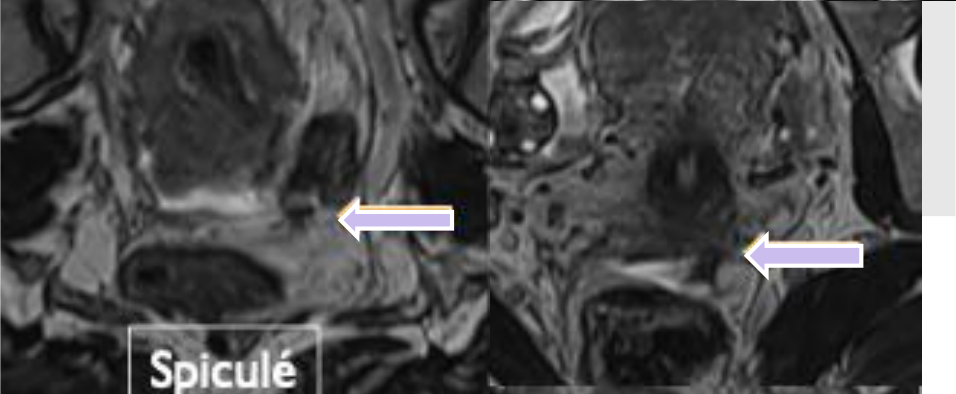
Description anatomique

Fusion des LUS à l'arrière du col de l'utérus, formant un demi-cercle délimitant les frontières du cul-de-sac de Douglas.

Ainsi, le LUS proximal est situé le long du fornix vaginal postérieur et correspond au segment orienté transversalement.

Dessins



	Compartiment Mediocentral	
Torus / Proximal LUS	• US normal = épaisseur transversale ≤ 3 mm • LUS certaine = Epaississement nodulaire et/ou rétracté/spiculé dans au moins deux plans ou si un spot en hypersignal T1FS est détecté • LUS incertaine = Epaississement pseudonodulaire ou irrégulière que dans un plan. • Torus uterinum = nodule ou d'un épaississement à la jonction postérieure col/corps ou au niveau de la partie postérosupérieure du col utérin • LUS unilateral = nodule unilatéral du LUS ou un épaississement fibreux par rapport au LUS controlatéral, avec des bords réguliers ou irréguliers. • LUS bilateral + torus = atteinte arciforme.	
	Sont à rapporter : • site (proximal ou distal) • infiltration du mésorectum en particulier si l'infiltration s'étend latéralement, car cela rend l'intervention chirurgicale plus complexe.	
		

Localisations latérales

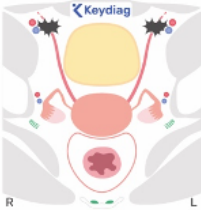
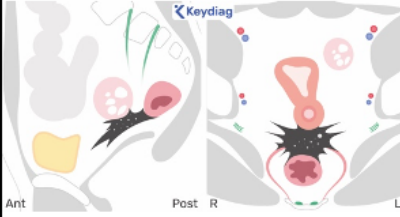
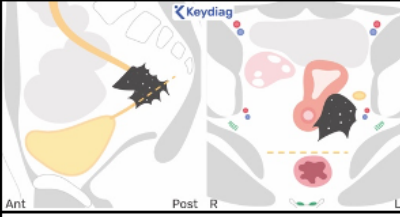
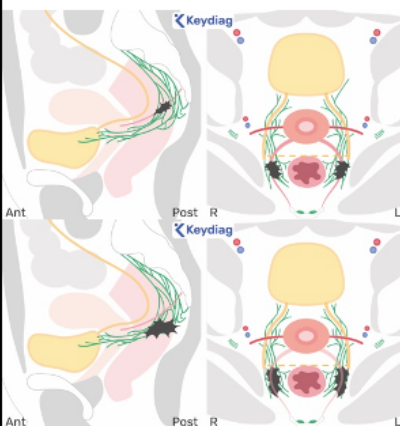
- Espace paravésical
- Ligament rond distal
- Paramètre médiolatéral
- Uretere
- Paramètre postérolatéral
 - LUS distal
 - Lame sacrorectale

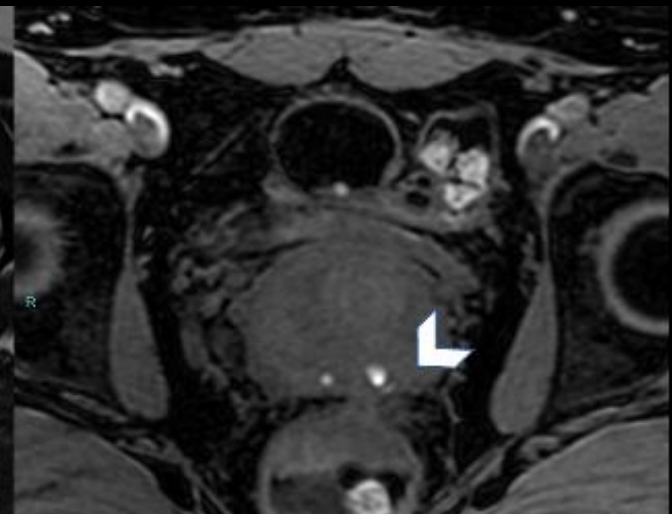
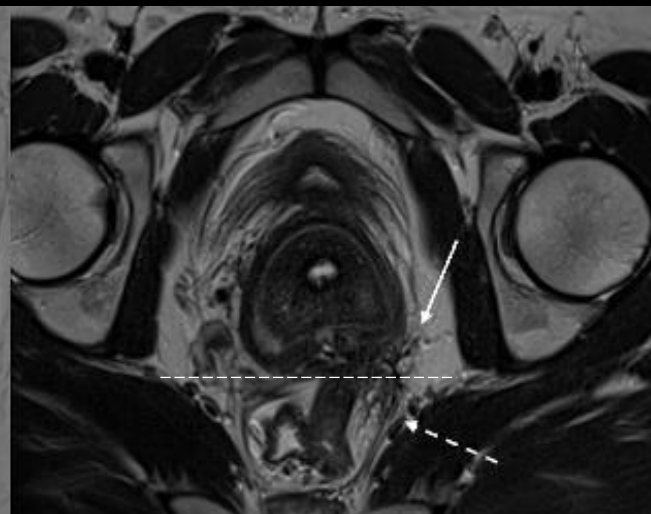
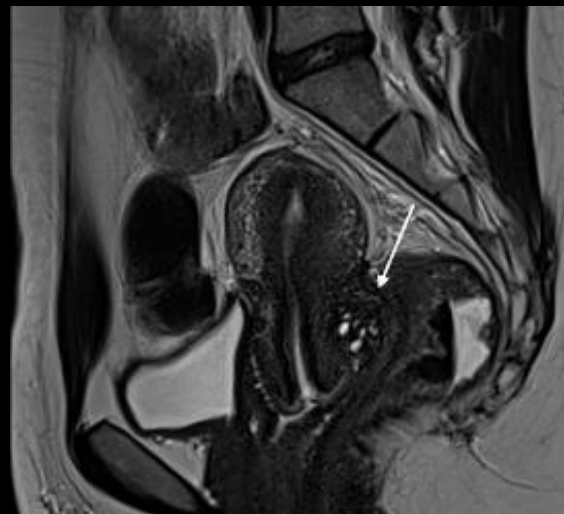
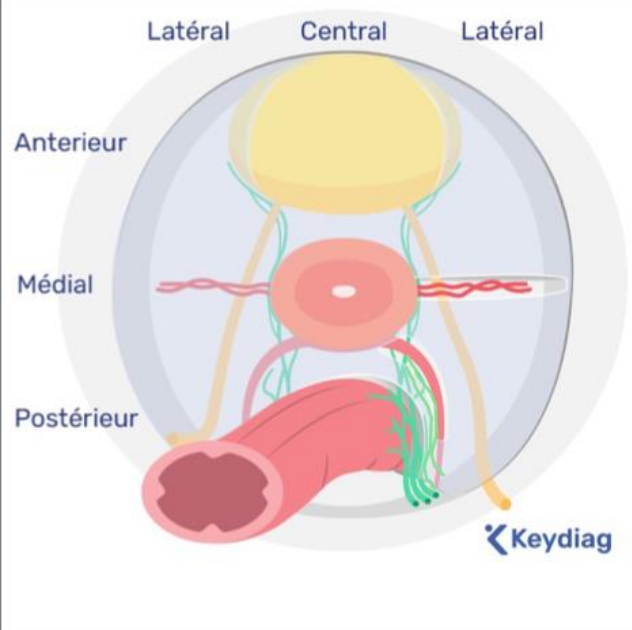
Plexus hypogastrique inférieur

ANTERIEUR

MEDIAL

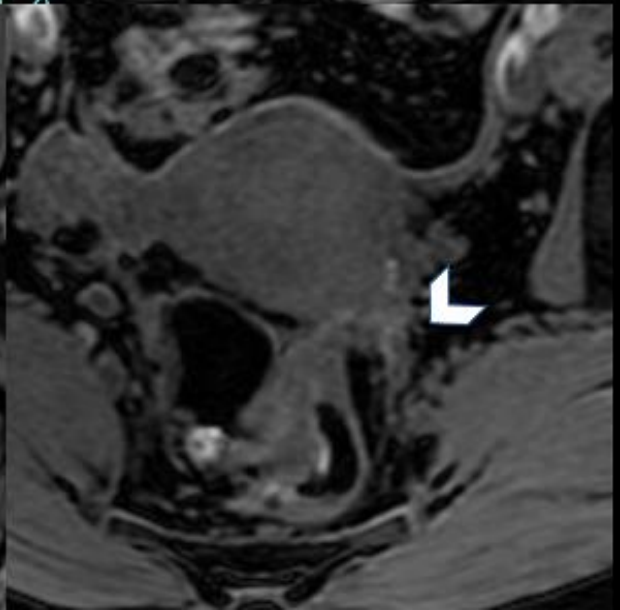
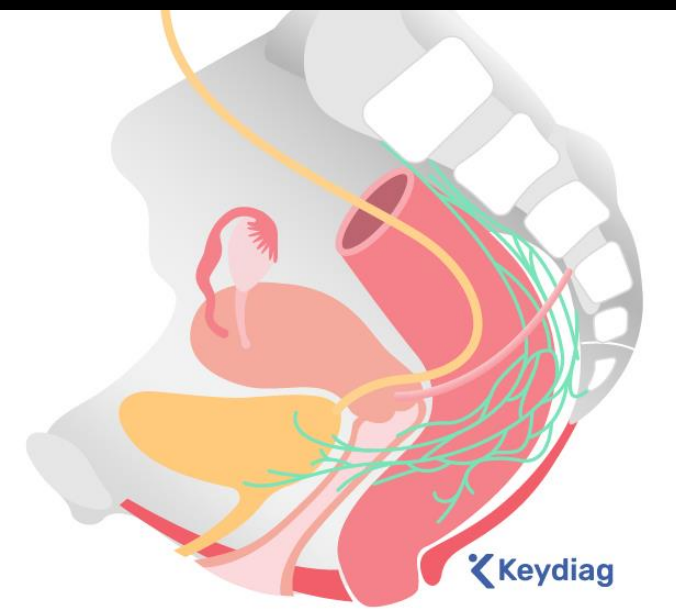
POSTERIEUR

LATERAL LOCATIONS		
ANTEROLATERAL	Distal round ligament: • suspected when ligament shows fibrotic thickening compared to the contralateral round ligament, with regular or irregular margins and occasionally a nodular appearance. • The distal round ligament corresponds to the intrapelvic distal two-thirds of round ligament, up to the deep orifice and/or into the inguinal canal	
MEDIOLATERAL	Mediolateral parametrium: suspected • when there is irregular and/or retractile fibrotic infiltration, with or without hemorrhagic cystic areas, within the vascular and adipose tissue of the lateral or posterolateral cervical or vaginal regions. • This typically arises from a nodular lesion (over 1 cm) in the proximal uterosacral ligament extending downwards and outwards or from a lesion in the inferior and posterior broad ligament.	
ERAL	Ureter: suspected • when there is fibrotic infiltration of the ureteral wall and often peri-ureteral fat (focal low signal intensity), typically where the ureter enters the parametrium or, more posteriorly, along the broad ligament's posterior leaf.	
	Nerves involved: Obturator nerve (L2-L4)	
POSTEROLATERAL	Posterolateral parametrium: suspected • when there is a fibrotic nodular infiltration within the lateral pelvic compartment, behind the posterior horizontal line passing anteriorly to the rectum, either unilaterally or bilaterally, with loss of the normal appearance of the retro- and sub peritoneal pararectal space located outside the mesorectal fascia. • The USL represents the roof of the sacrorectal septum, therefore, an endometriotic deposit that infiltrates underneath and outside the USL into the pararectal space invades the sacrorectal septum.	
	Nerves involved: lumbosacral plexus and /or roots (S2, S3, S4), sciatic nerve (L4-S3)	



Plexus hypogastrique inférieur (nerfs parasympathiques)

Paramètre posterolateral (- - →) and mediolateral (—→)



Paroi pelvienne latérale : Nerfs somatiques

Pelvic Nerve Endometriosis: MRI features and key findings for surgical decision Insight Imaging 2025



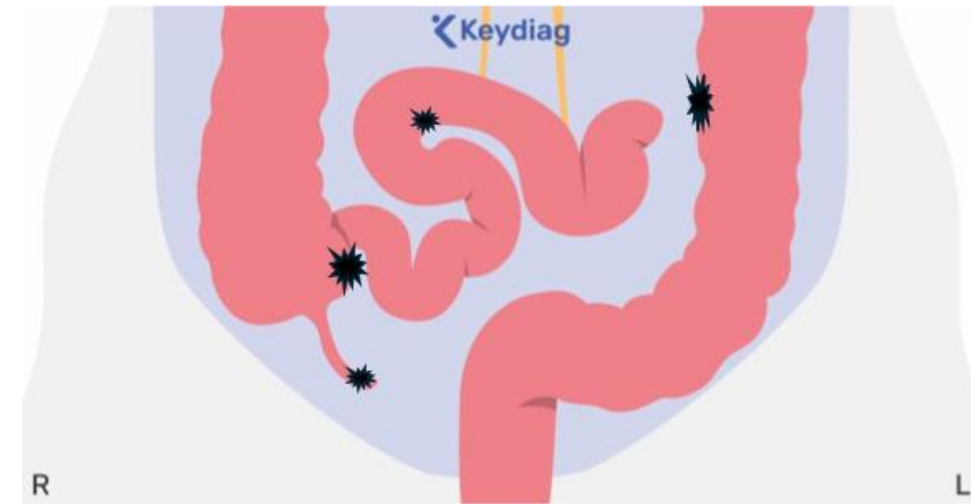
Justine Bourg (CHIC promo Hiver 2024)



Edouard Ruaux (Tenon promo Hiver 2022)

Localisations extra pelviennes

- Atteintes digestives
 - Sigmoides
 - Carrefour caeco-appendiculaire
- Uretère Lombaire
- Paroi abdomino-pelvienne
- Région inguinale



- La recherche d'atteinte diaphragmatique n'est pas recommandé de façon systématique

Pathologies associées

- Adénomyose interne
 - Session dédiée cet après midi !
- Varices pelviennes
- Malformations utéro vaginales

Role des classifications

CONSENSUS STATEMENT

Non-invasive imaging techniques for diagnosis of pelvic deep endometriosis and endometriosis classification systems: an International Consensus Statement

G.CONDOUS^{1#}, B. GERGES^{1,2#}, I. THOMASSIN-NAGGARA³, C. BECKER⁴, V. C. TOMASSETTI^{5,6}, H. KRENTEL⁷, B. J. VAN HERENDAEL^{8,9}, M. MALZONI¹⁰, M. S. ABRAO¹¹, E. SARIDOGAN¹², J. KECKSTEIN¹³, Intersociety Consensus Group[†] and G. HUDELIST¹⁴

Published in
EJR 2024
And 6 other
journals



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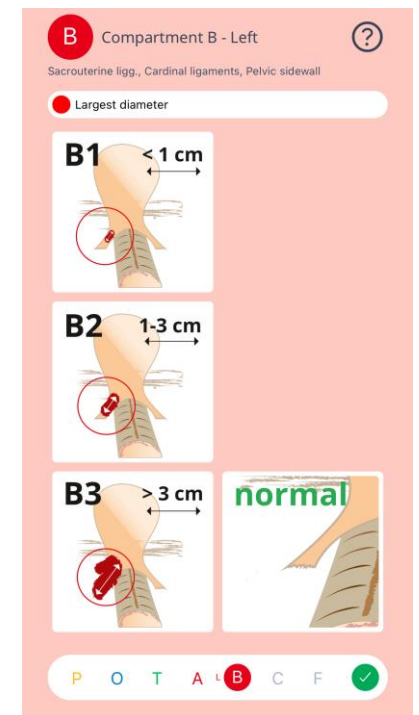
Role des classifications

Non-invasive imaging techniques for diagnosis of pelvic deep endometriosis and endometriosis classification systems: an International Consensus Statement

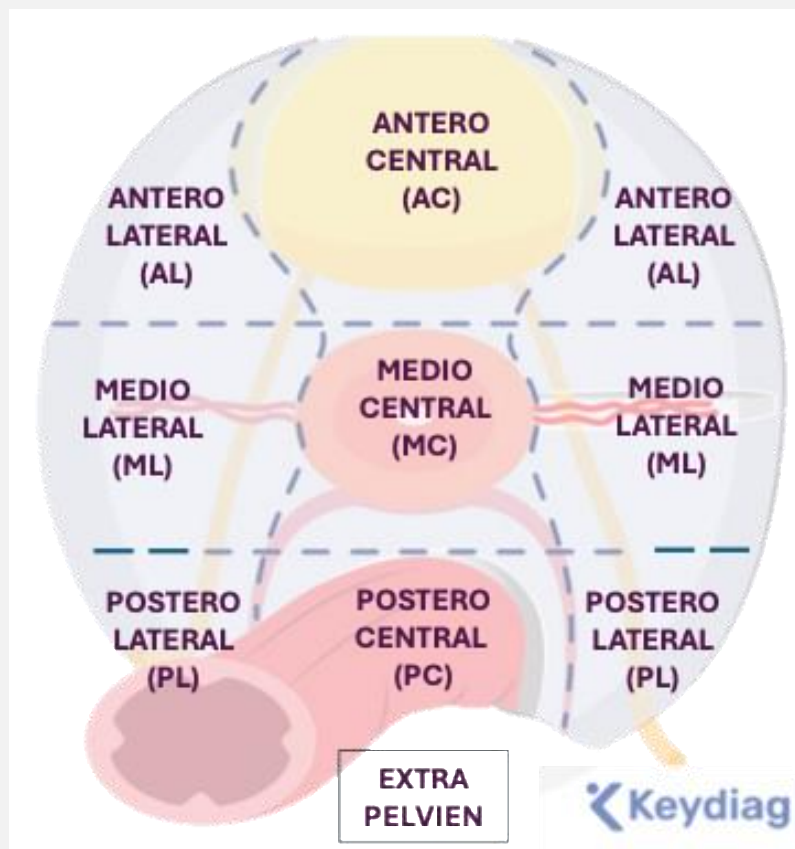
G. CONDOUS^{1#}, B. GERGES^{1,2#} , I. THOMASSIN-NAGGARA³, C. BECKER⁴, C. TOMASSETTI^{5,6}, H. KRENTEL⁷ , B. J. VAN HERENDAEL^{8,9}, M. MALZONI¹⁰, M. S. ABRAO¹¹ , E. SARIDOGAN¹², J. KECKSTEIN¹³ , G. HUDELIST¹⁴ and Collaborators[†]

« The majority of participants agreed strongly on the use of TVS or MRI in combination with the #Enzian classification, although it is less accurate in cases of parametrial and USL involvement. »

Enzelsberger et al. Preoperative application of the Enzian classification for endometriosis (The cEnzian Study): A prospective international multicenter study BJOG 2022



#ENZIAN app - MRI



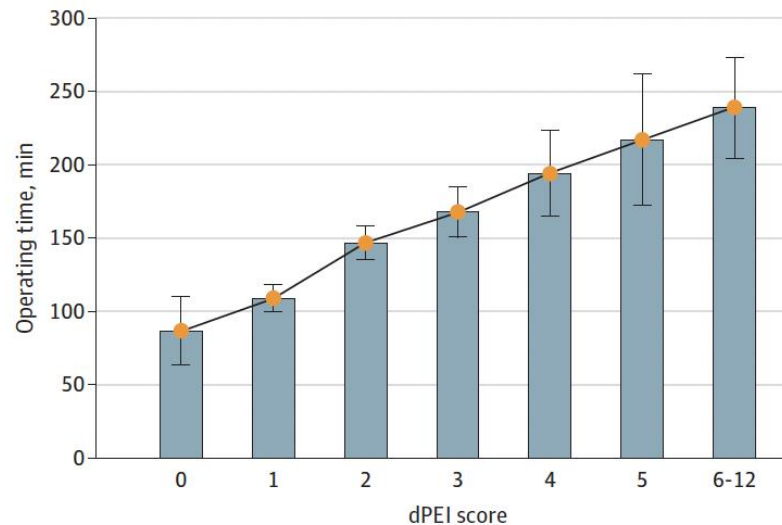
	Lateral DT	Central	Lateral GH
Anterieur	LR distal Espace périvésical	LR Prox Vessie	LR distal Espace périvésical
Medial	Parametre ML Uretere Paroi pelvienne ML	Torus LUS prox Vagin + CRV Myometre	Parametre ML Uretere Paroi pelvienne ML
Posterieur	LUS distal Lame sacrorectale Paroi pelvienne PL	Rectum	LUS distal Lame sacrorectale Paroi pelvienne PL
Extra pelvic	- Digestif (Sigmoïde, caecoappendiculaire) - Paroi pelvienne abdomino pelvienne - Diaphragme		

dPEI score : 1 point par compartiment
1 point additionnel : Vagin, base vésicale, uretère Paroi pelvienne ML or PL

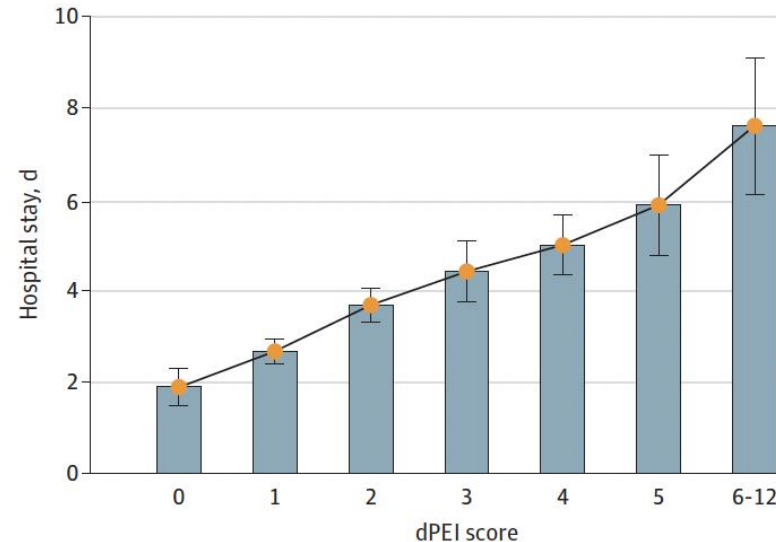
Classification IRM : planifier le geste opératoire

- dPEI classification : faible (I, II), modérée (III, IV), sévère (V et plus)
- Etude ENDOVAL IRM (n=605), 7 centres experts français

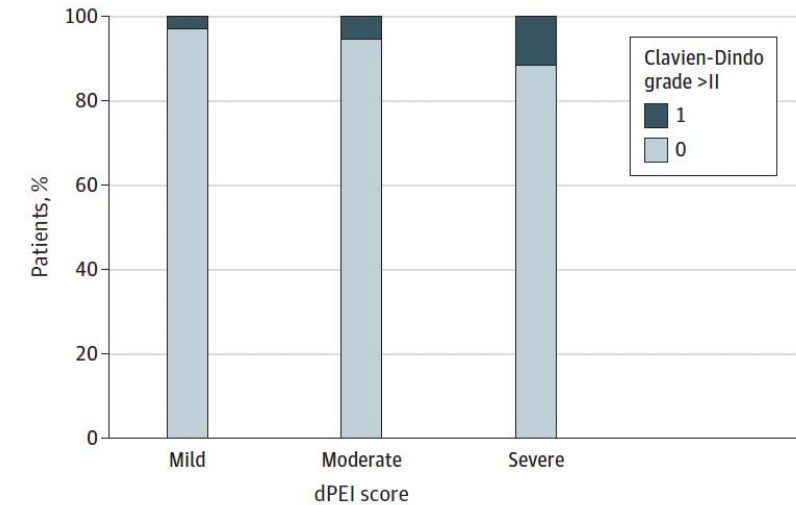
Temps opératoire



Temps d'hospitalisation



Complications post opératoires



Classification IRM

- “ESUR panelists strongly agreed the usefulness of MR classification with a majority of experts considering the dPEI classification to be the most useful (Grade A)”

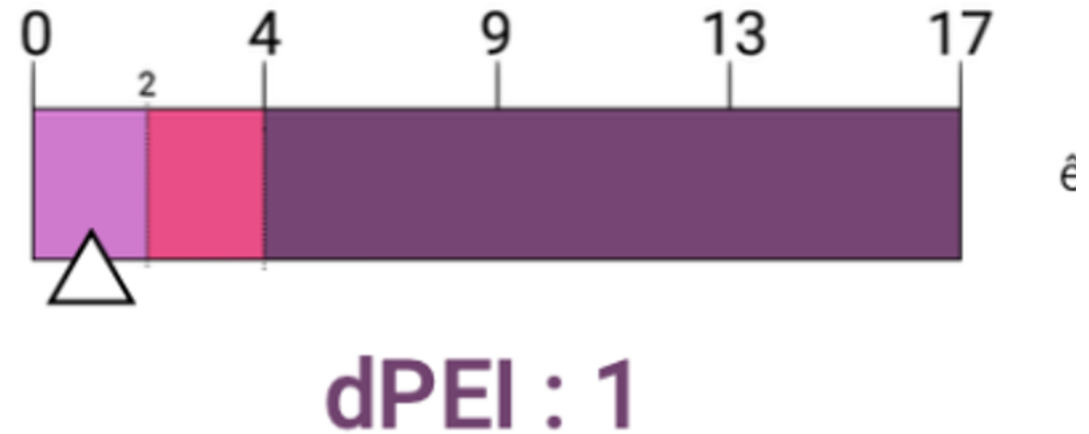
Result

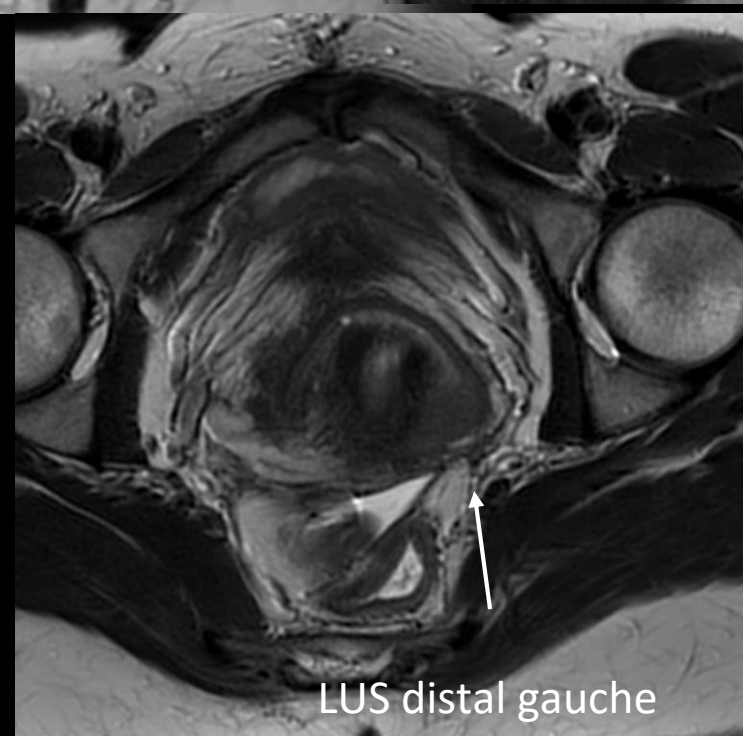
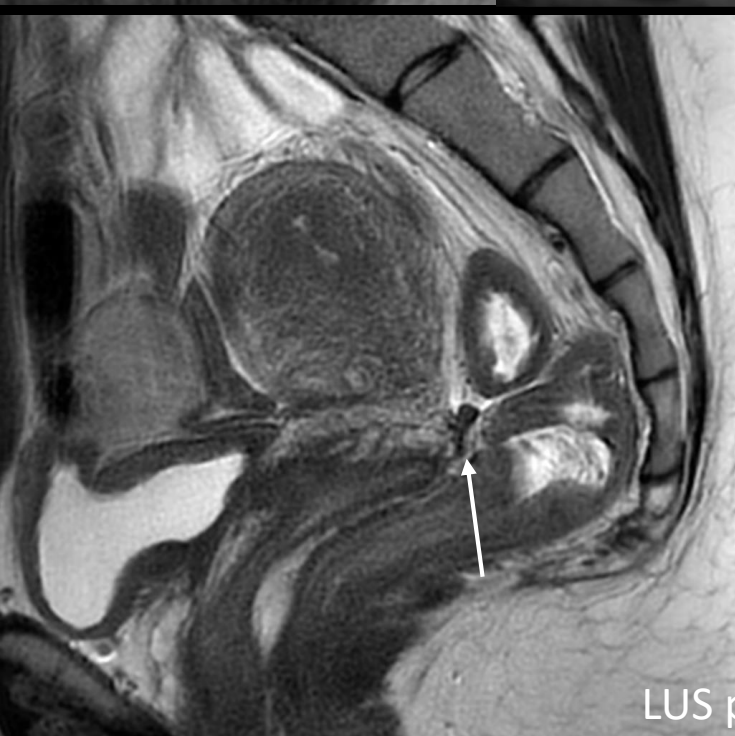
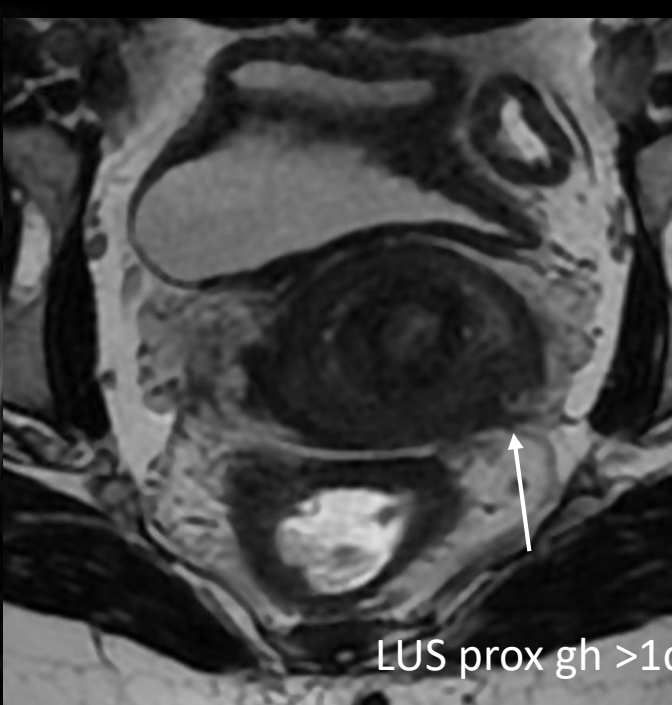
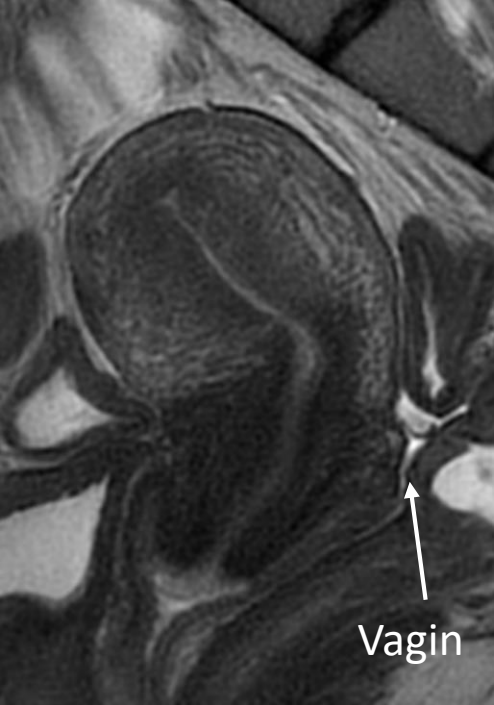
6. Apr

13:17

#Enzian

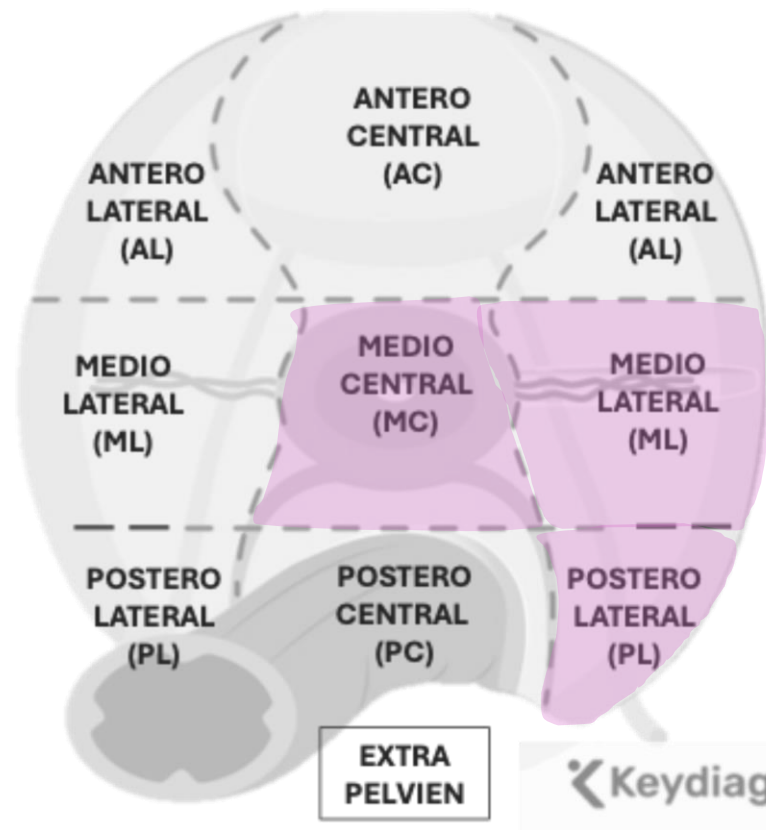
(m)P2, O2/3, T2/3, A2,
B3/2, C2, FUr



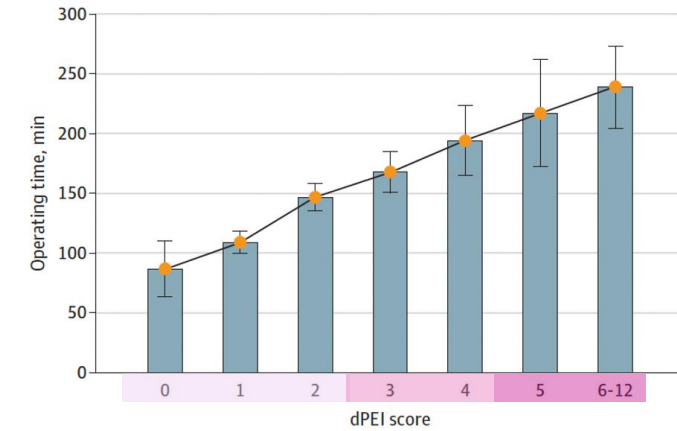


dPEI score

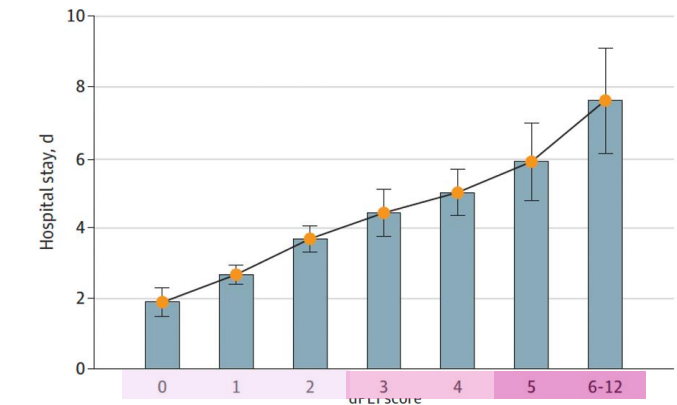
Score dPEI = 3 + 1_{vagin}



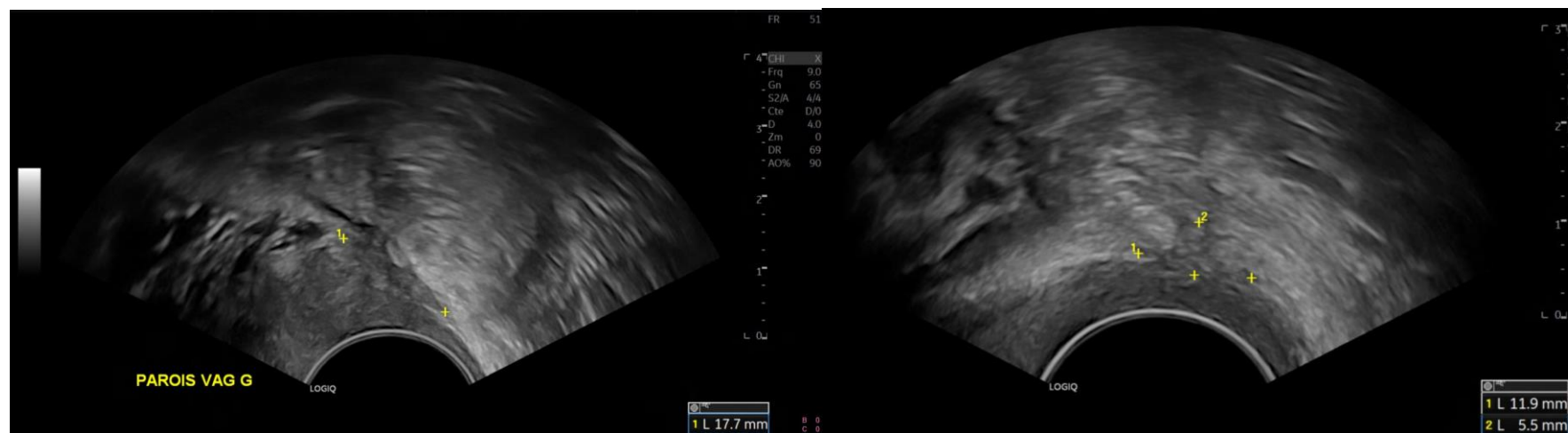
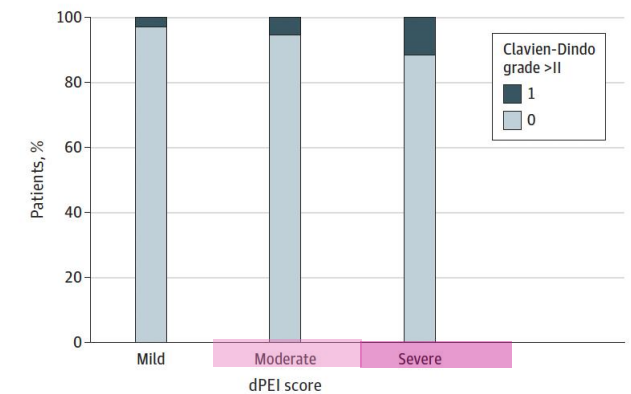
B Overall dPEI and operating time



D Overall dPEI and hospital stay



E Categorical dPEI and Clavien-Dindo grade



Education



E-Learning

★★★★★ (1 avis)

ENDOMÉTRIOSE PELVIENNE : COMMENT JE FAIS ET COMMENT J'INTERPRÈTE MON ÉCHOGRAPHIE

Imagerie de la femme

⌚ Durée : 3 hrs + Durée d'accès 6 mois

📅 Accessible toute l'année



E-Learning

★★★★☆ (4 avis)

ENDOMÉTRIOSE PELVIENNE : COMMENT JE FAIS ET COMMENT J'INTERPRÈTE MON IRM ?

Imagerie de la femme

⌚ Durée : 4 hrs + Durée d'accès 6 mois

📅 Accessible toute l'année

 Radiologie Imagerie Médicale

 SOCIÉTÉ FRANÇAISE DE RADIOLOGIE & D'IMAGERIE MÉDICALE

 Société d'Imagerie de la Femme



Formation présentielle
sur consoles
18-19 decembre 2025
PARIS



Vacations virtuelles d'IRM en endométriose

Savoir comment analyser les différentes séquences d'IRM. Etre capable de caractériser une masse pelvienne dans un contexte d'endométriose.

🕒 Du 12/12/2024 au 13/12/2024

FORMATION



DPC n°42962325007

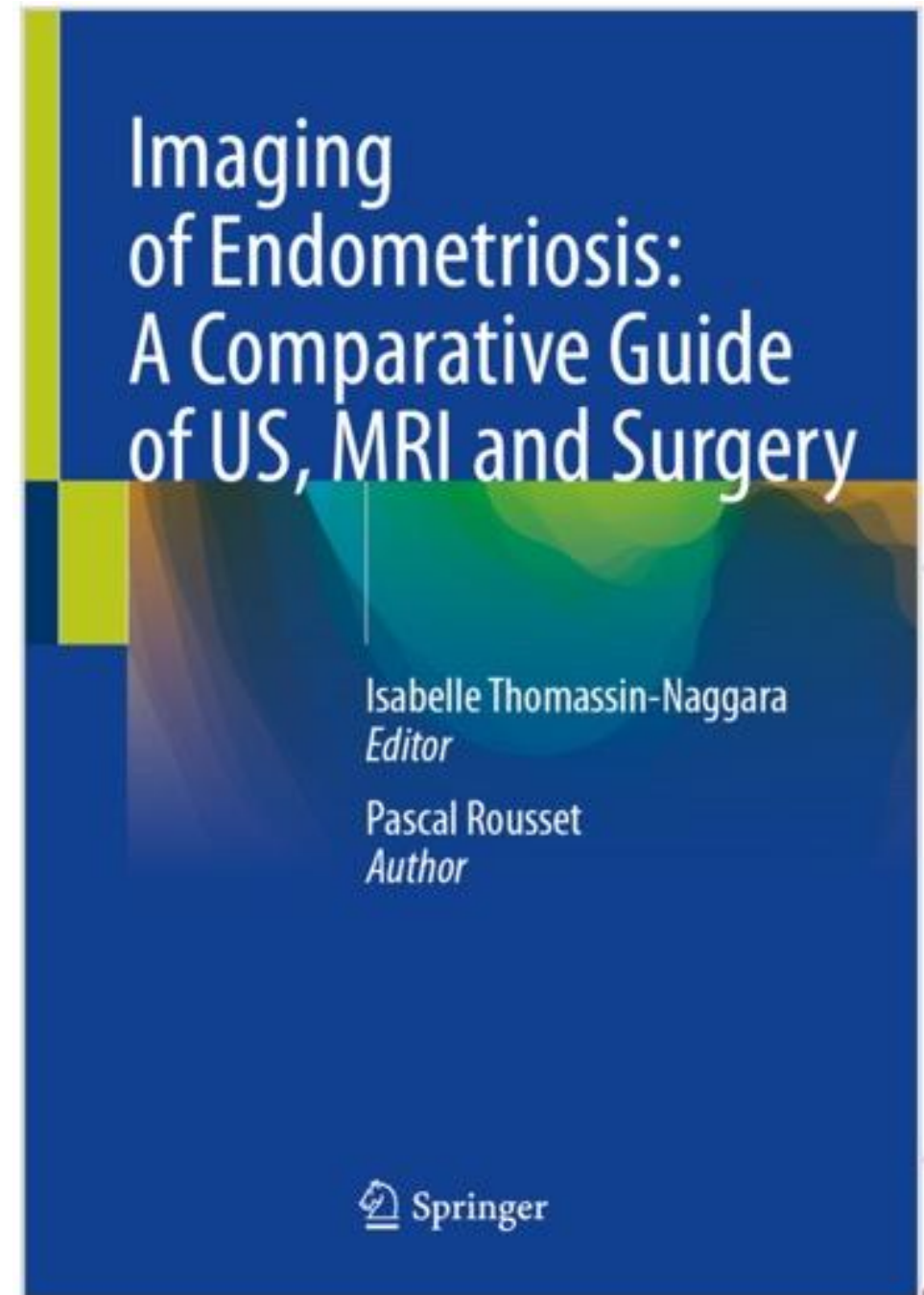
Endométriose session 18 et 19 décembre 2025

📍 Paris

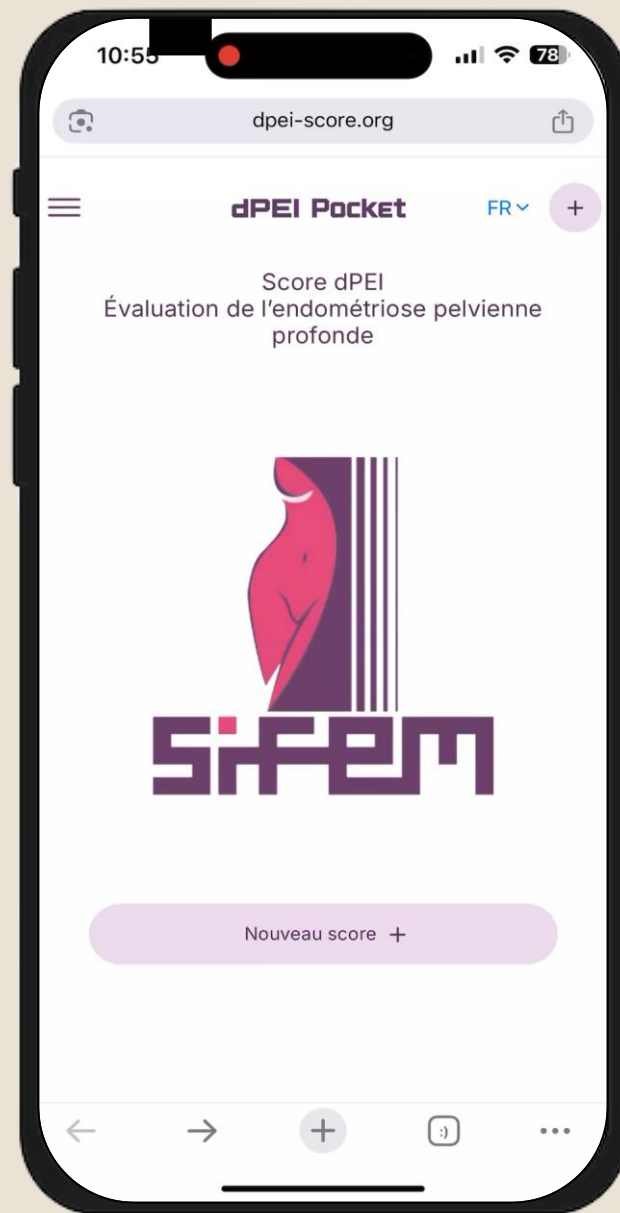
📅 4 novembre 2025

👤 Pré-requis : médecins radiologues

Mixte



Prix Innover (2024)
Le plus grand Hackathon
européen
dédiée à la santé des femmes



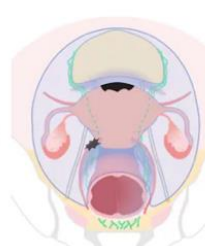
PDF



Score dPEI



Le deep Pelvic Endometriosis Index (dPEI) est un score d'imagerie d'évaluation de l'endométriose pelvienne pour les patientes suspectées d'endométriose pelvienne



Vue pelvienne latérale

Vue coelioscopique

Vue globale de l'abdomen

Superficial

None

Adnexal > left side

None

Adnexal > right side

None

Associated pathologies

None

0 2 4 9 13 18



dPEI = 2

06/06/2025 09:06

Lesions

Vagina / Rectovaginal Space

Outer Myometrium

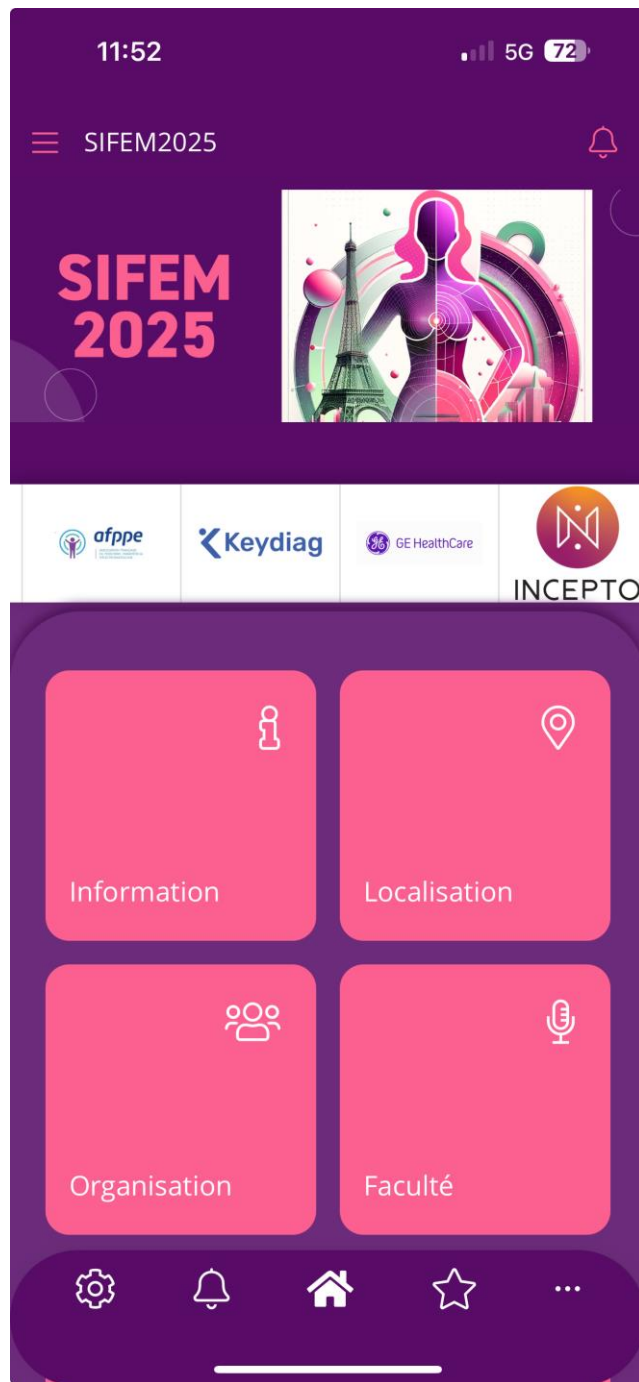
Torus/Proximal Uterosacral Ligament (USL)

Affected compartments

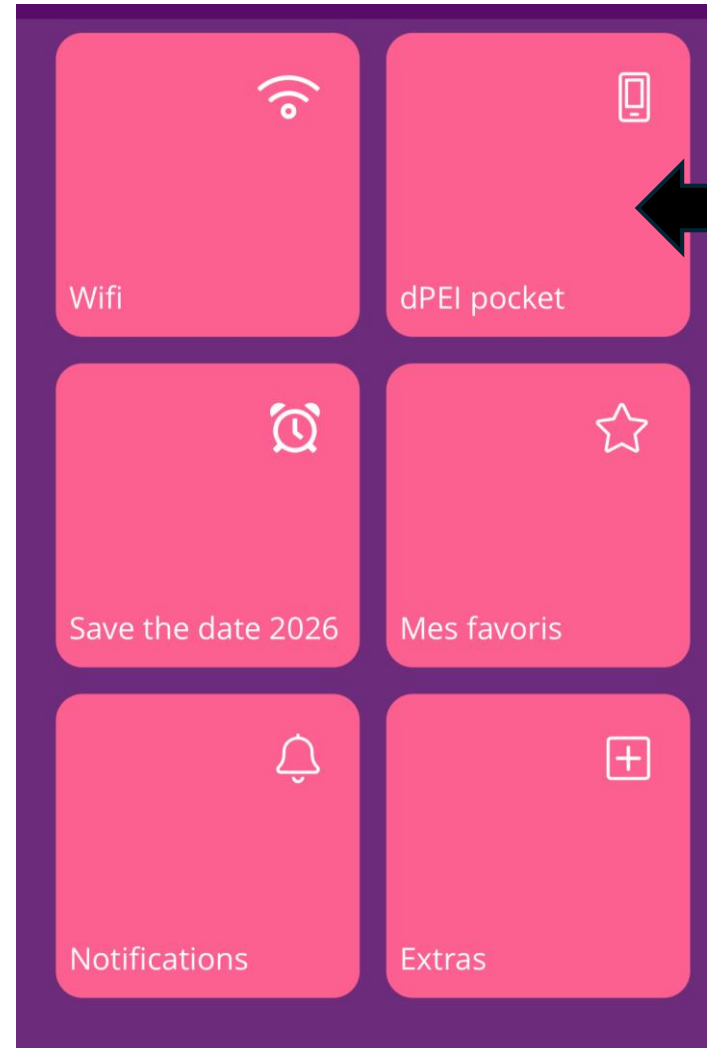
Mediocentral

Le score dPEI prédit la complexité de la maladie et permet de mieux orienter au sein des filières

Nom de la filière	Site Web	REGION
Afena	https://www.afena.fr/	NOUVELLE AQUITAINE
Endora	https://www.endaura.fr/	AUVERGNE RHONE ALPES
Endo BFC	https://endo-bfc.fr/	BOURGOGNE FRANCHE COMTE
ENDO centre ouest IDF	https://www.endo-idf.fr/	ILE DE FRANCE
ENDObreizh	https://www.endobreizh.com/	BRETAGNE
EndOccitanie	https://www.endoccitanie.fr/	OCCITANIE
EndoCentre	https://www.endocentreidl.fr/	CENTRE VAL DE LOIRE
EndoSud	https://endosudpaca.fr/	PACA
EndoSud IDF	https://www.endo-idf.fr/	ILE DE FRANCE
FEnM Martinique	https://fenm.org/nos-missions	OUTRE MER
Filière endométriose nord est	https://www.endo-idf.fr/	ILE DE FRANCE
Voyelle	https://www.endo-idf.fr/	ILE DE FRANCE



Appli gratuite SIFEM Phone / Mac / PC



Ateliers de cas
cliniques
16h
Auditorium



<https://www.dpei-score.org>

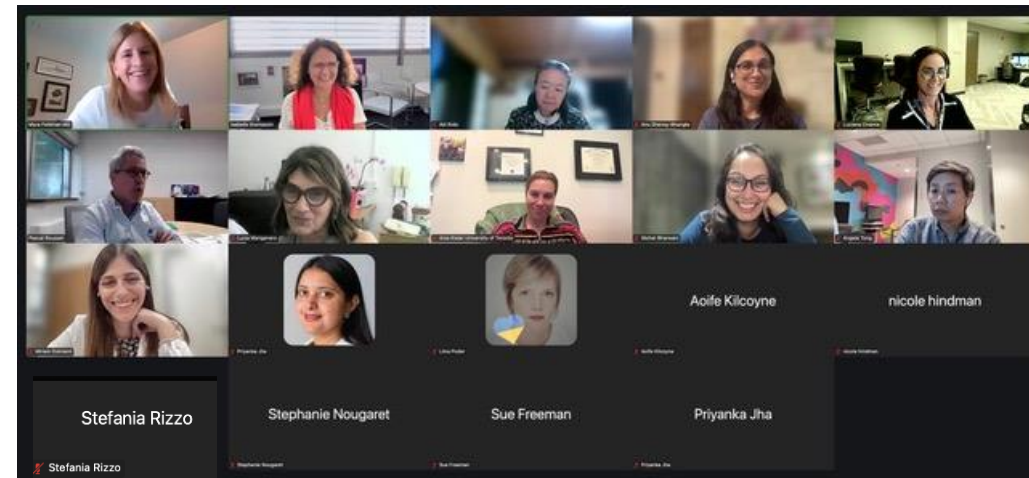
www.dpei-score.org

Conclusion

- La standardisation des compte rendus améliore la communication (multidisciplinaire / patientes +++)
- Nouveau lexique IRM européen (consensus ESUR) / français (HAS)
- Role majeur du radiologue pour orienter les patients au sein des filières (importance des classifications)
- Développement d'outils d'aide au diagnostic
 - CR structuré SIFEM dPEI pocket

Consensus SAR – ESUR
Lexique international pour la description
des différentes formes d'endométriose
Objectif : RSNA 2025

1st meeting Delphi
= 10 juin 2025 !





Equipe Tenon



CA SIFEM
2022-2025



-Equipe CHIC

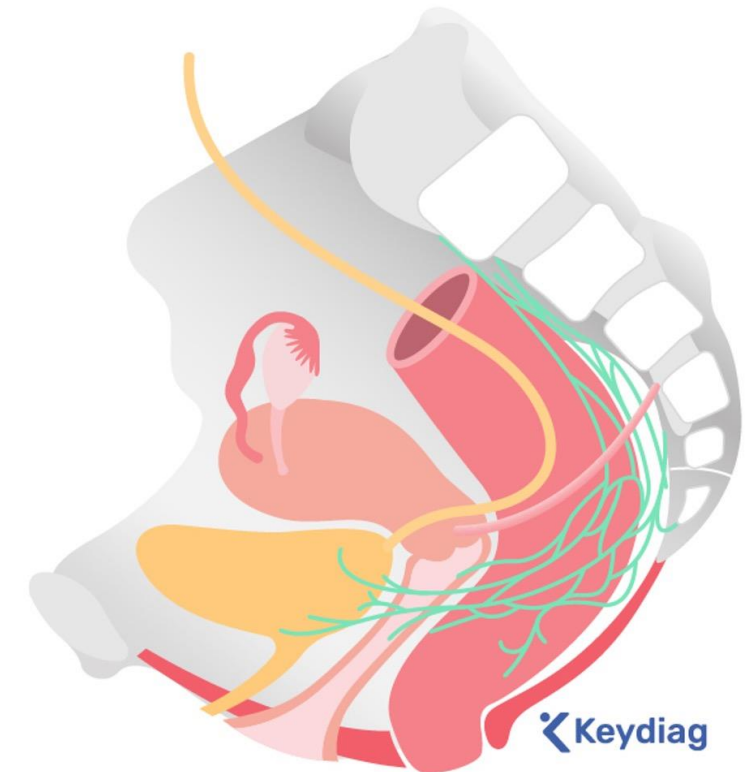
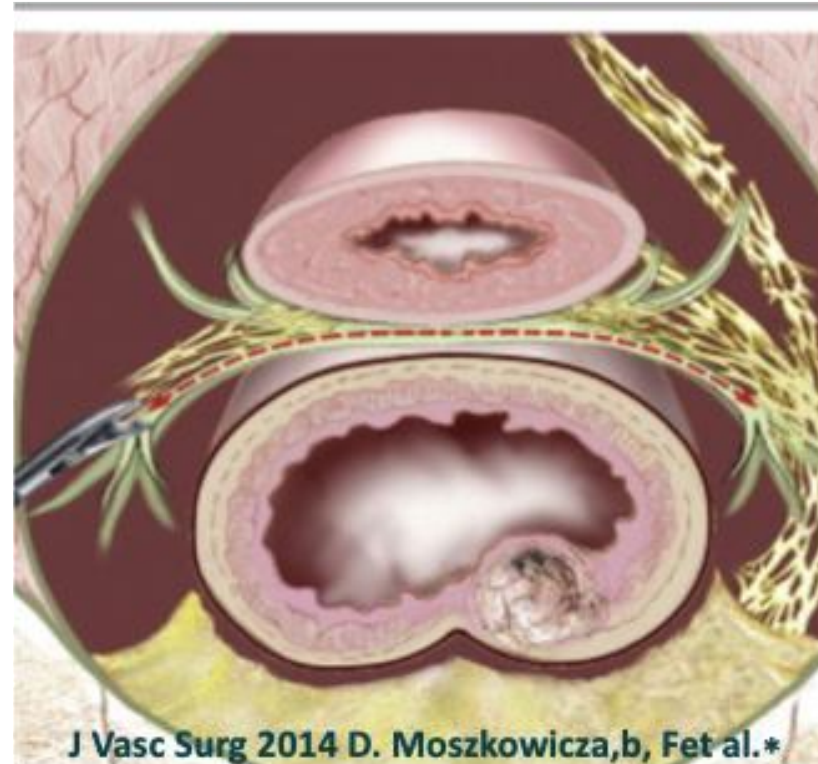
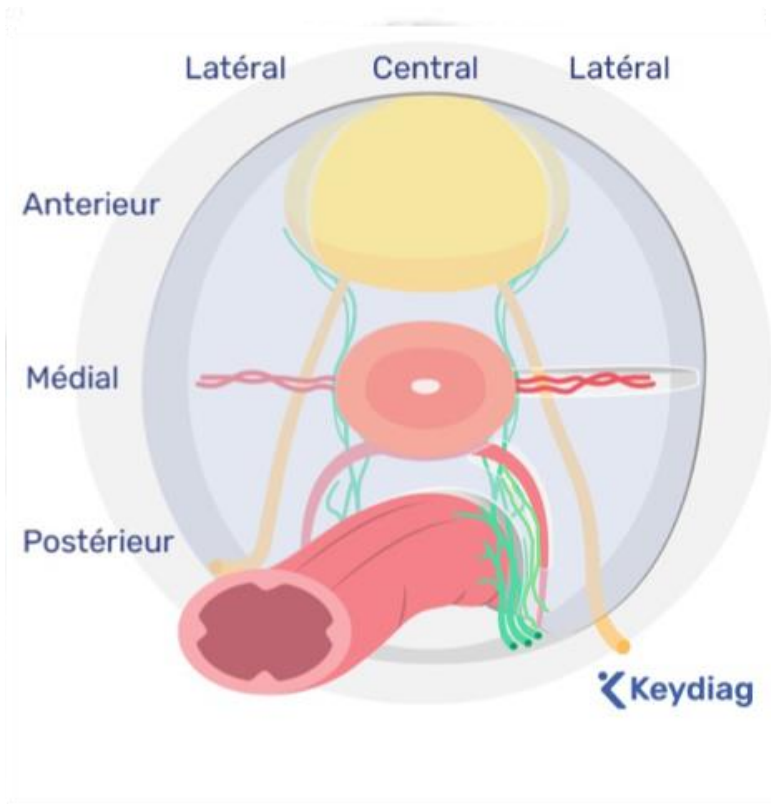


Corinne Balleyguier



Pascal Rousset

Parametre : Le plexus hypogastrique inférieur



INTRODUCTION



- Augmentation du nombre de demandes +++
- Attente des patientes (impact sur qualité de vie) +++
- Protocole IRM standardisé
- Pas de lexique ou CR standardisé
- Communication ++++

Thomassin-Naggara *et al.* *European Radiology*
<https://doi.org/10.1007/s00330-024-10595-w>



SPECIAL REPORT

Reasons why it is time to change imaging guidelines on endometriosis



Isabelle Thomassin-Naggara^{1,2*} , Pascal Rousset³, Cyril Touboul^{2,4}, Leo Razakamanantsoa^{1,2} and Lucia Manganaro⁵