CONGRÈS ANNUEL DE LA

SIFEM 2025

12>14 JUIN I 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'interets

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

Société d'Imagerie de la Femme

HAS HAUTE AUTORITÉ DE SANTÉ

RECOMMANDER LES BONNES PRATIQUES

NOTE DE CADRAGE

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

Début juin 2025

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

ESUR MR Consensus Paper

ESUR endometriosis panel : 20 experts / 10 countries

Leaders : ITN, LM, PR, MD

Protocol, Lexicon, Reporting, Classification

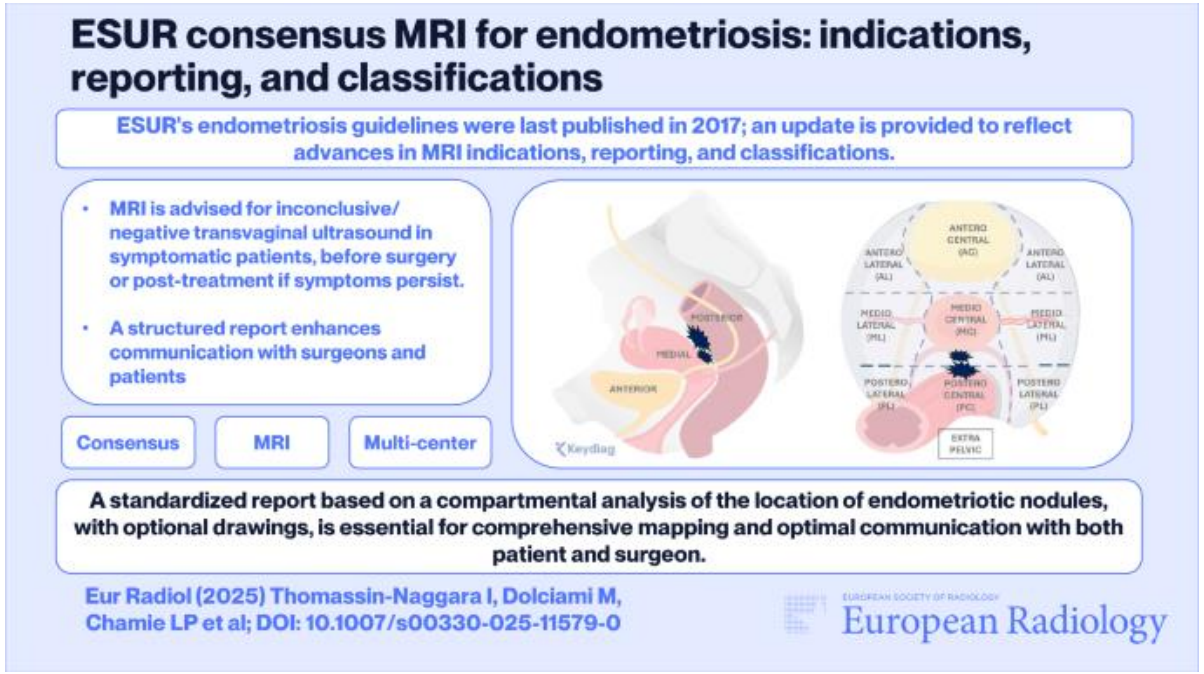
FULLY OPEN ACCESS

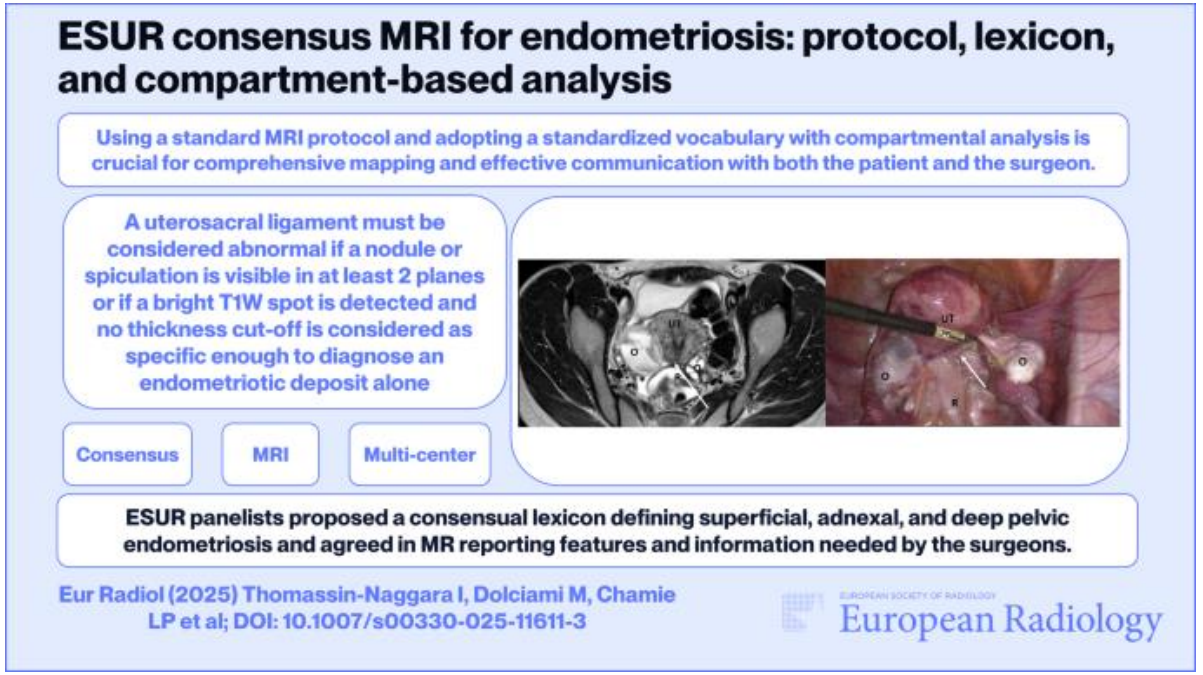
ESUR consensus MRI for endometriosis: indications, reporting, and classifications

link.springer.com

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

link.springer.com





PROTOCOLE IRM : Préparation

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

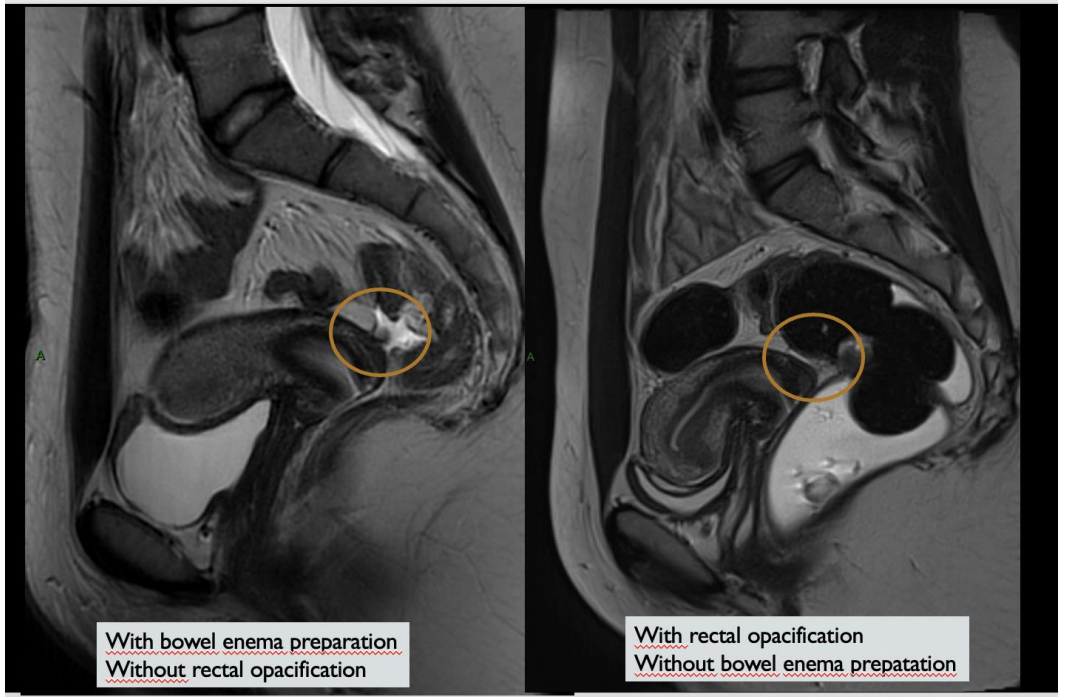
Thomassin-Naggara *et al. European Radiology* (2024) 34:7705–7715
https://doi.org/10.1007/s00330-024-10842-0

European Radiology

UROGENITAL

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

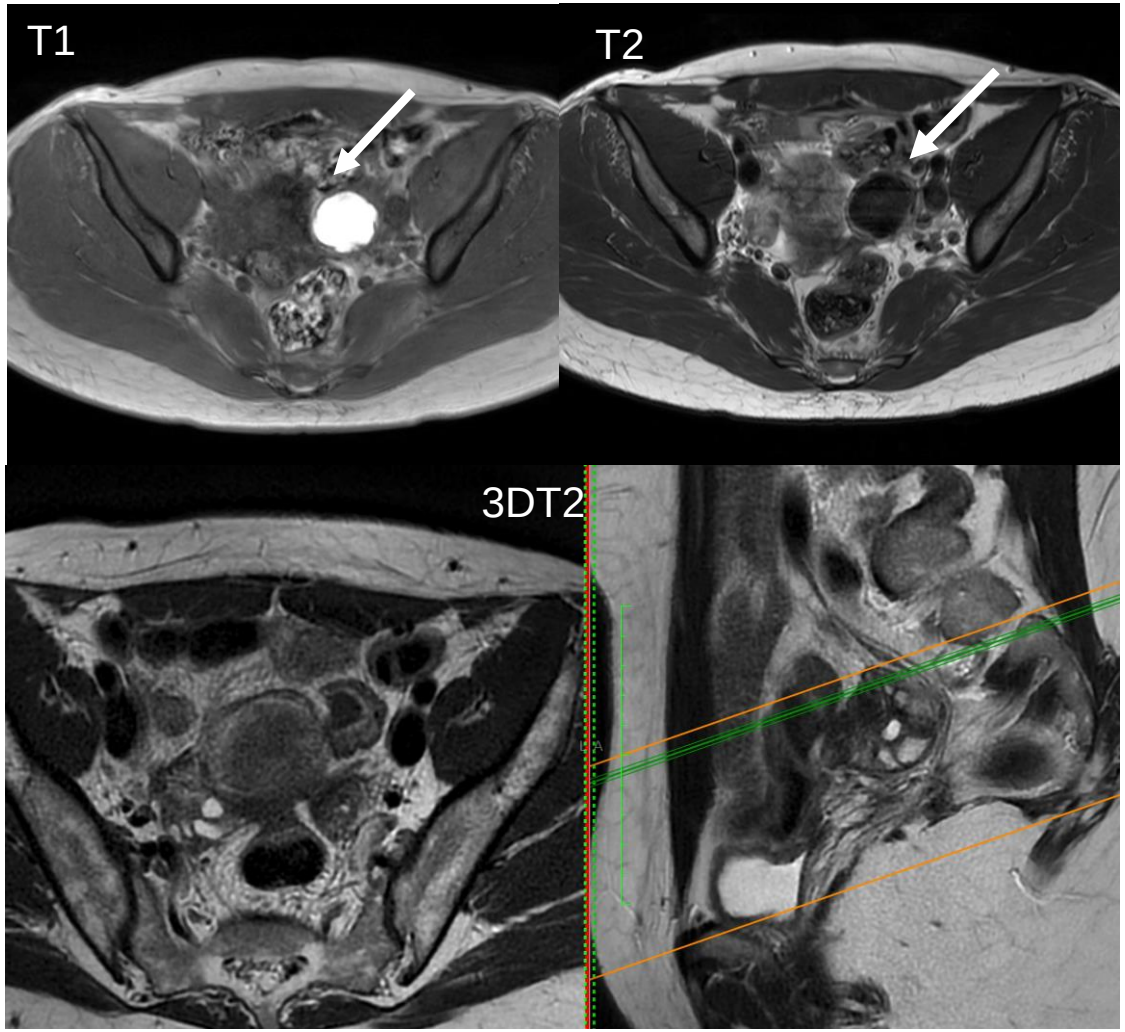
Isabelle Thomassin-Naggara[1,2*], Christine Sadjo Zoua[1], Marc Bazot[1,2], Michele Monroc[3], Horace Roman[4], Léo Razakamanantsoa[1,2] and Pascal Rousset[5], for the ENDOVALIRM study group



Thomassin-Naggara et al. Springer 2025

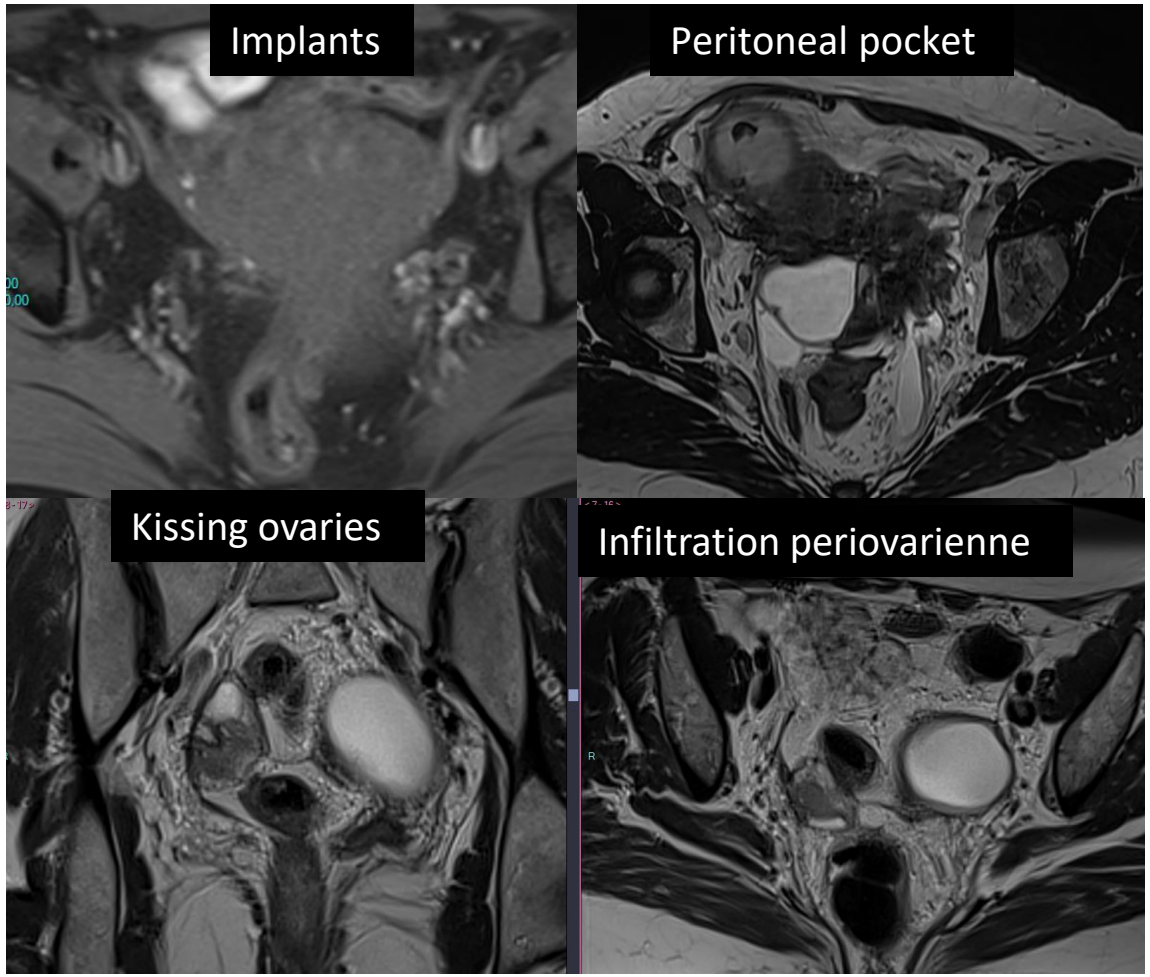
PROTOCOLE IRM : Séquences

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



LEXIQUE : Endométriose superficielle

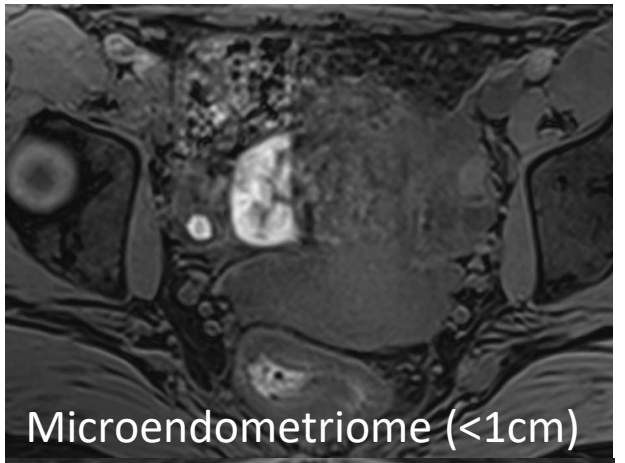
- Implants en hypersignal T1
- Adhérences
- « Kissing ovaries »
- Peritoneal pocket
- Faux kyste d’inclusion
- Infiltration de la fossette ovarienne
- Atteinte du cul de sac vésico utérin

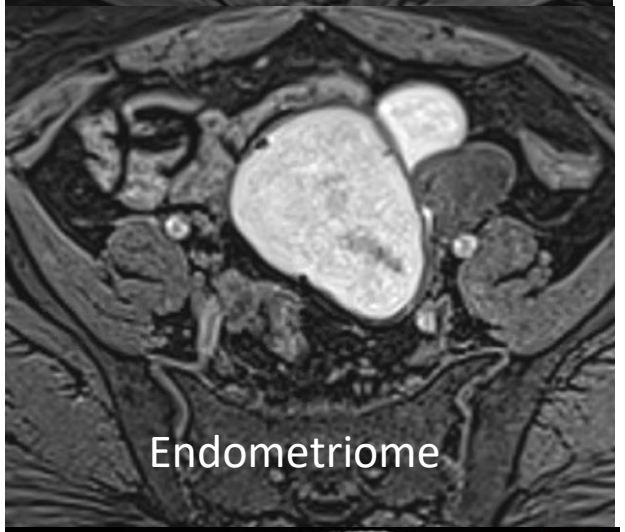


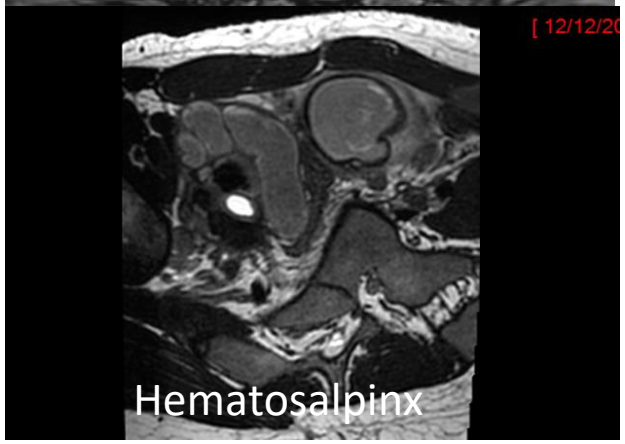
LEXIQUE : Endométriose annexielle

- Les termes **micro-endométriome ou implant ovarien** peuvent être utilisés pour lésion hyperintense intra-ovarienne en T1FS ≤1cm (au minimum de 3)
- Le terme **endométriome** doit être utilisé pour
  - kyste > 1 cm
  - avec contenu endométriosique (T2 variable, hyperT1 >= 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.

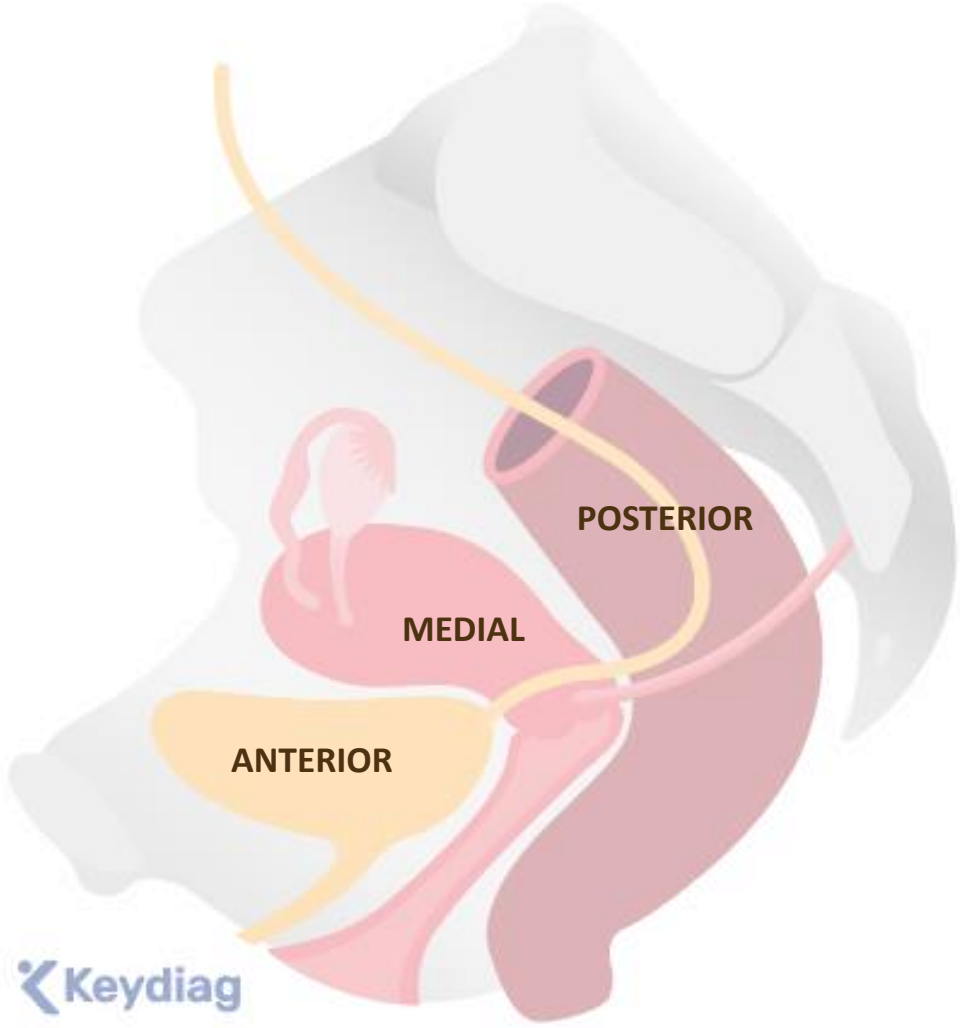
Diamètre, multiplicité, emplacement, uni/bilatéralité.
parenchyme ovarien résiduel (taille et follicules)

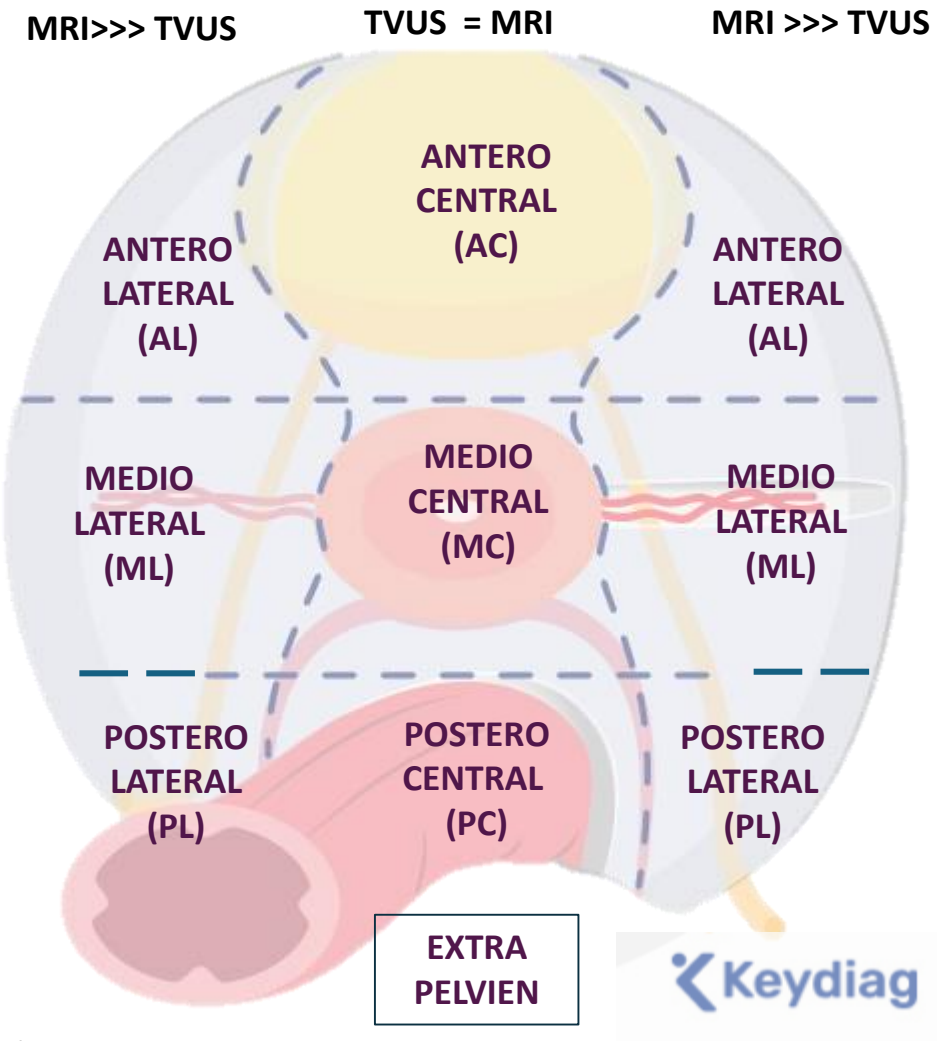






LEXIQUE : Endométriose profonde





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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 rectosigmoidienne

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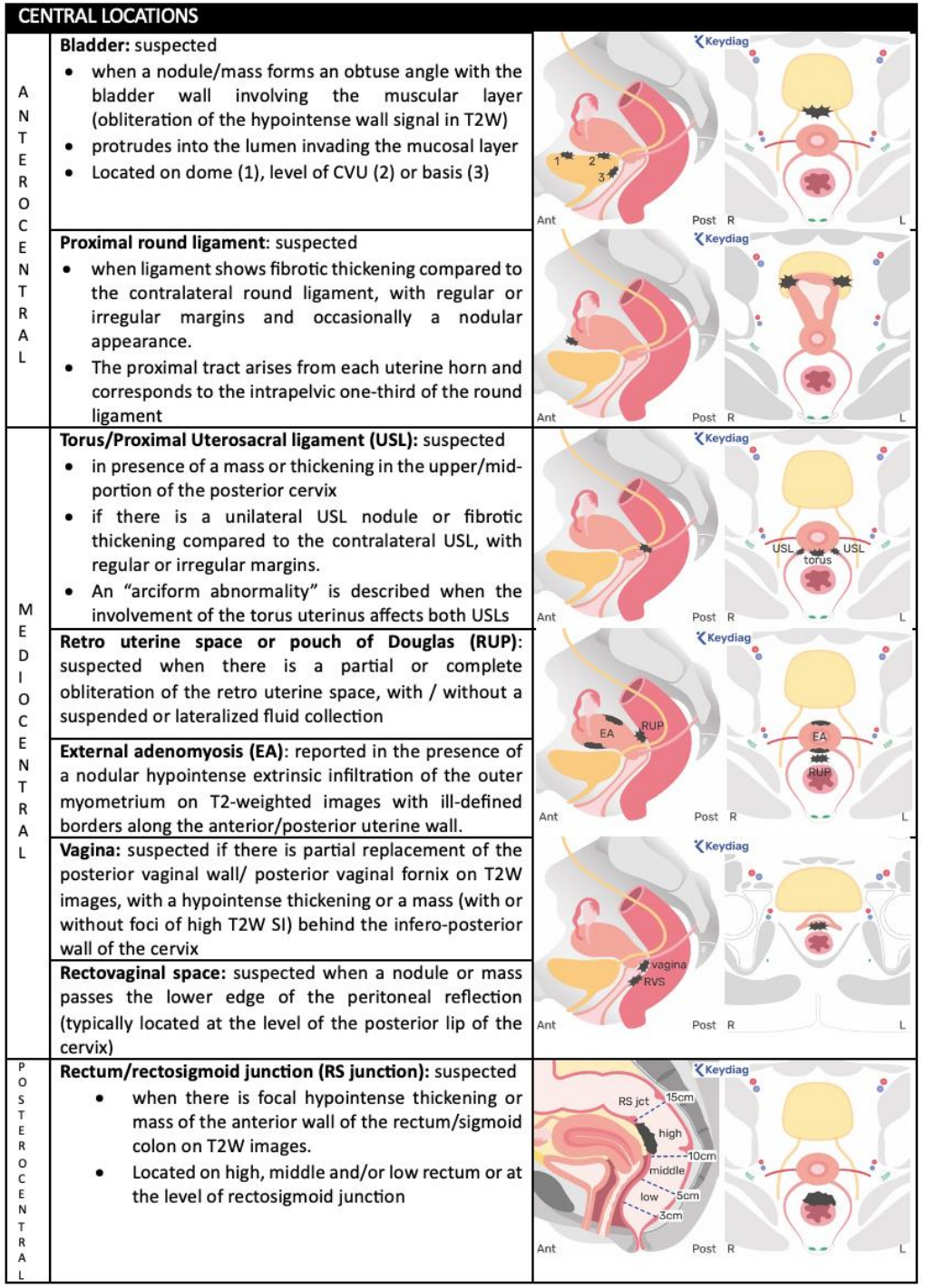
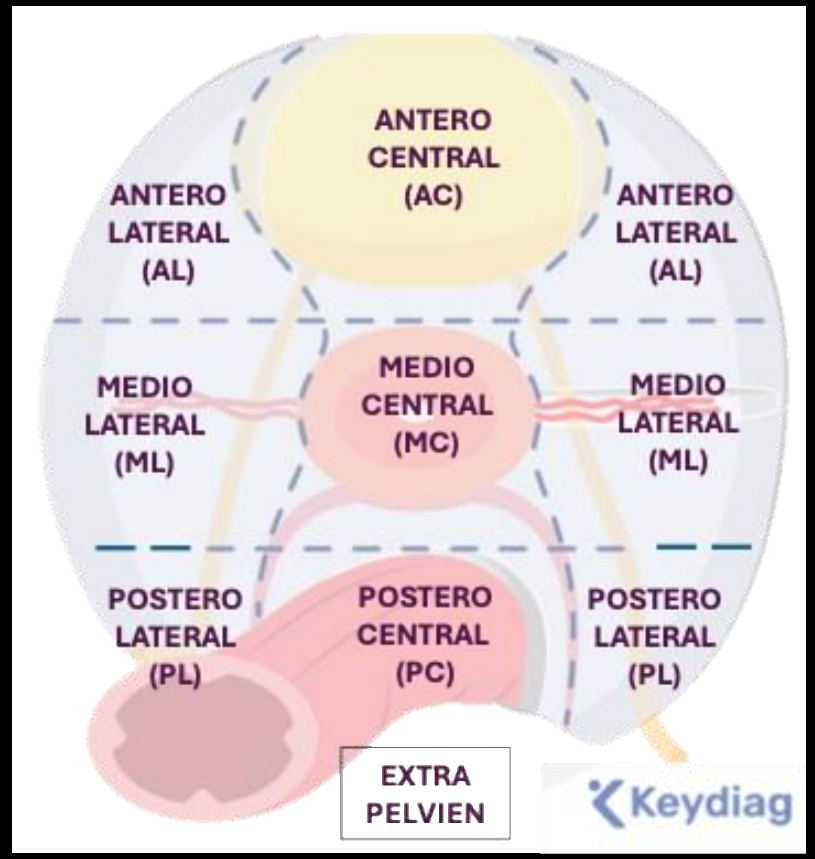


Torus - Proximal LUS

Compartiment médiocentral

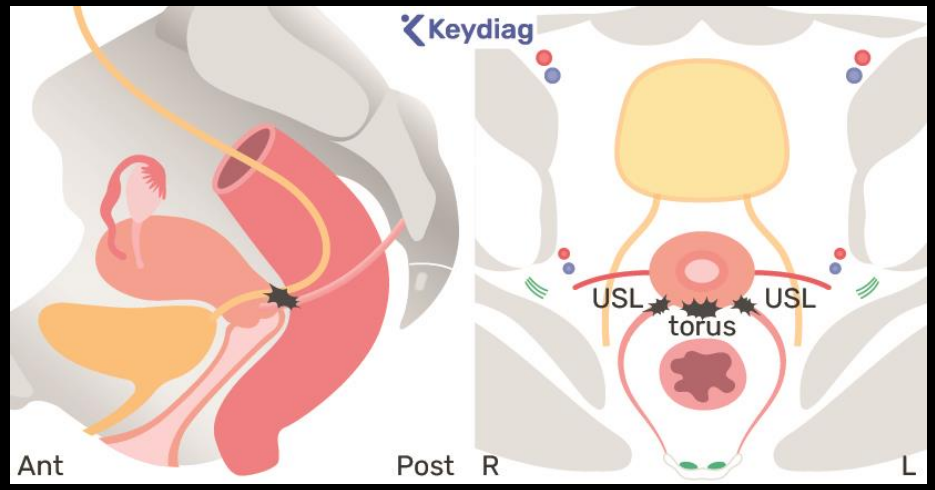


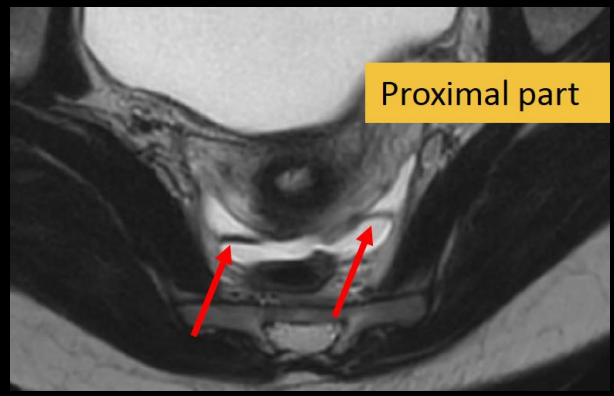
Description anatomique

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

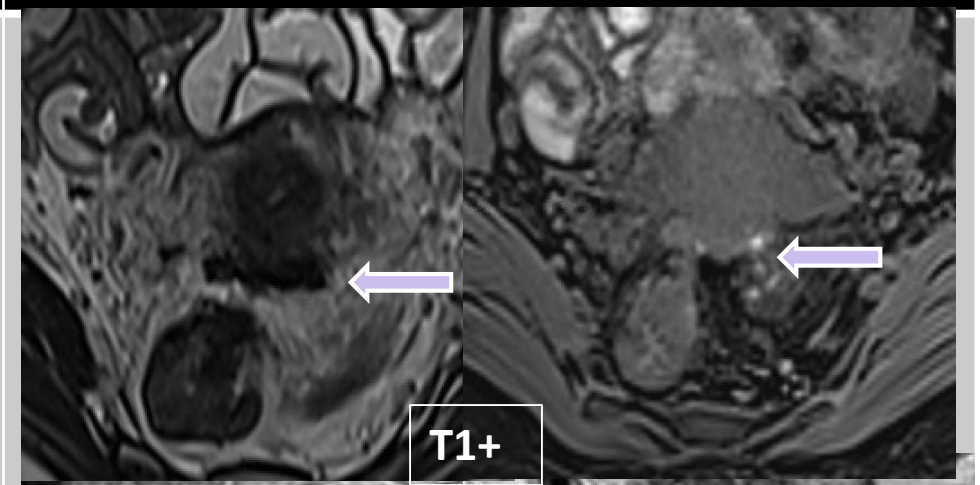
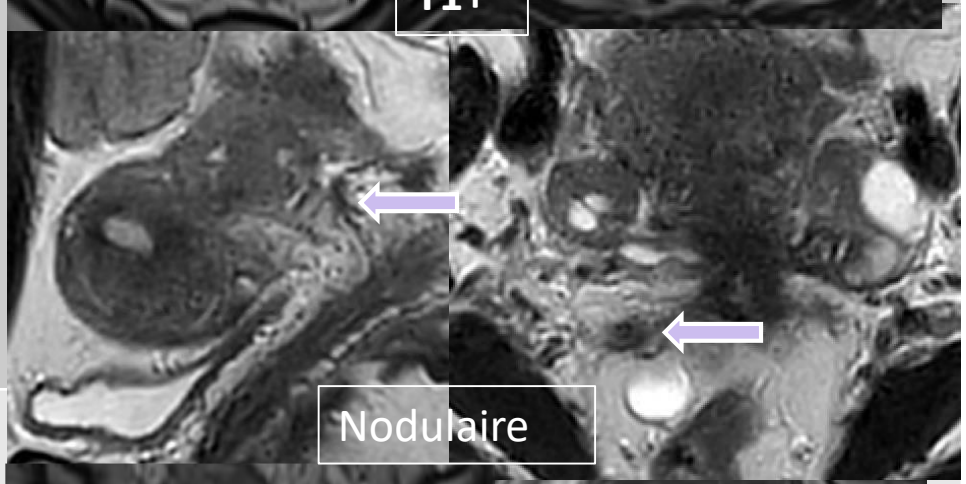
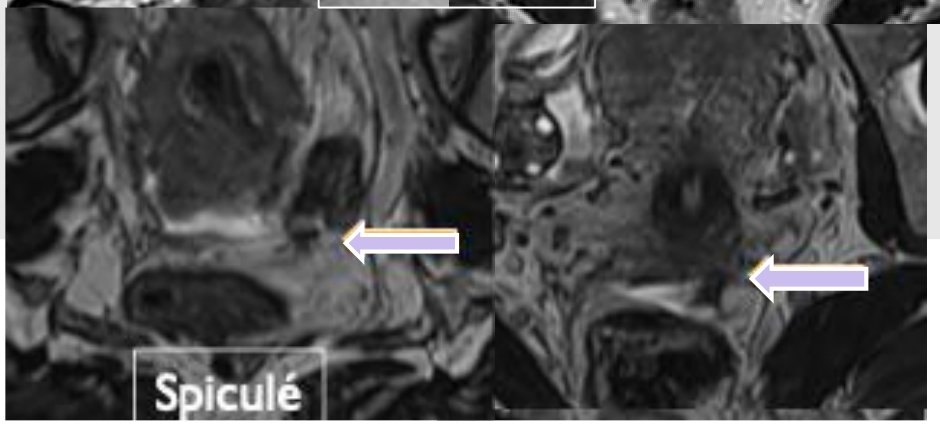
Ainsi, le LUS proximal est situé le long du fornix vaginal postérieur et correspond au segment orienté transversalement.

Dessins





Thomassin-Naggara et al. ESUR consensus : MR protocol, lexicon, compartment based analysis Eur Radiol 2025

	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

ANTERIEUR

- Paramètre médiolatéral
- Uretere

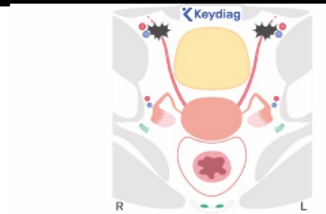
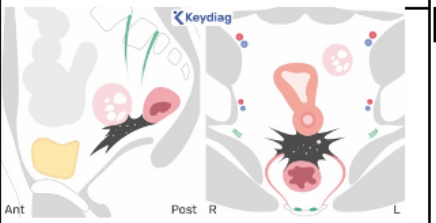
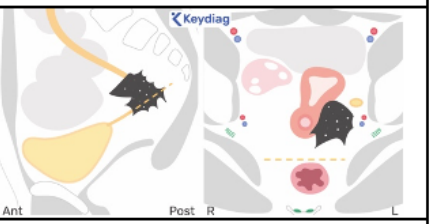
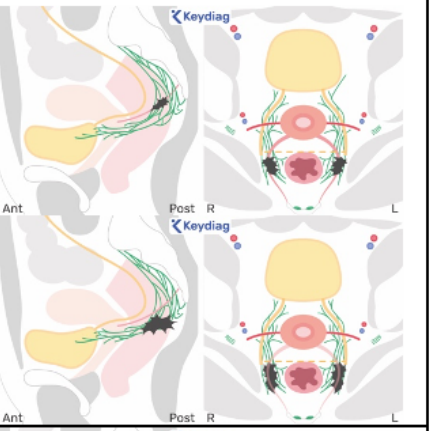
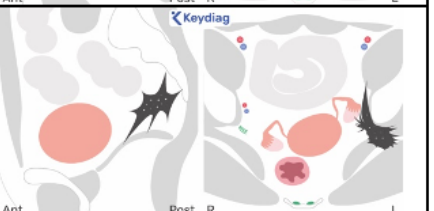
MEDIAL

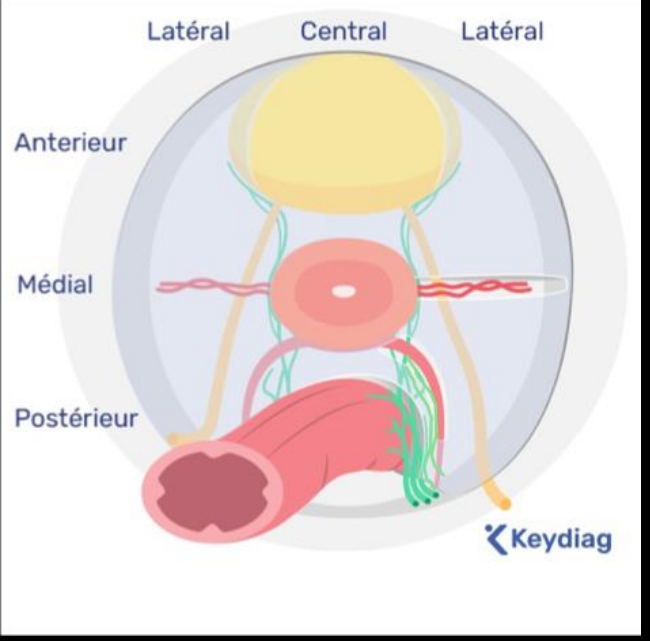
- Paramètre postérolatéral
  - LUS distal
  - Lame sacrorectale

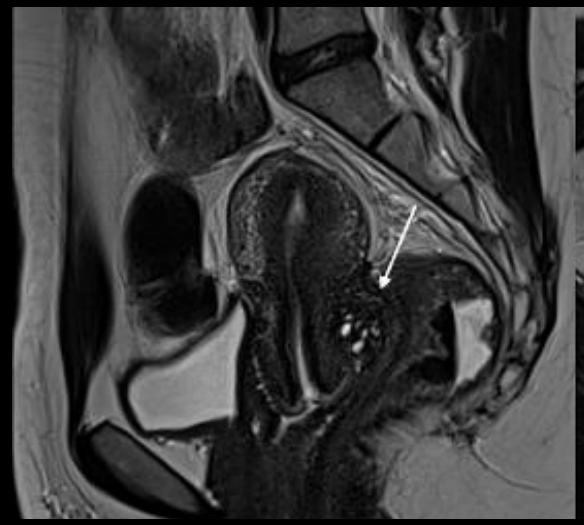
POSTERIEUR

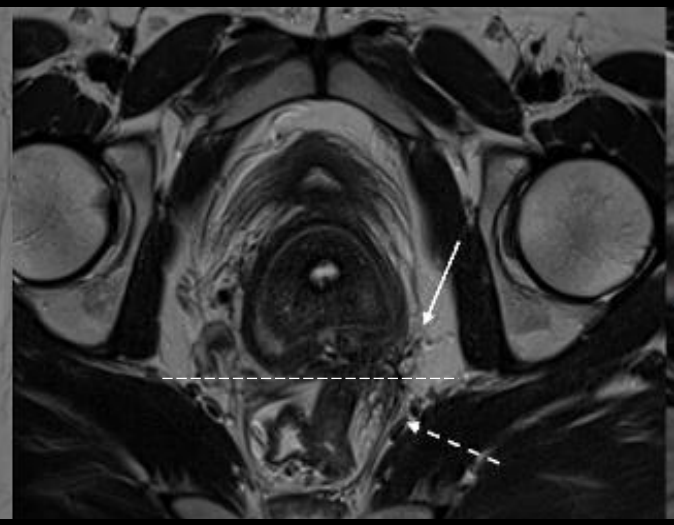
Plexus hypogastrique inférieur

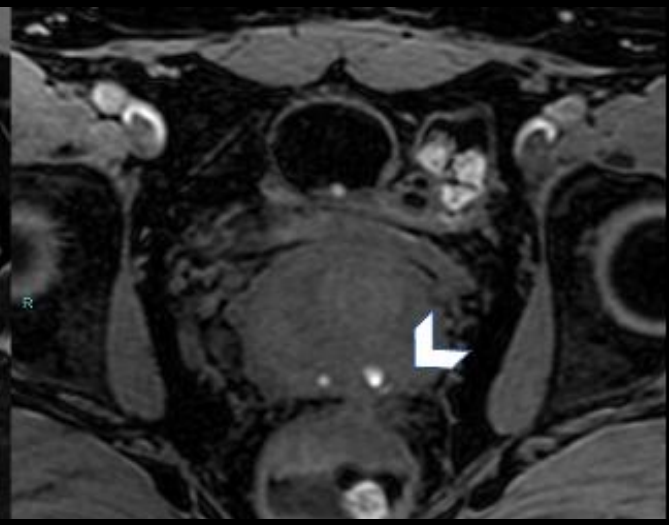
Thomassin-Naggara et al. Eur Radiol 2025

LATERAL LOCATIONS		
ANTEROLAT	**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.	
	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)	



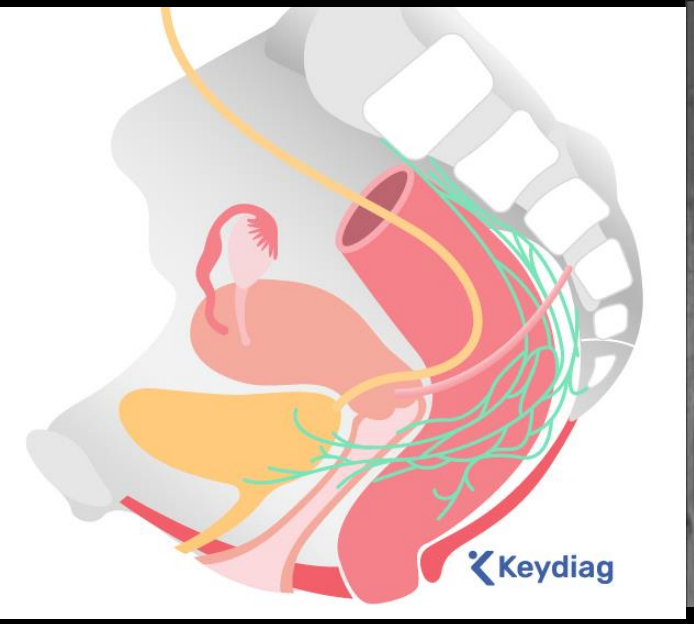


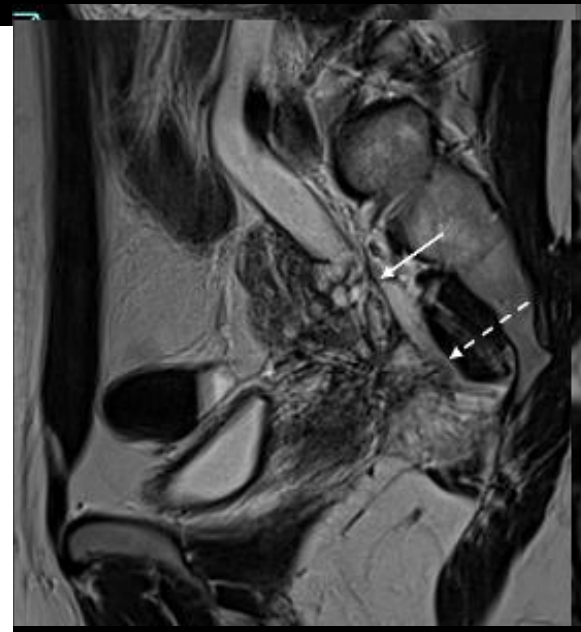


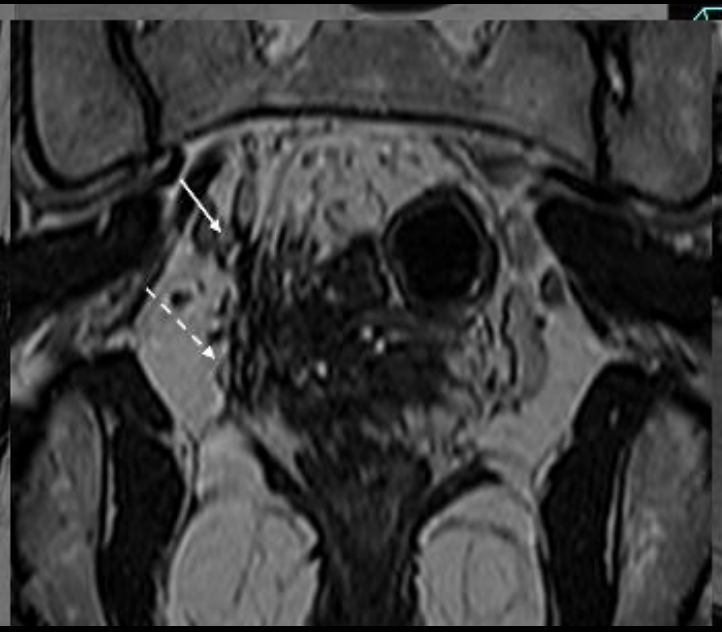


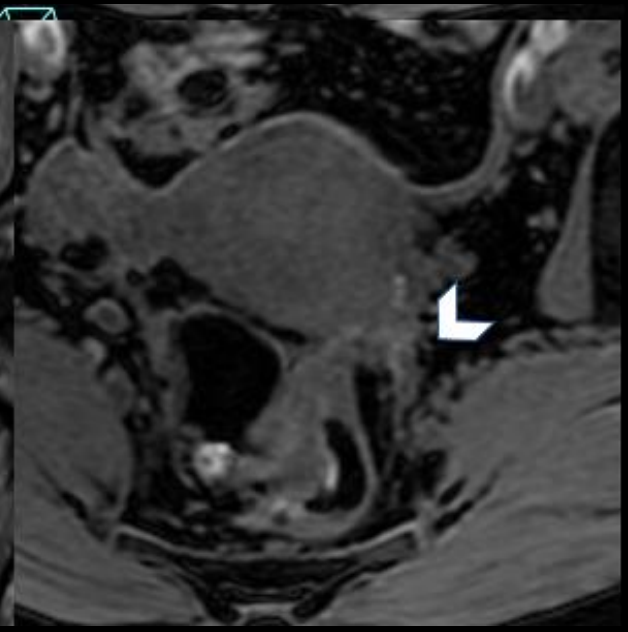
Plexus hypogastrique inférieur (nerfs parasympathiques)

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









Thomassin-Naggara et al. ESUR consensus Eur Radiol 2025

Paroi pelvienne latérale : Nerfs somatiques

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

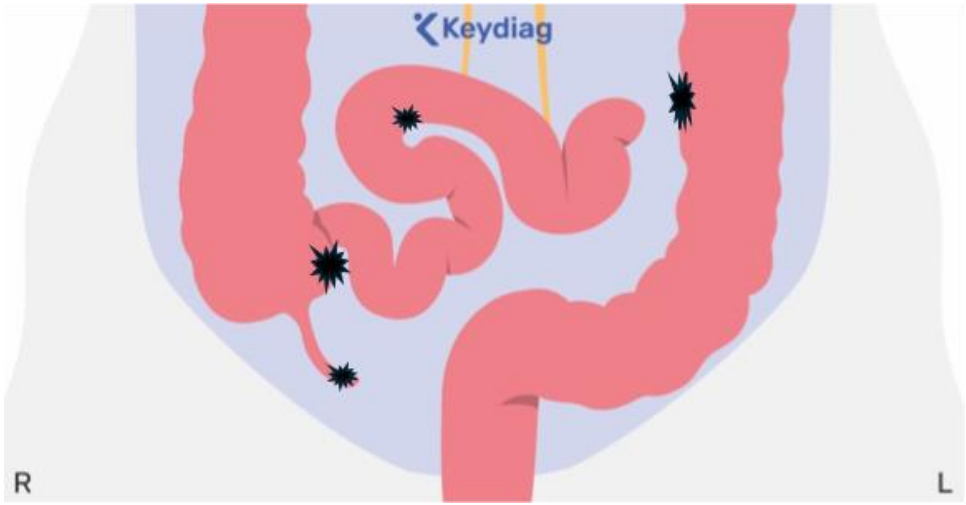
Justine Bourg (CHIC promo Hiver 2024)

HCL
HOSPICES CIVILS DE LYON
Pr P. Rousset

Edouard Ruaux (Tenon promo Hiver 2022)

Localisations extra pelviennes

- Atteintes digestives
  - Sigmoïde
  - 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 utérovaginales

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-NAGGARA[3], C. BECKER[4], V. C. TOMASSETTI[5,6], H. KRENTEL[7], B. J. VAN HERENDAEL[8,9], M. MALZONI[10], M. S. ABRAO[11], E. SARIDOGAN[12], J. KECKSTEIN[13], Intersociety Consensus Group[†] and G. HUDELIST[14]

George Condous

Joerg Keckstein
Ertan Saridogan

Gernot Hudelist
Harald Krentel

Bruno van Herendael

Mauricio Abrao
Mario Malzoni

Carla Tomasetti
Christian Becker

Isabelle Thomassin Naggara

Published in EJR 2024
And 6 other journals

Role des classifications

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

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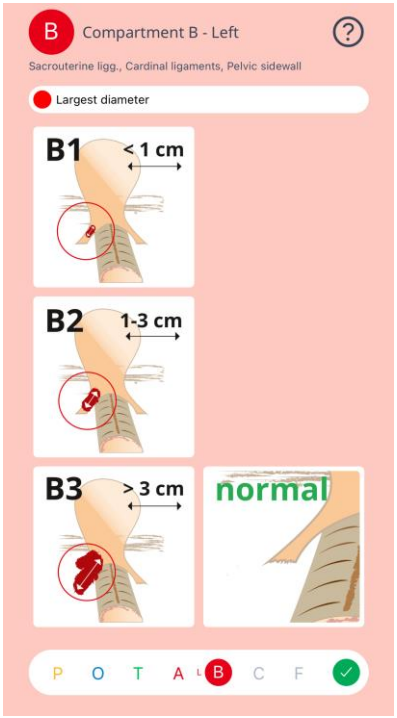
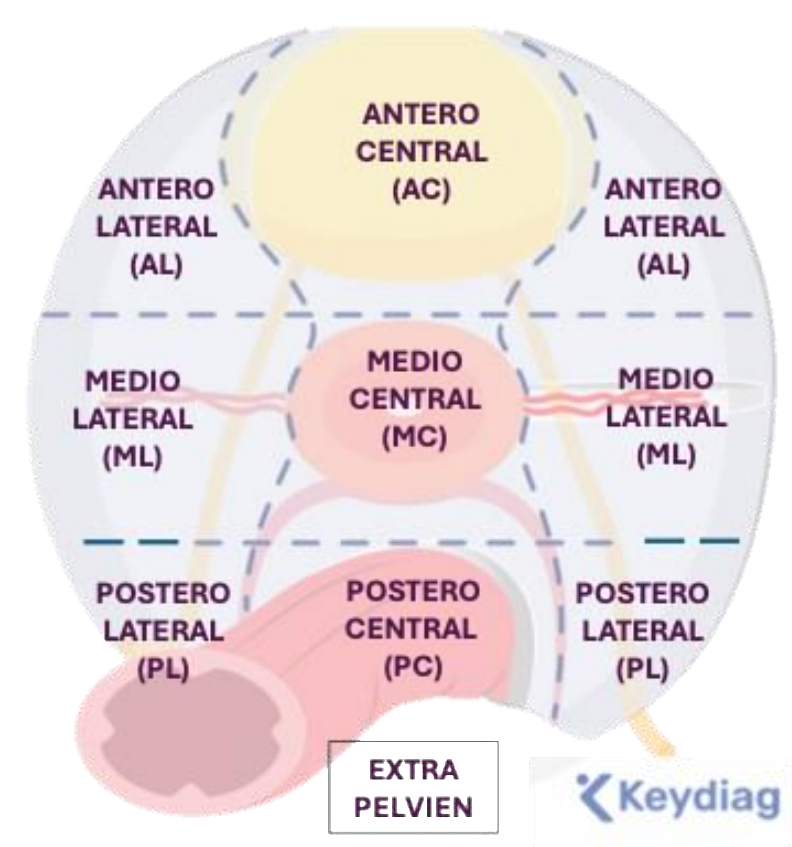
« The majority of participants agreed strongly on the use of TVS or MRI in combination with the#Enzian classification, although it is less accurate in cases of parametrial and USL involvement. »



#ENZIAN app - MRI

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

Thomassin-Naggara et al. Hum Reprod 2020 >>> création dPEI



	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

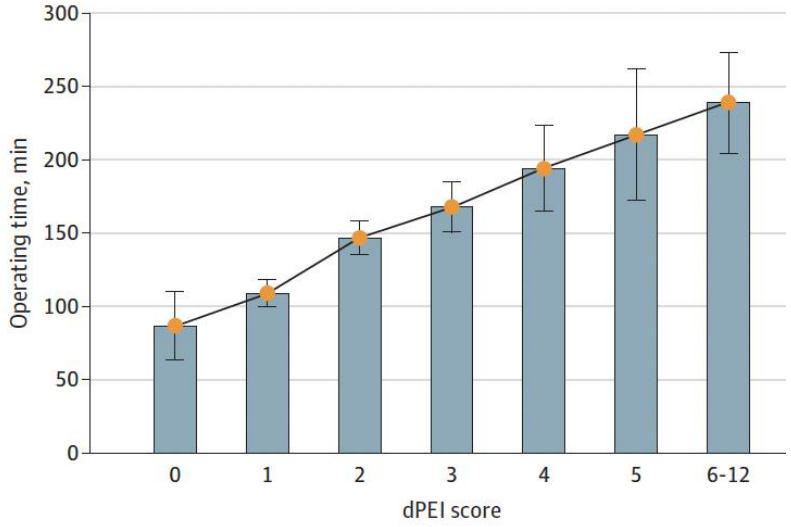
Extra pelvic	• Digestif (Sigmoide, caecoappendiculaire) • Paroi pelvienne abdomino pelvienne • Diaphragme

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

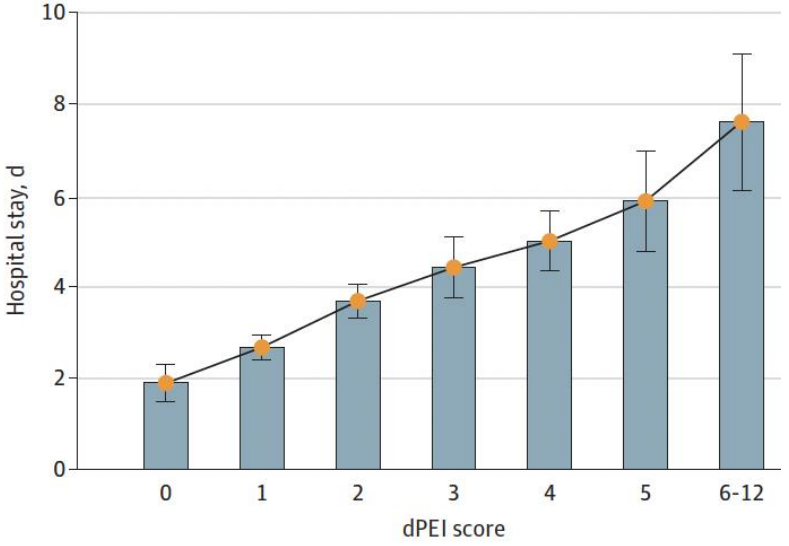
Classification IRM : planifier le geste opératoire

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

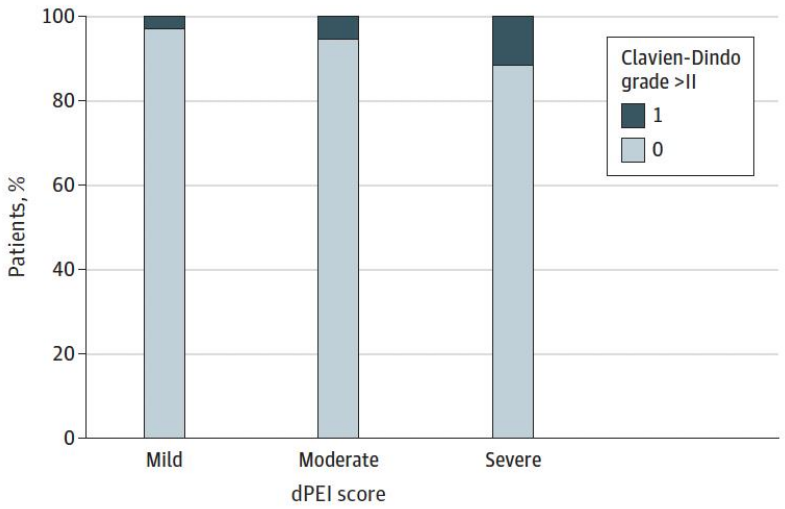
Temps opératoire



Temps d'hospitalisation



Complications post opératoires



Thomassin-Naggara I et Rousset P. al. JAMA Netw op 2023

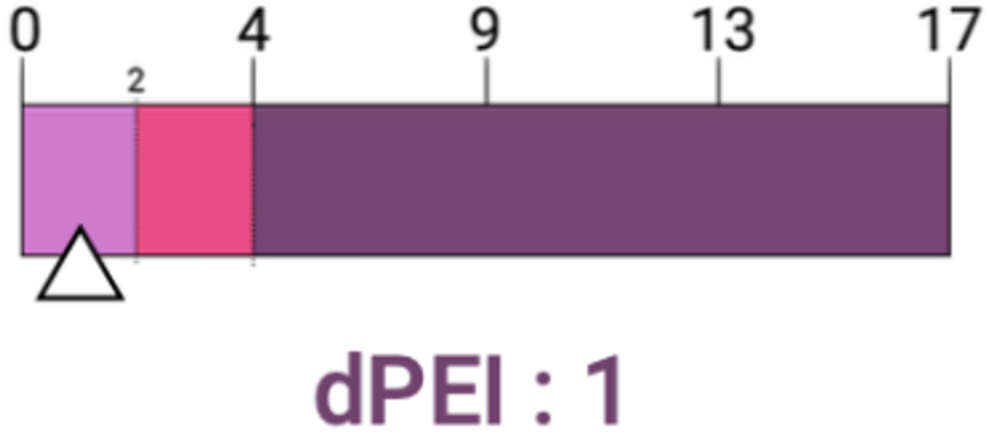
Classification IRM

- “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



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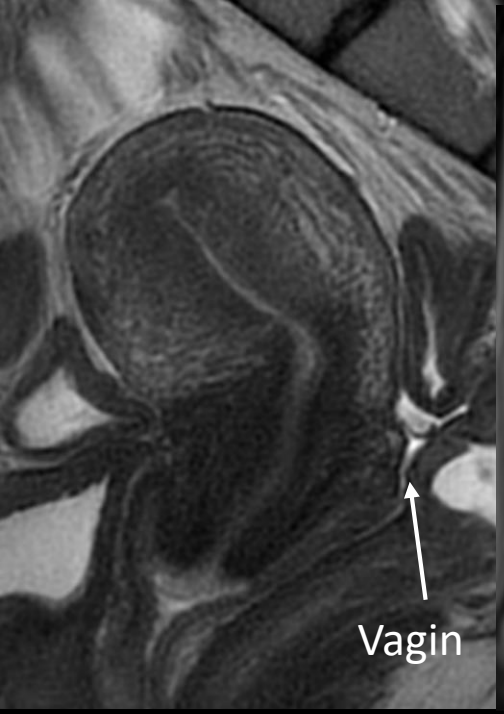
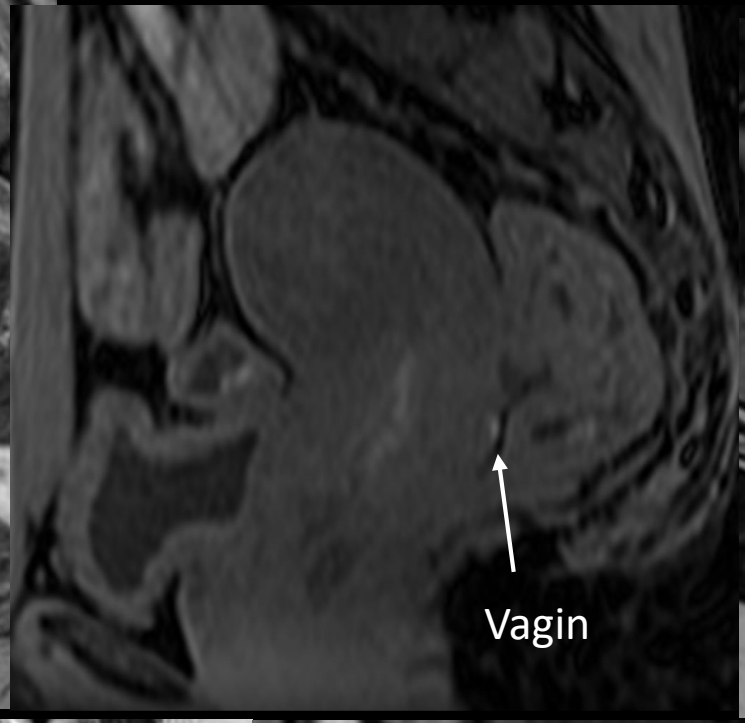

Vagin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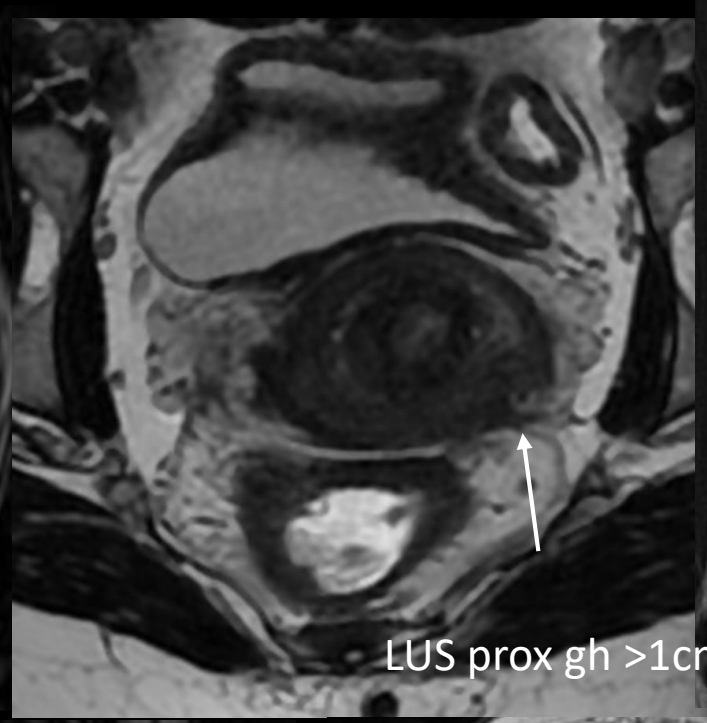
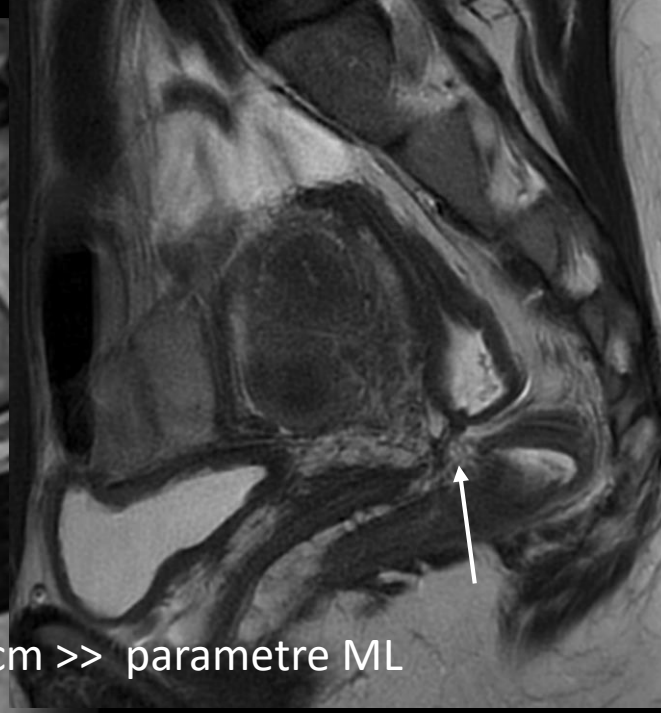
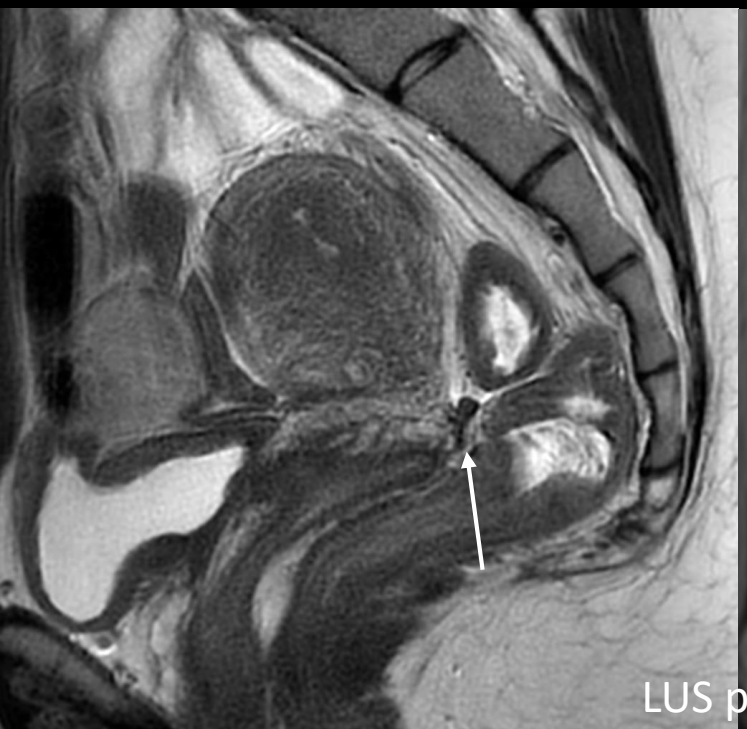
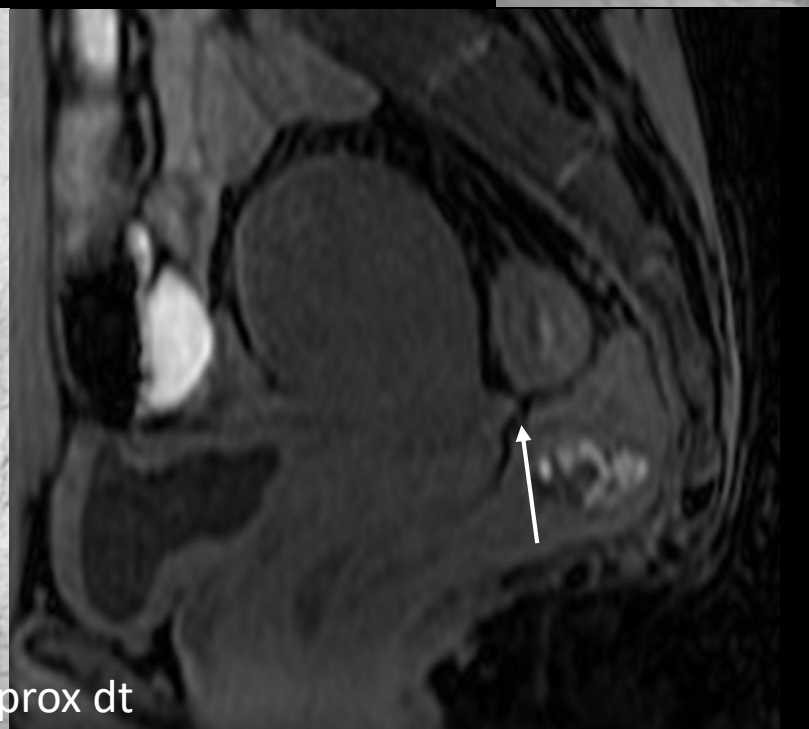
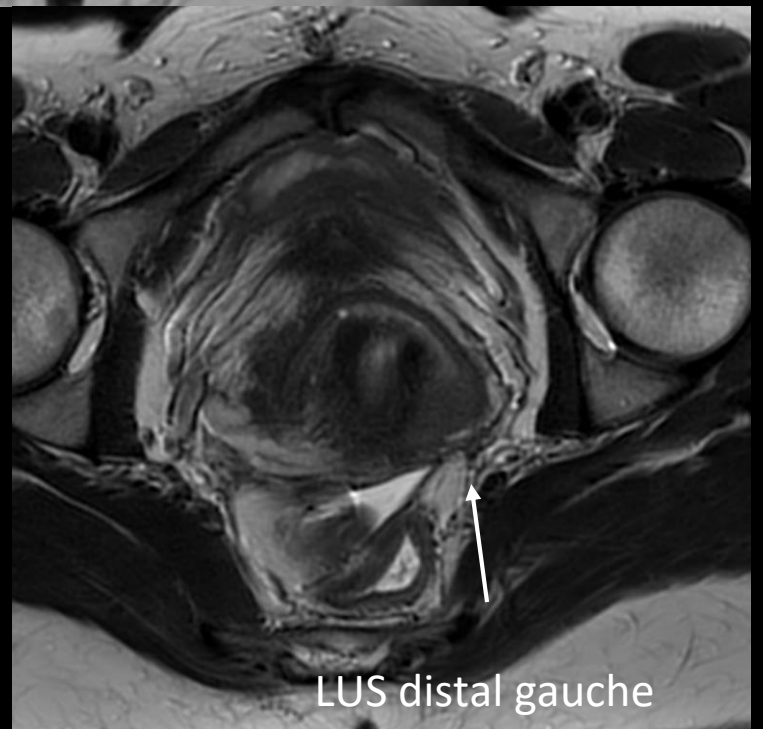



LUS prox gh >1cm >> parametre ML

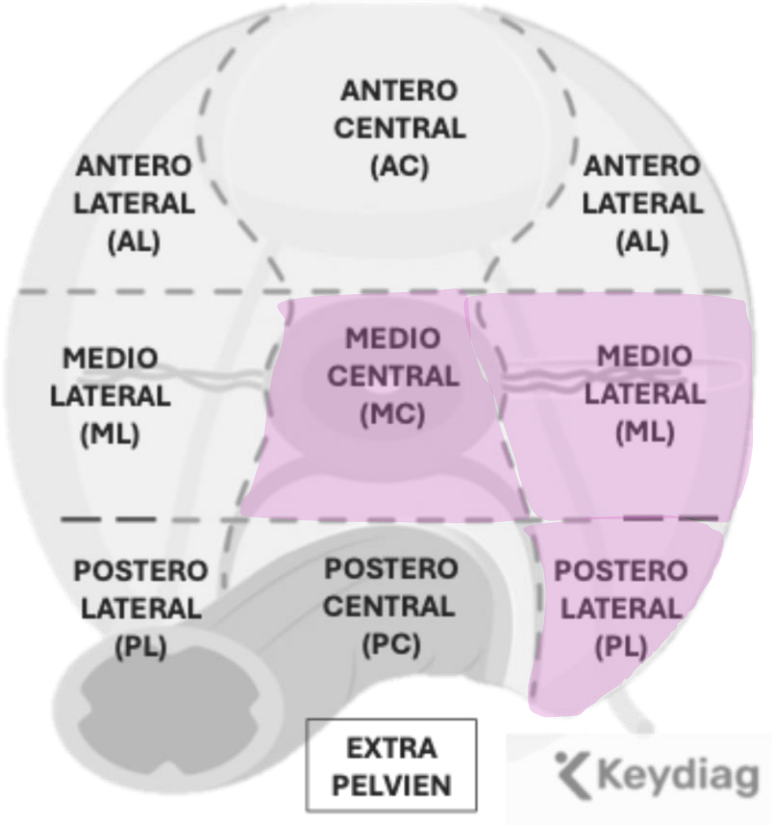


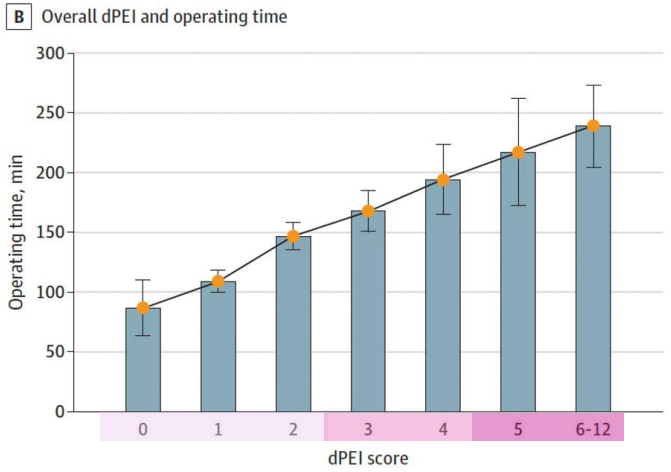

LUS prox dt

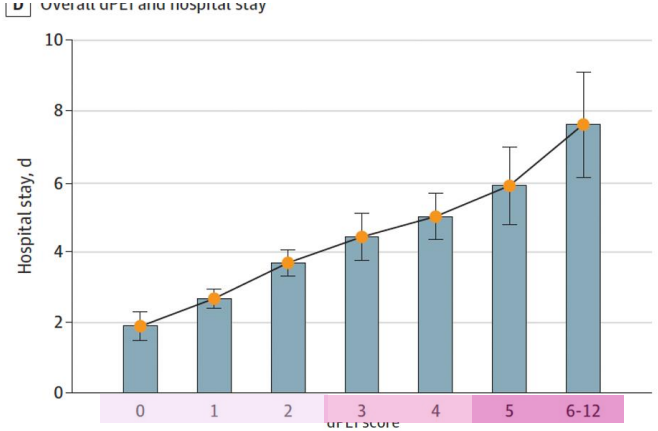

LUS distal gauche

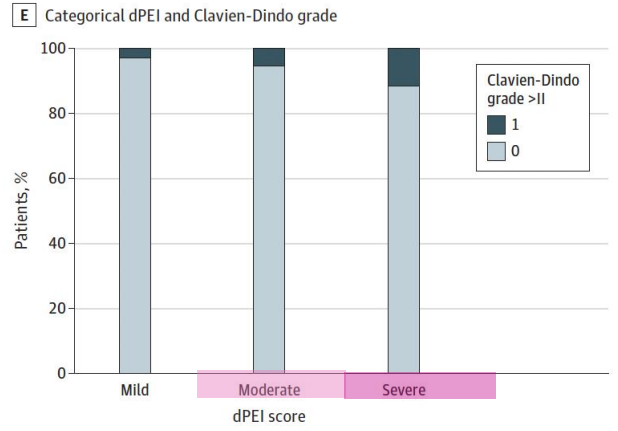
dPEI score

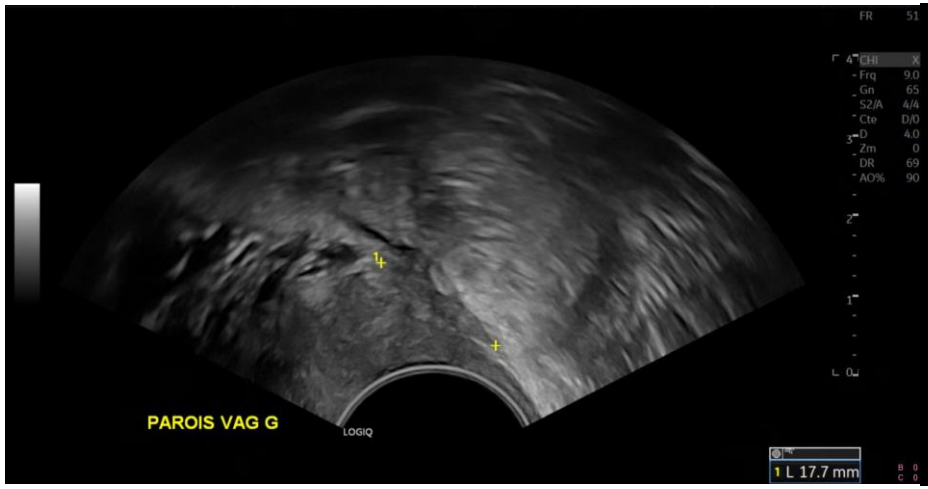
Score dPEI = 3 +1vagin

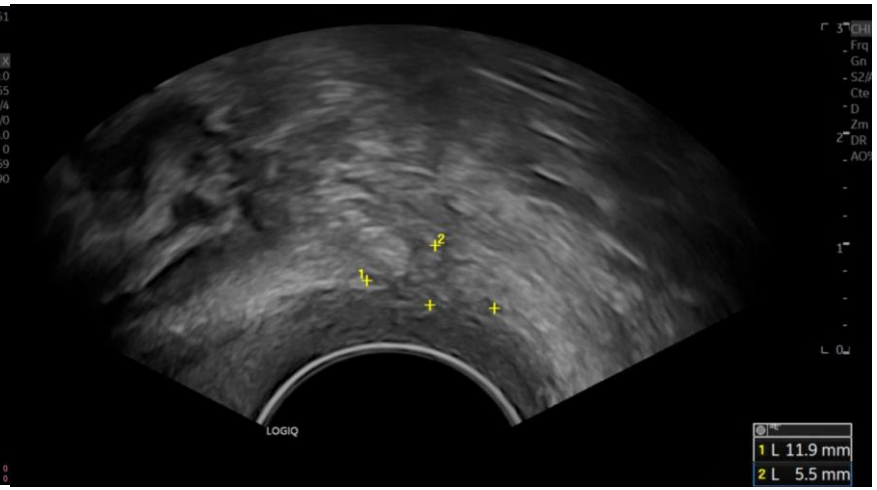




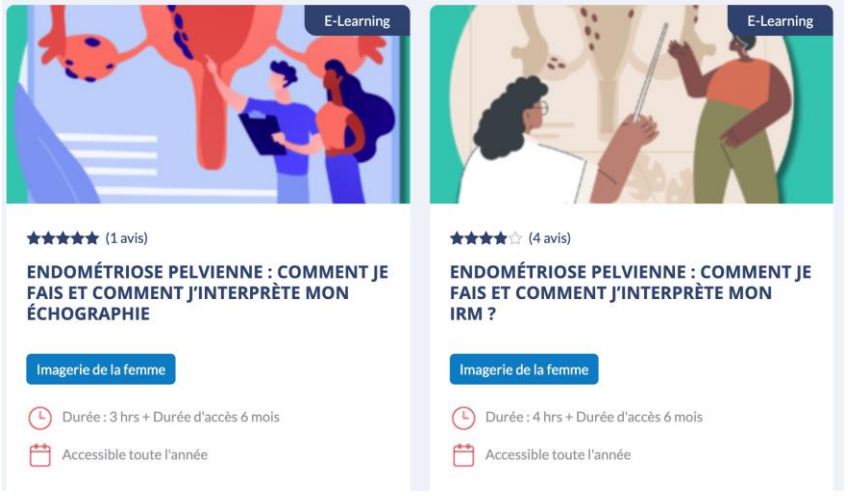


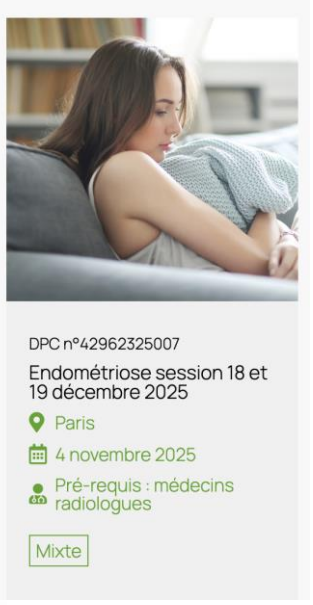






Education



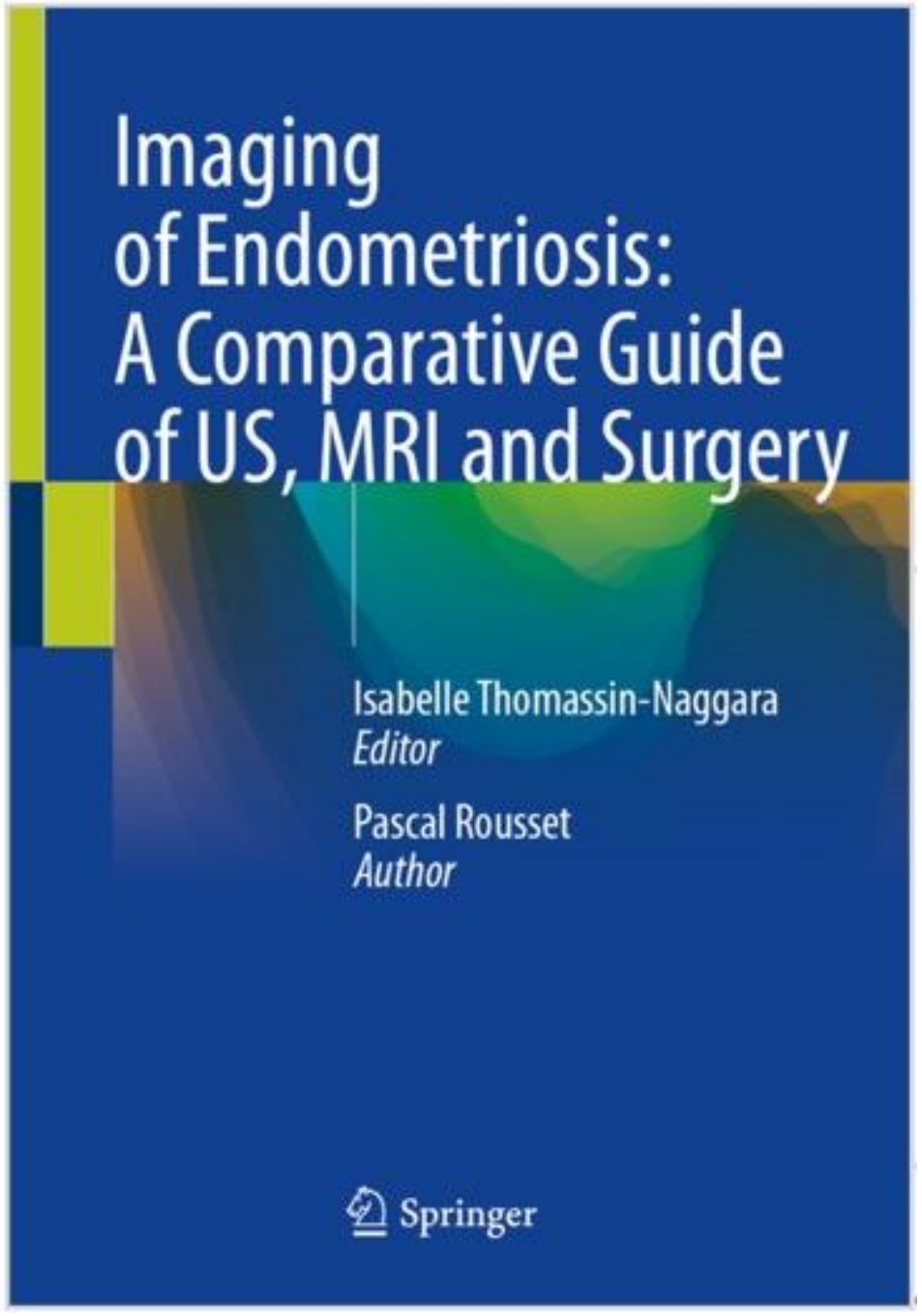


odpc rim
Radiologie Imagerie Médicale

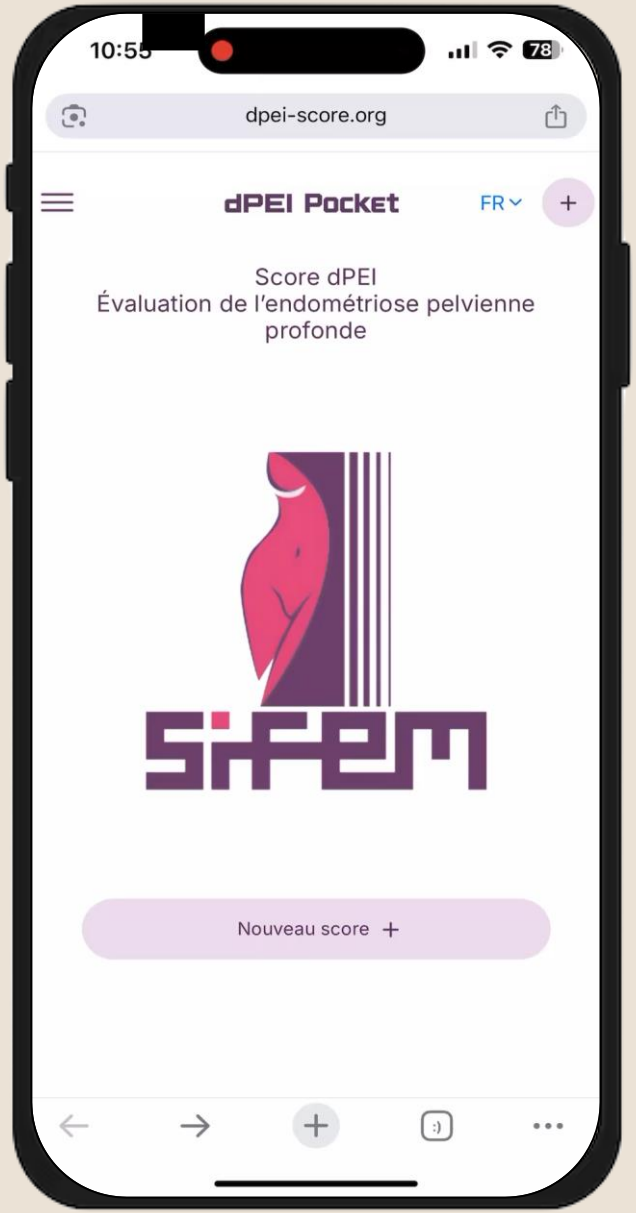
SFR SOCIÉTÉ FRANÇAISE DE RADIOLOGIE & D'IMAGERIE MÉDICALE

SIFEM Société d'Imagerie de la Femme

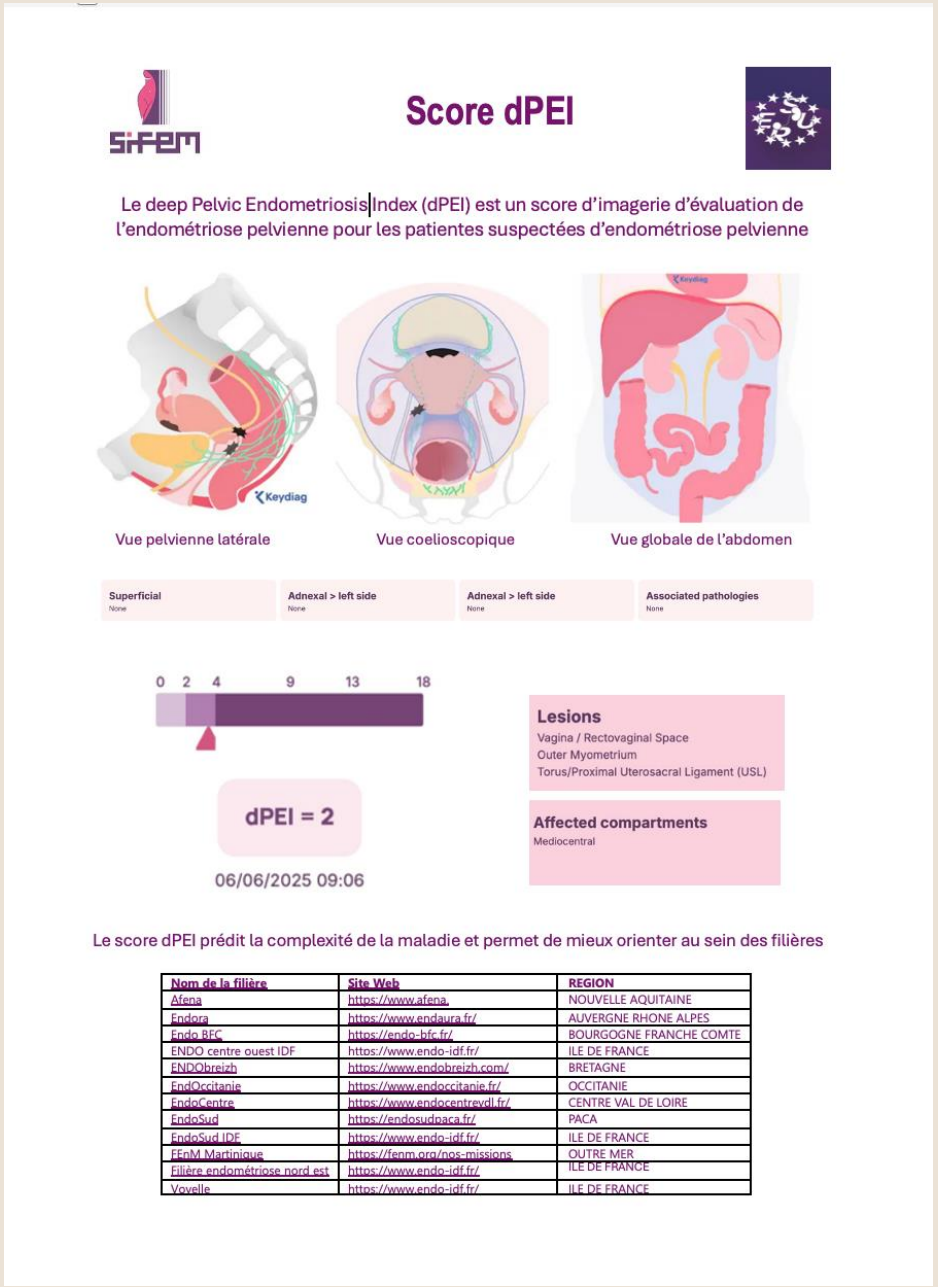
Formation présentielle
sur consoles
18-19 decembre 2025
PARIS



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

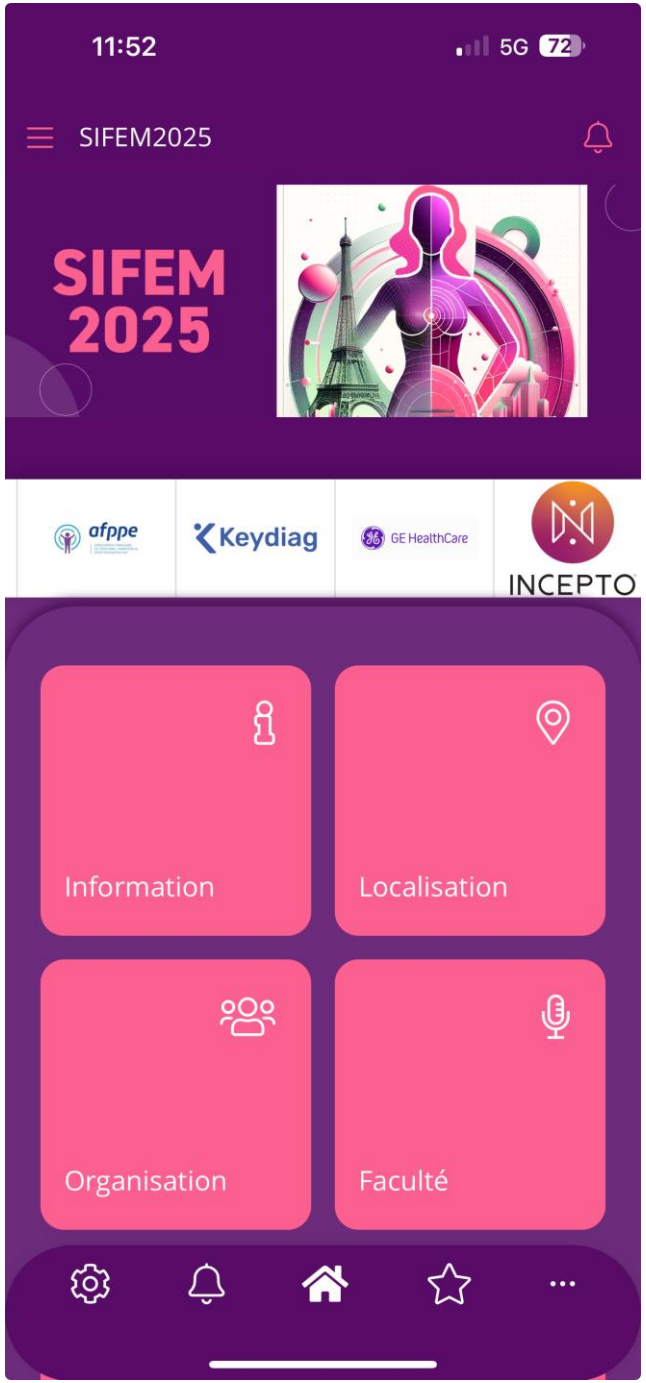


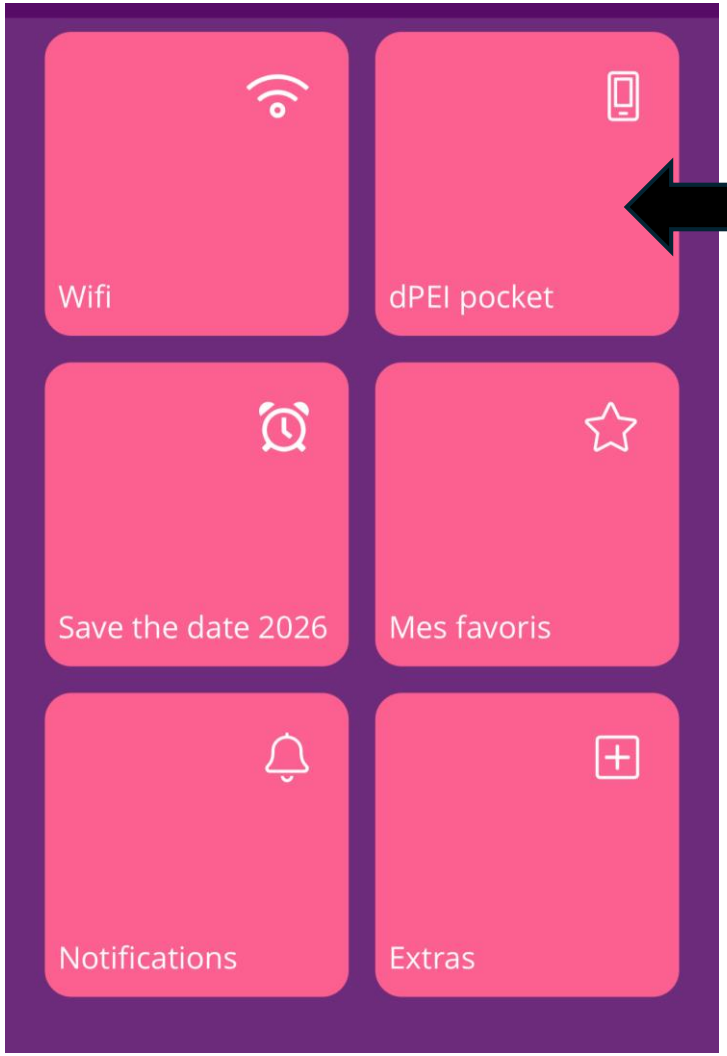
PDF

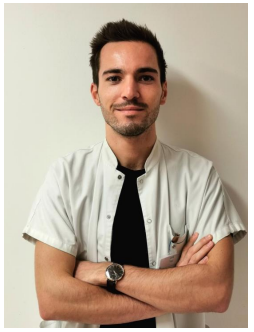


Nom de la filière	Site Web	REGION
Afena	https://www.afena.	NOUVELLE AQUITAINE
Endora	https://www.endaura.fr/	AUVERGNE RHONE ALPES
Endo BFC	https://endo-bfc.fr/	BOURGOGNE FRANCHE COMTE
ENDO centre ouest IDF	https://www.endo-idf.fr/	ILE DE FRANCE
ENDObreizh	https://www.endobreizh.com/	BRETAGNE
EndOccitanie	https://www.endoccitanie.fr/	OCCITANIE
EndoCentre	https://www.endocentrevdl.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







NEW

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) / francais (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

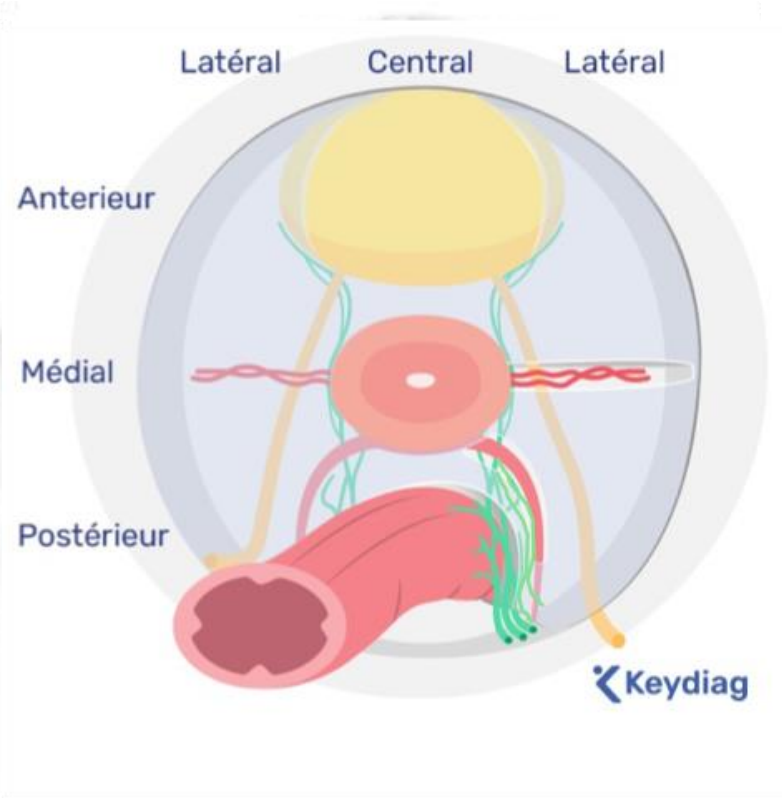
CA SIFEM
2022-2025

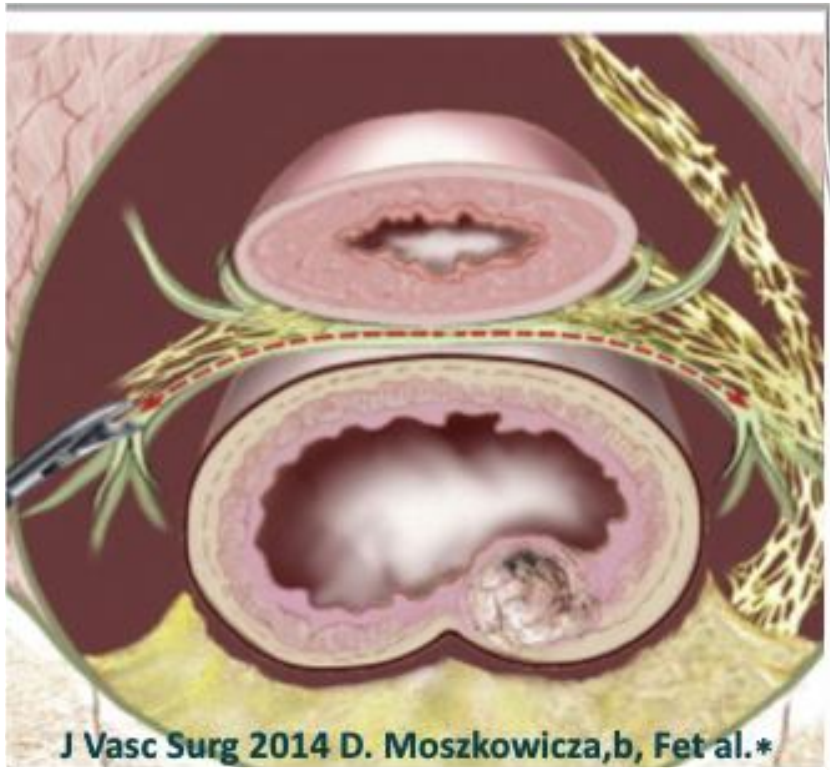
Equipe CHIC

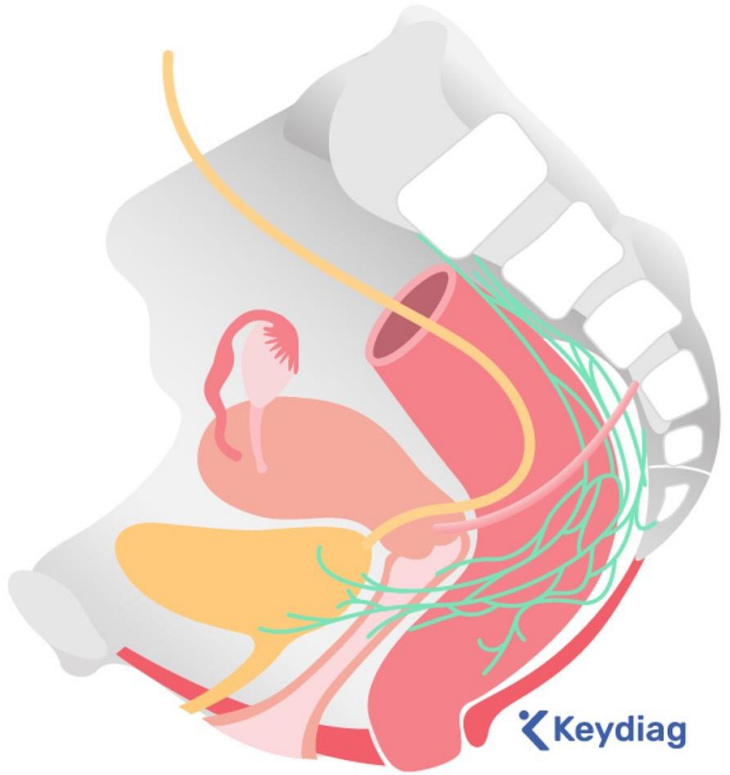
Corinne Balleyguier

Pascal Rousset

Parametre : Le plexus hypogastrique inférieur







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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

EUROPEAN SOCIETY OF RADIOLOGY
European Radiology

SPECIAL REPORT

Reasons why it is time to change imaging guidelines on endometriosis

Isabelle Thomassin-Naggara[1,2*], Pascal Rousset[3], Cyril Touboul[2,4], Leo Razakamanantsoa[1,2] and Lucia Manganaro[5]