

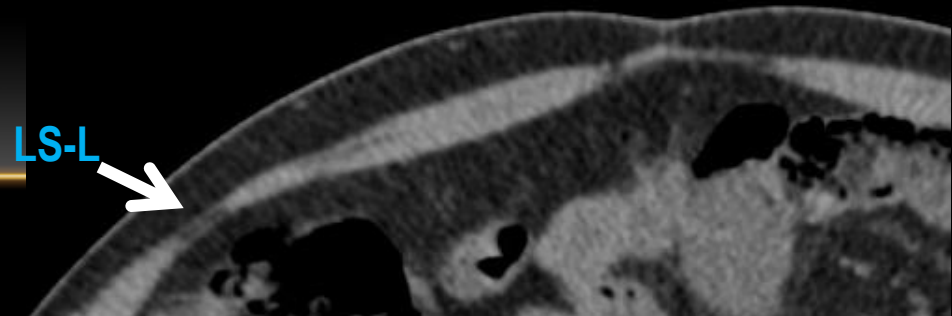
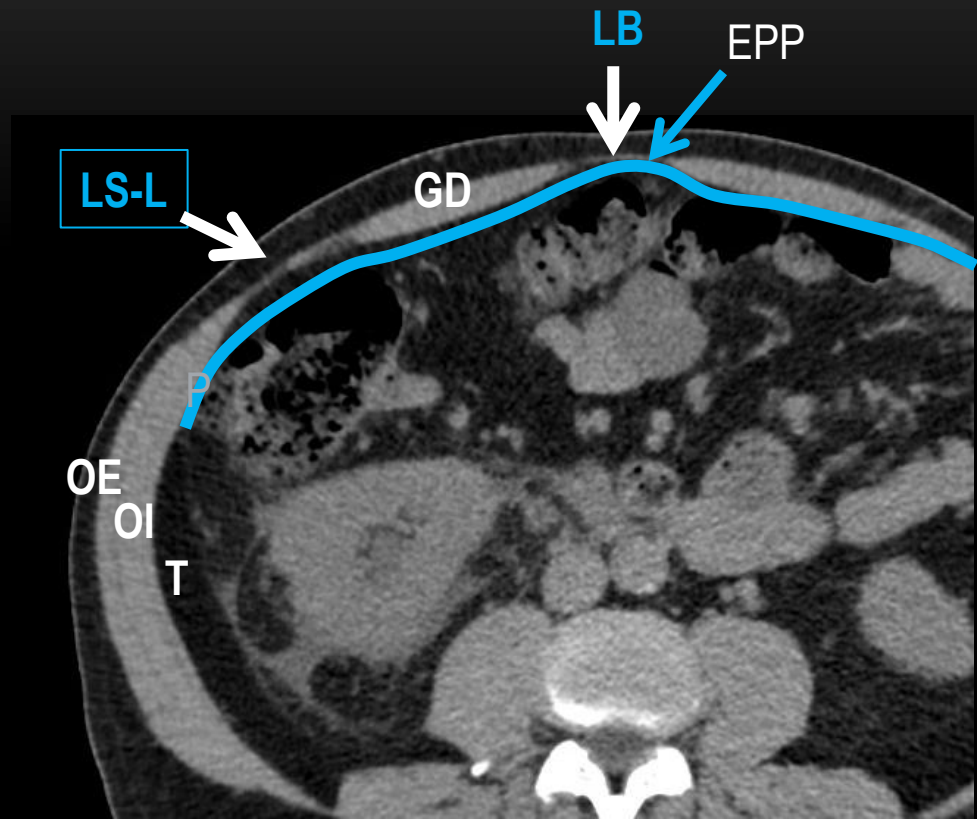
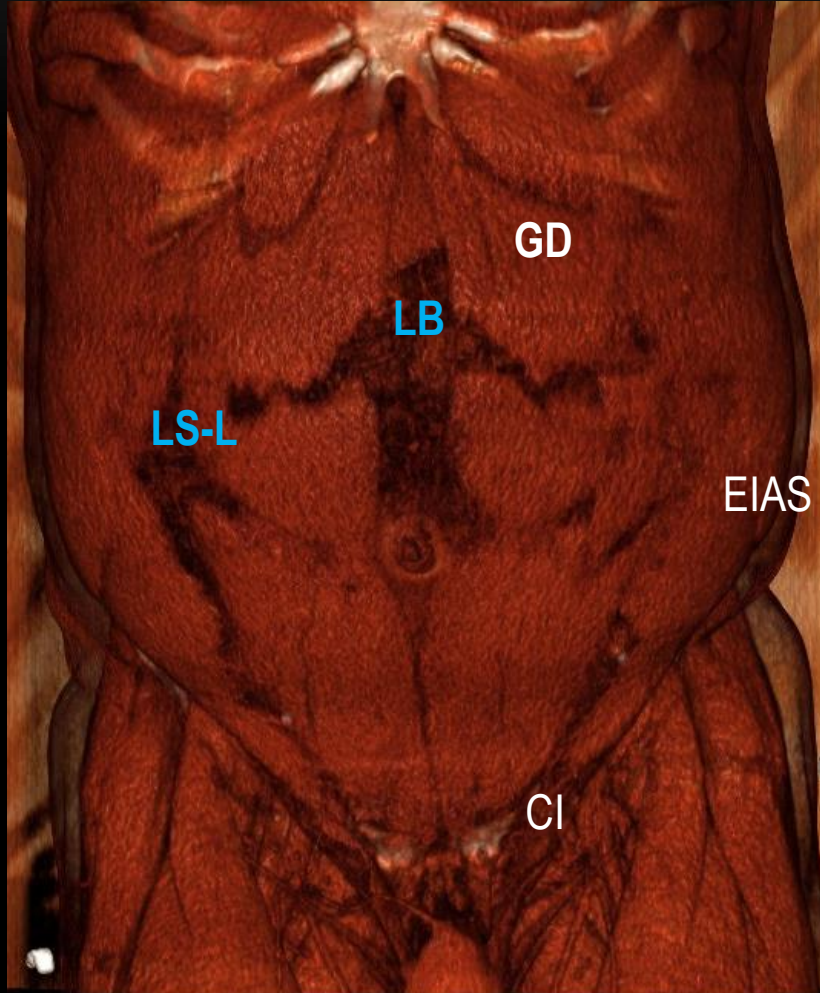
LES HERNIES

Pariétales

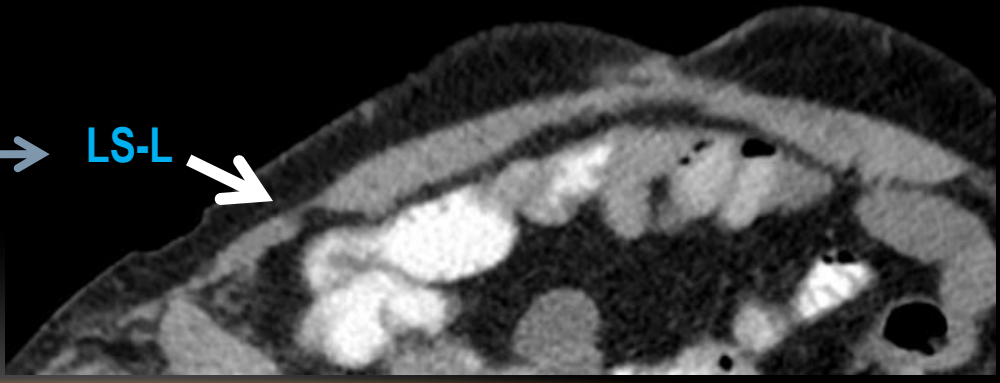
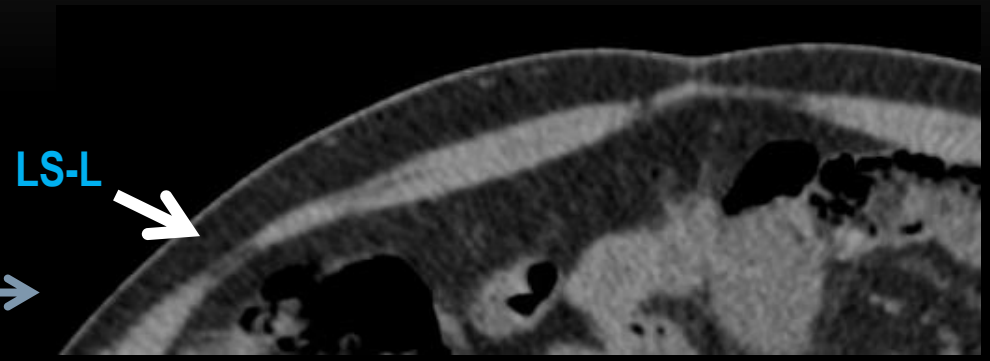
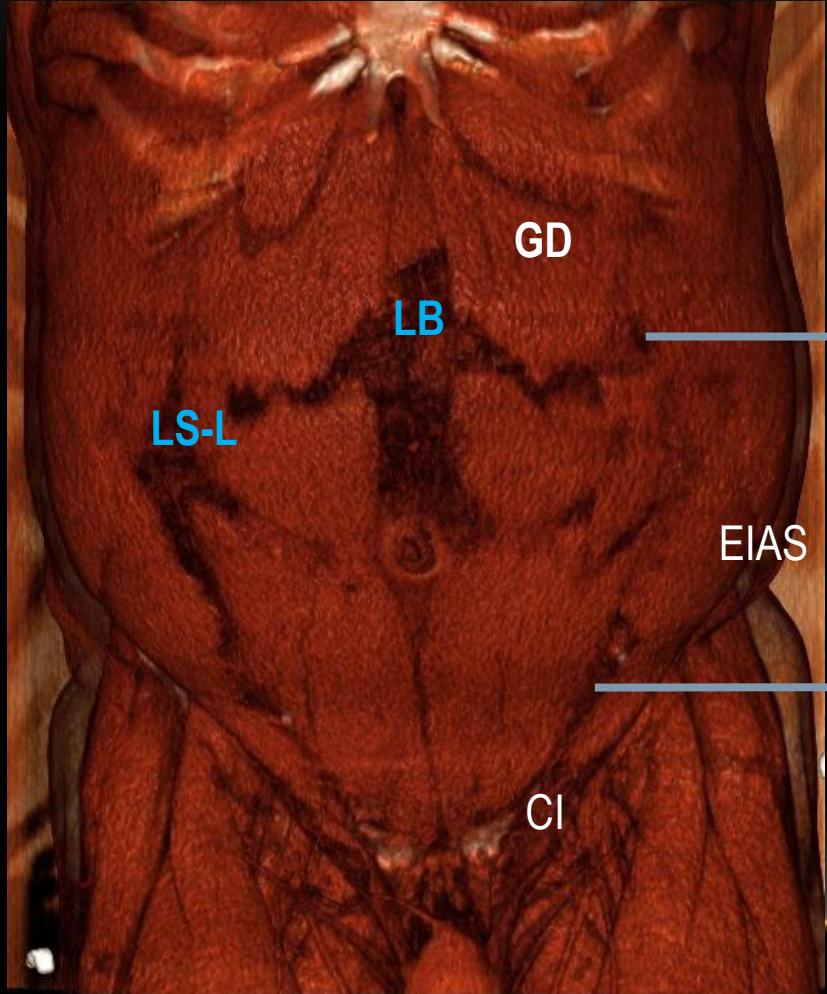
Internes

HERNIES PARIETALES

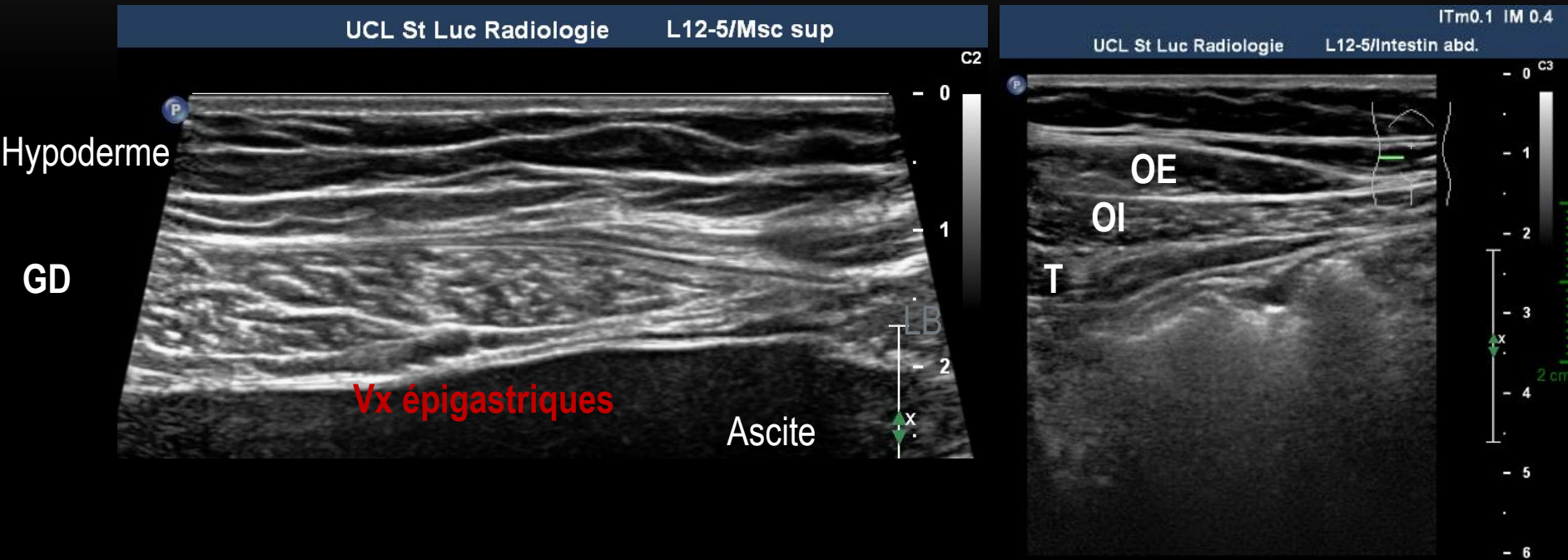
ANATOMIE PARIÉTALE



ANATOMIE PARIÉTALE



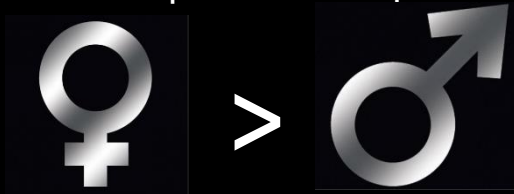
ANATOMIE PARIÉTALE



DIASTASIS DES GRANDS DROITS

= Majoration distance entre les grands droits - Selon Beer et al > 3 cm

- Multiparité $>$ nulliparité

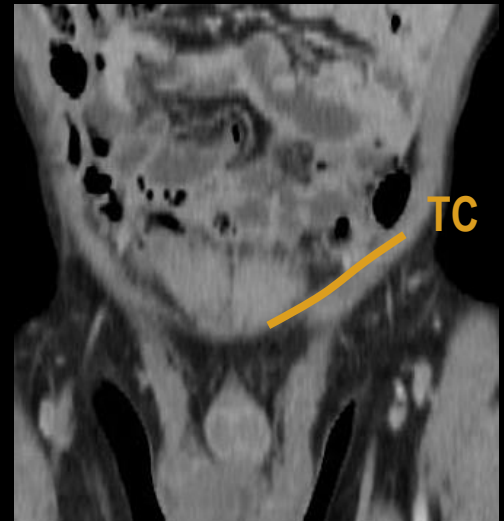
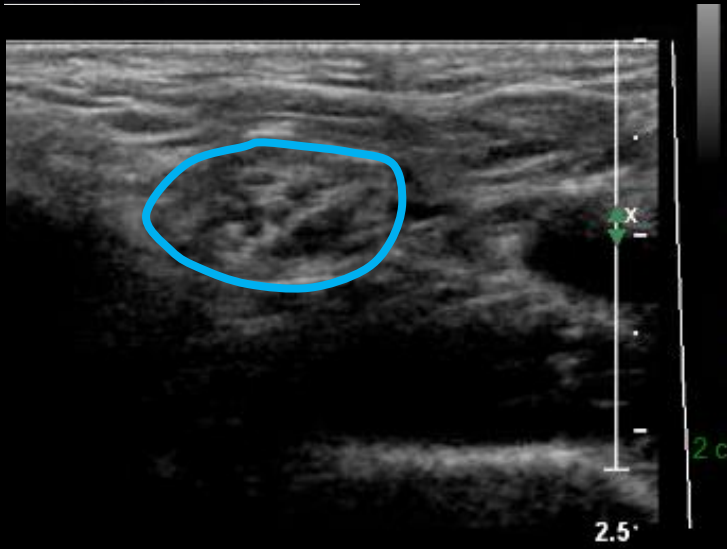


IMPORTANCE

**Cure
d'éventration**

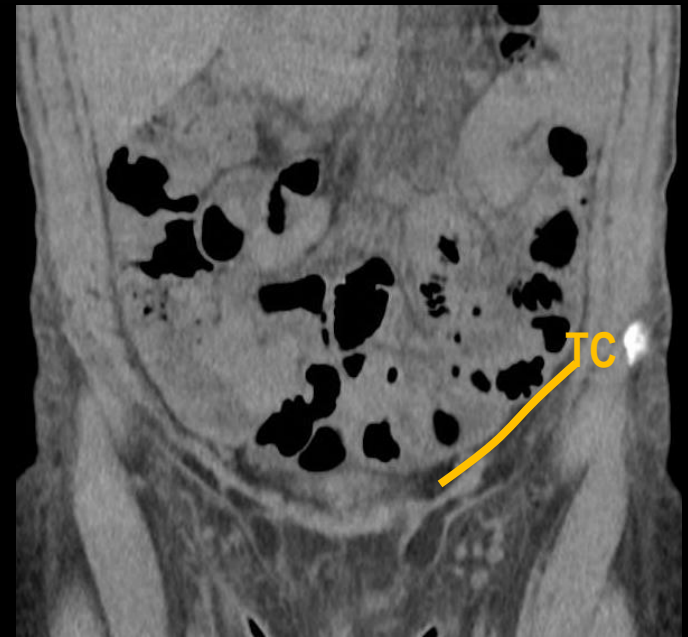
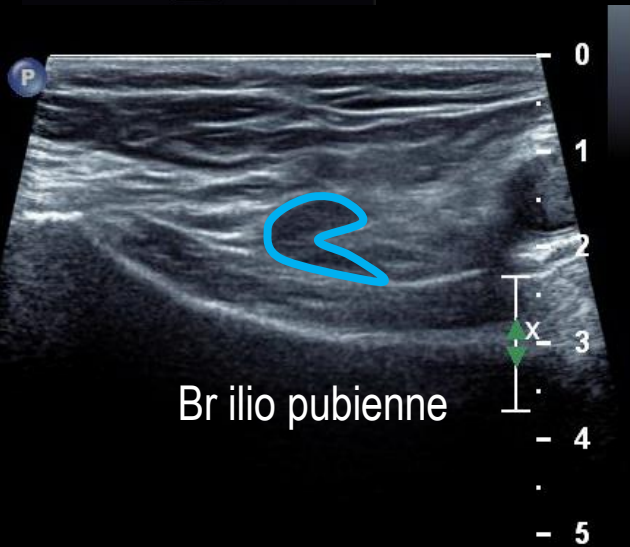


CANAL INGUINAL





CANAL INGUINAL



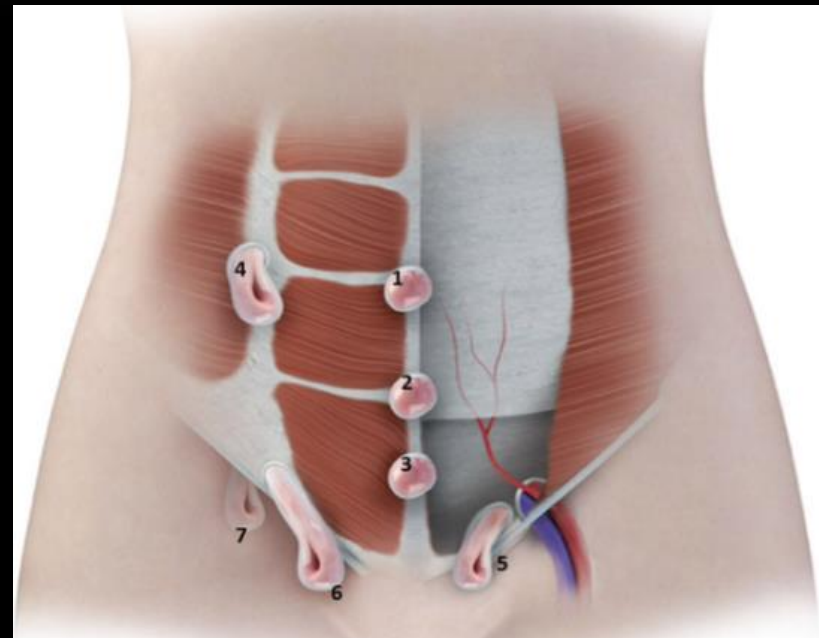
DÉFINITION HERNIE PARIÉTALE



Protrusion sac péritonéal au travers d'une faiblesse ou d'un défaut congénital ou acquis de la paroi musculaire abdominale

HERNIE DE LA PAROI ABDOMINALE

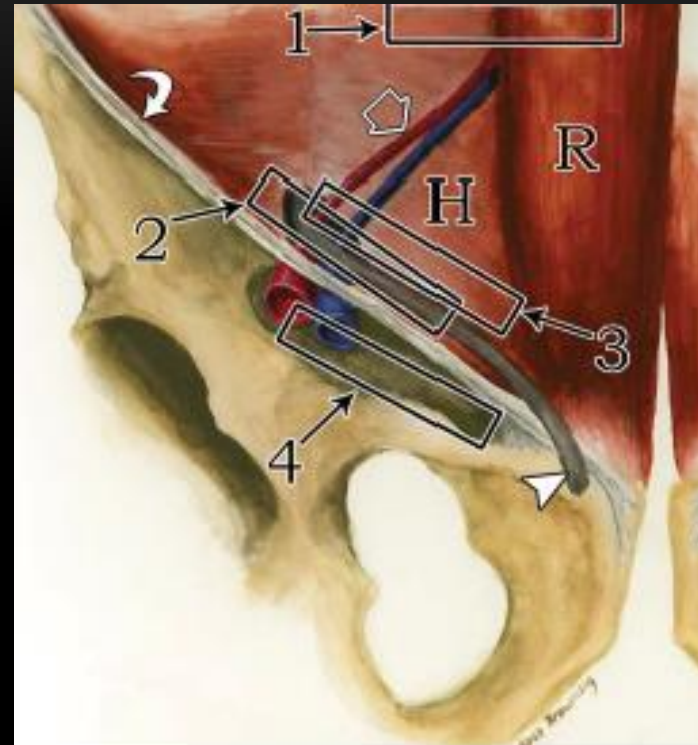
- **Inguinale et pelvienne** - indirecte
 - directe
 - fémorale et obturatrice
- **Ventrale - antérieure** - épigastrique
 - ombilicale et para-ombilicale
 - hypogastrique
- **latérale**
- **Lombaire**
- **Incisionnelle** (éventration – hernies parastomiales)



US ?

- Courbe d'apprentissage
- Avantage dynamique de l'US
- Valsalva / debout / irréductibilité
- Pas d'irradiation

≠ hernies inguinales – fémorales
ombilicales – Spiegel



Sonography of Inguinal Region Hernias
AJR:187, July 2006

- Signes d'incarcération

REPÈRES ANATOMIQUES

- Art épigastrique -> hernie directe vs indirecte
- Ligament inguinal – Tubercule pubis
-> hernie inguinale vs fémorale
- Veine fémorale -> hernie fémorale ?

US



Sonography of Inguinal Region Hernias

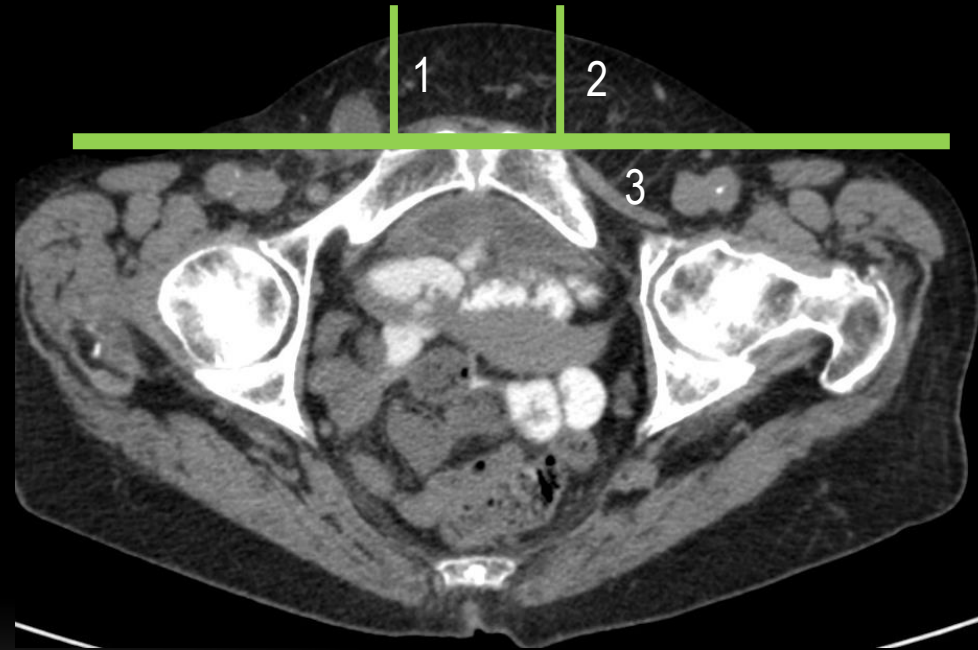
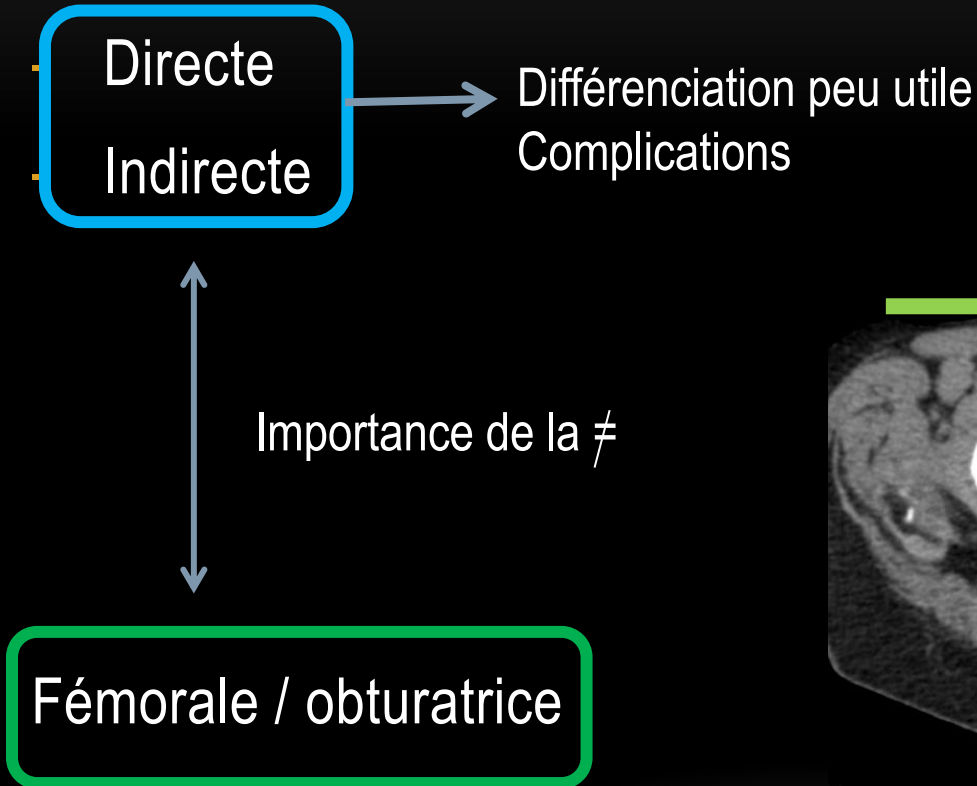
AJR:187, July 2006

David A. Jamadar¹
Jon A. Jacobson¹
Yoav Morag¹
Gandikota Girish¹
Farhad Ebrahim¹
Thomas Gest²
Michael Franz³

OBJECTIVE. The purpose of this article is to describe the anatomy of the inguinal region in a way that is useful for sonographic diagnosis of inguinal region hernias, and to illustrate the sonographic appearance of this anatomy. We show sonographic techniques for evaluating inguinal, femoral, and spigelian hernias and include surgically proven examples.

CONCLUSION. Understanding healthy inguinal anatomy is essential for diagnosing inguinal region hernias. Sonography can diagnose and differentiate between various inguinal region hernias.

HERNIE DE L'AINE





HERNIES INDIRECTES

- La + f

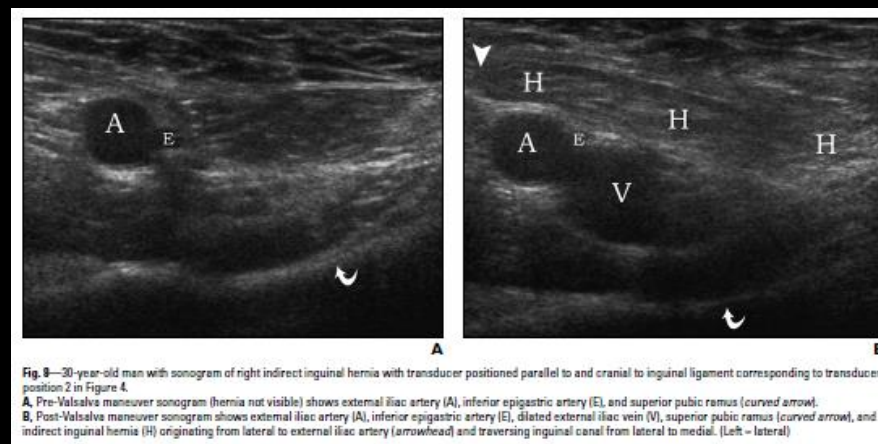
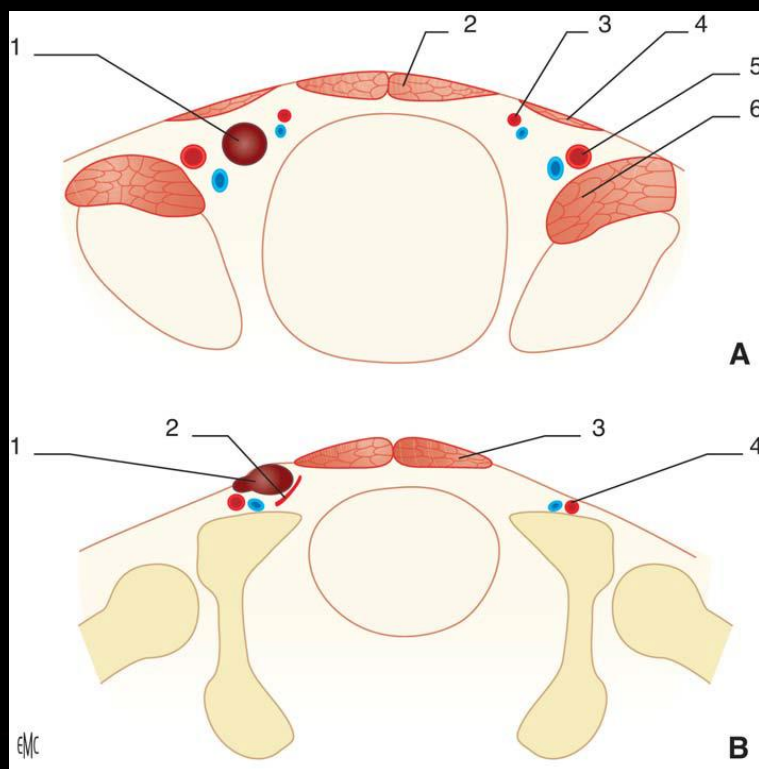


Fig. 8—30-year-old man with sonogram of right indirect inguinal hernia with transducer positioned parallel to and cranial to inguinal ligament corresponding to transducer position 2 in Figure 4.

A. Pre-Valsalva maneuver sonogram (hernia not visible) shows external iliac artery (A), inferior epigastric artery (E), and superior pubic ramus (curved arrow).
B. Post-Valsalva maneuver sonogram shows external iliac artery (A), inferior epigastric artery (E), dilated external iliac vein (V), superior pubic ramus (curved arrow), and indirect inguinal hernia (H) originating from lateral to external iliac artery (arrowhead) and traversing inguinal canal from lateral to medial. (Left = lateral)

- A.** Représentation schématique en coupe axiale au niveau de l'orifice profond du canal inguinal : hernie (1) dans le canal inguinal, en dehors des vaisseaux épigastriques (3), en dedans des vaisseaux fémoraux (5). Muscles grands droits (2), oblique interne (4) et psoas iliaque (6).
- B.** Coupe axiale plus basse que A : sac herniaire (1) en dehors des vaisseaux épigastriques (2), en dedans des vaisseaux fémoraux (4), pouvant atteindre le scrotum. Muscles grands droits (3).

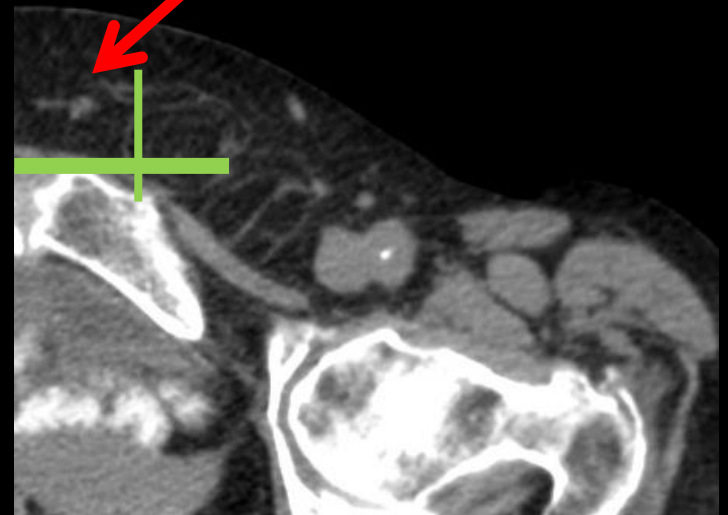
HERNIES INGUINALES INDIRECTES

Canal inguinal

souffrance



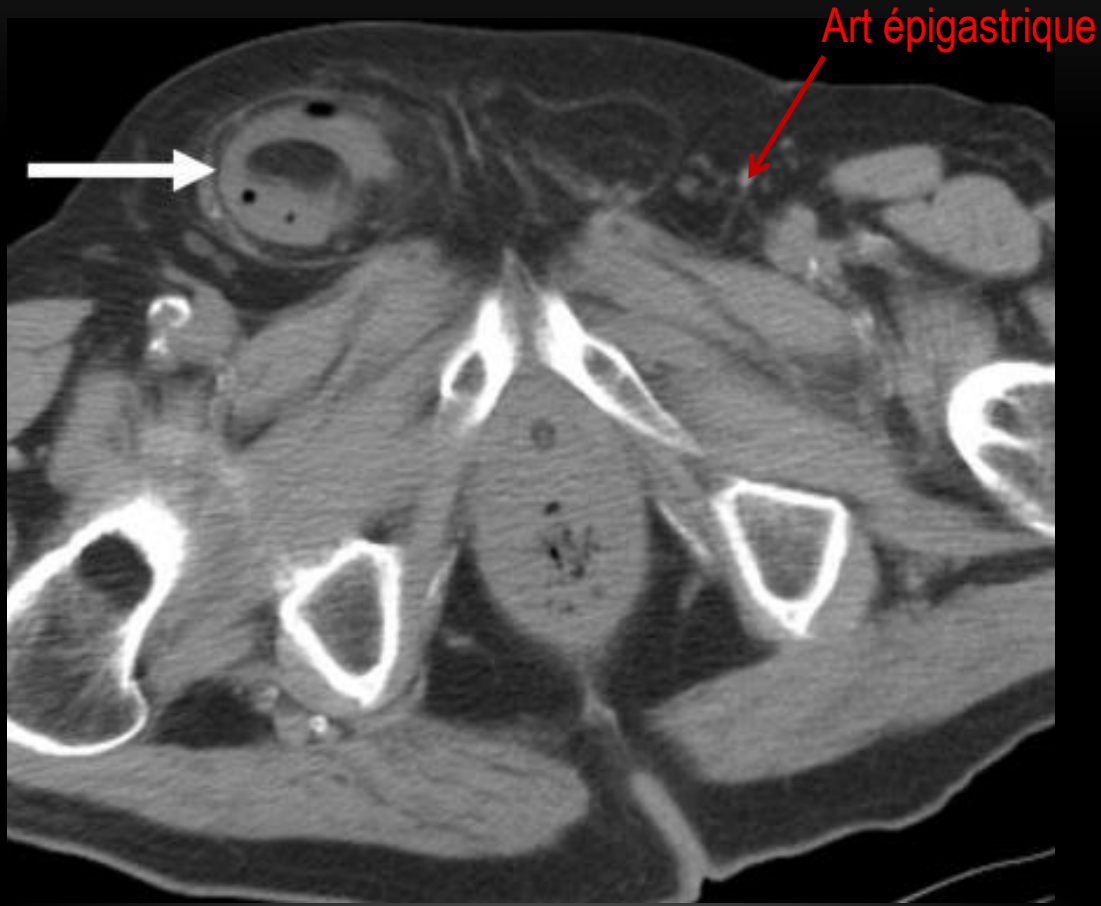
Art épigastrique



HERNIES INGUINALES INDIRECTES



HERNIE DIRECTE

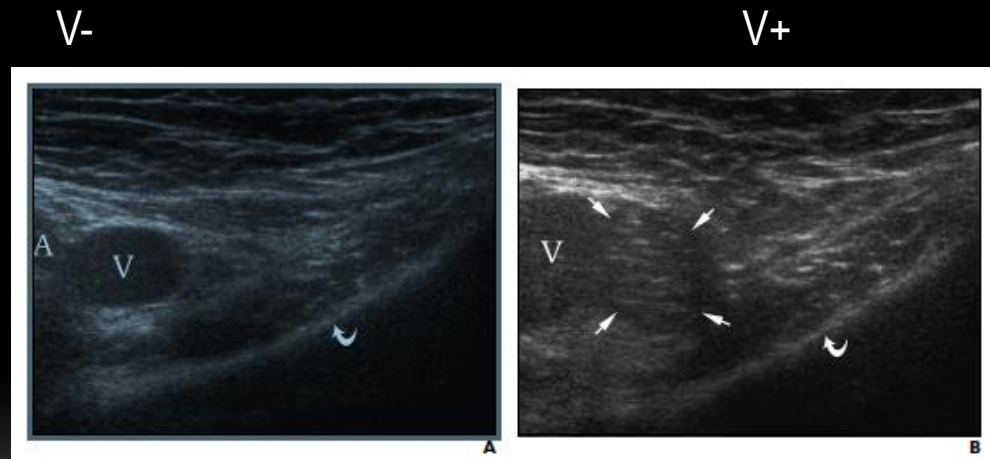
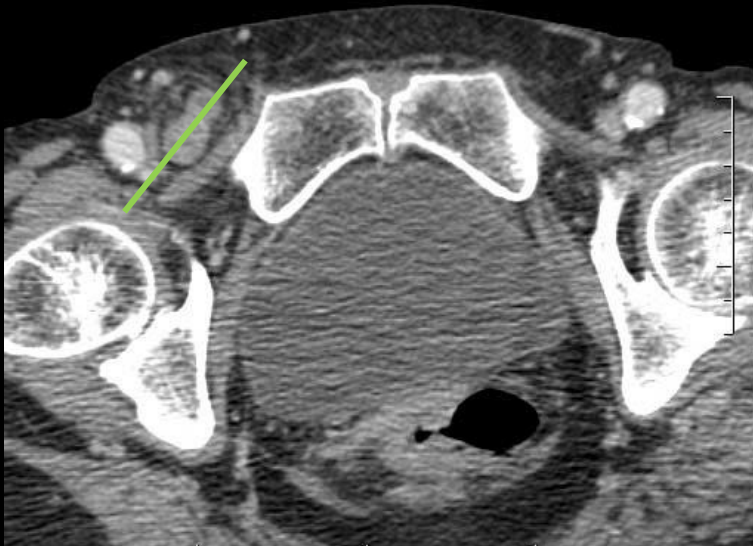


HERNIE FÉMORALE



D+++

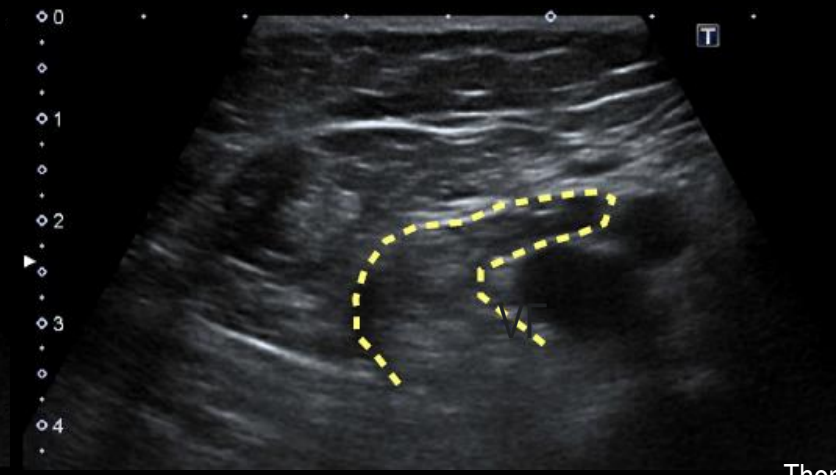
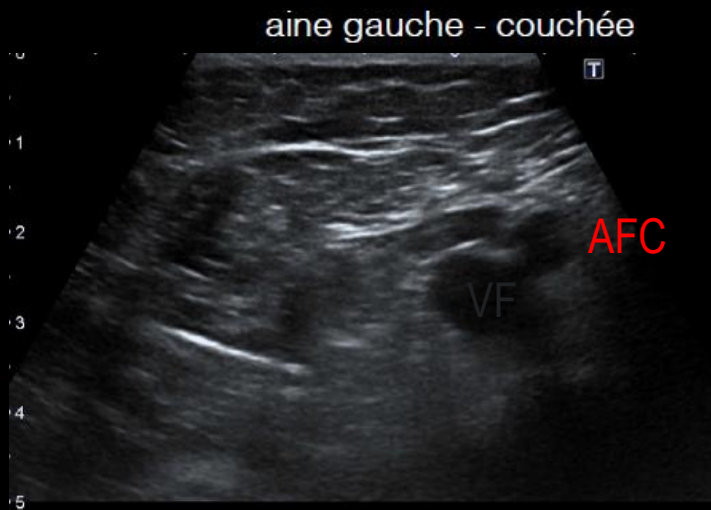
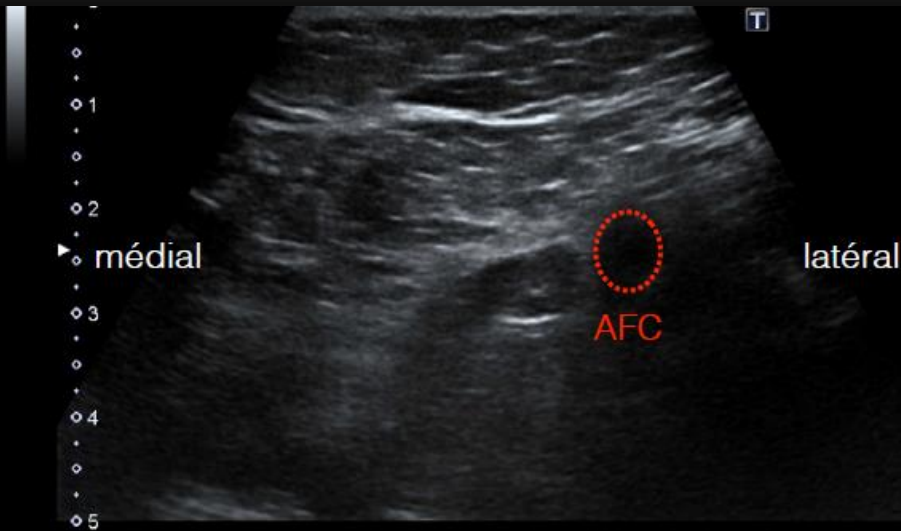
Sous le plan du ligament inguinal – externe - compression de la veine fémorale – Valsalva +++



Sfeir et al, Complications des hernies de la paroi abdominale : apport de la TDM, SFR

Sonography of Inguinal Region Hernias
AJR:187, July 2006

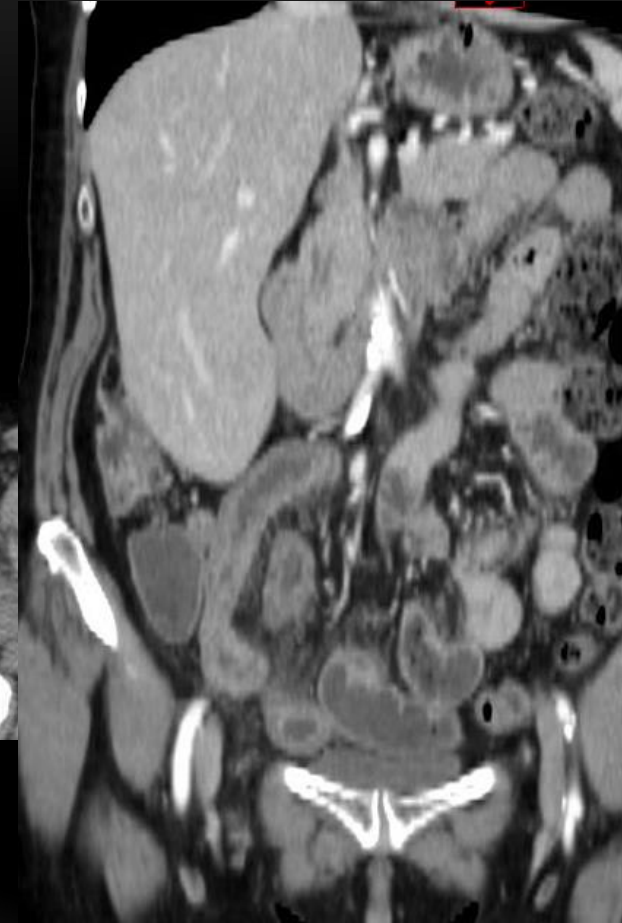
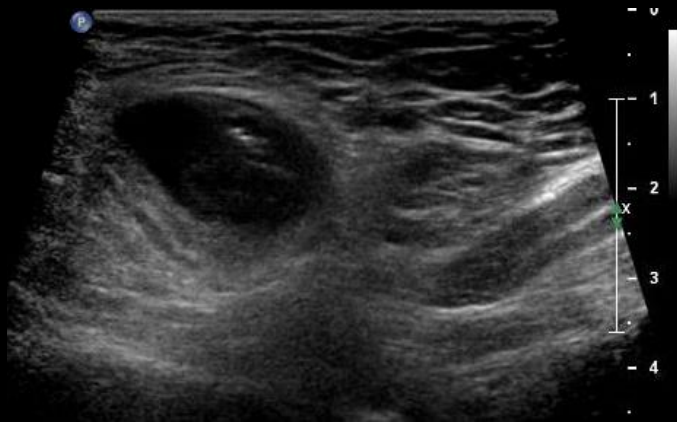
HERNIE FÉMORALE



HERNIE FÉMORALE



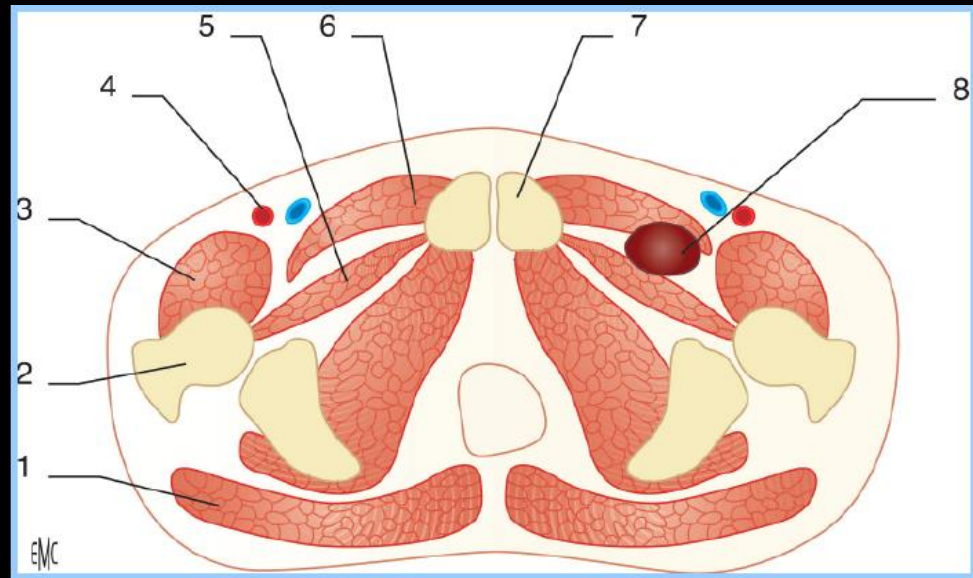
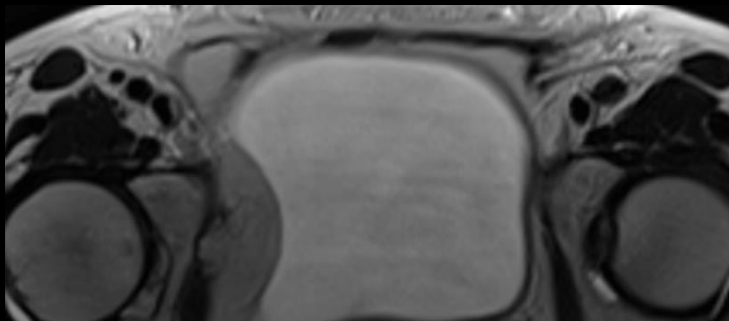
Risque +++ Incarcération



Souffrance avec aspect en cible

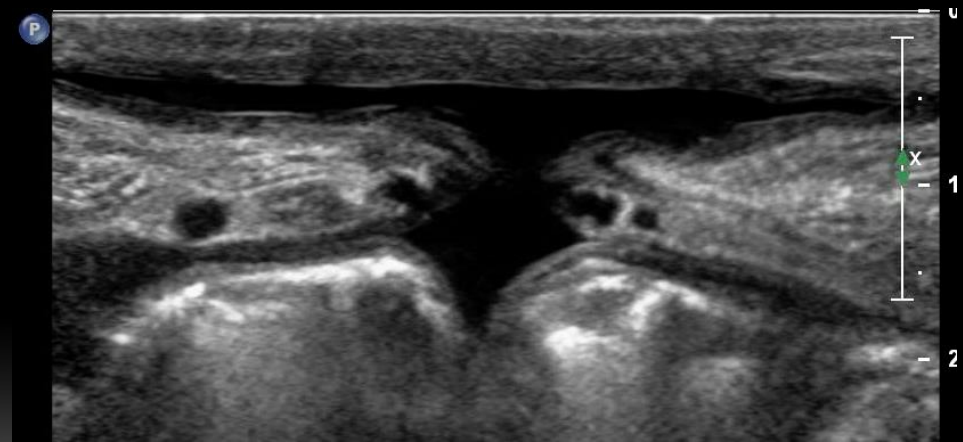
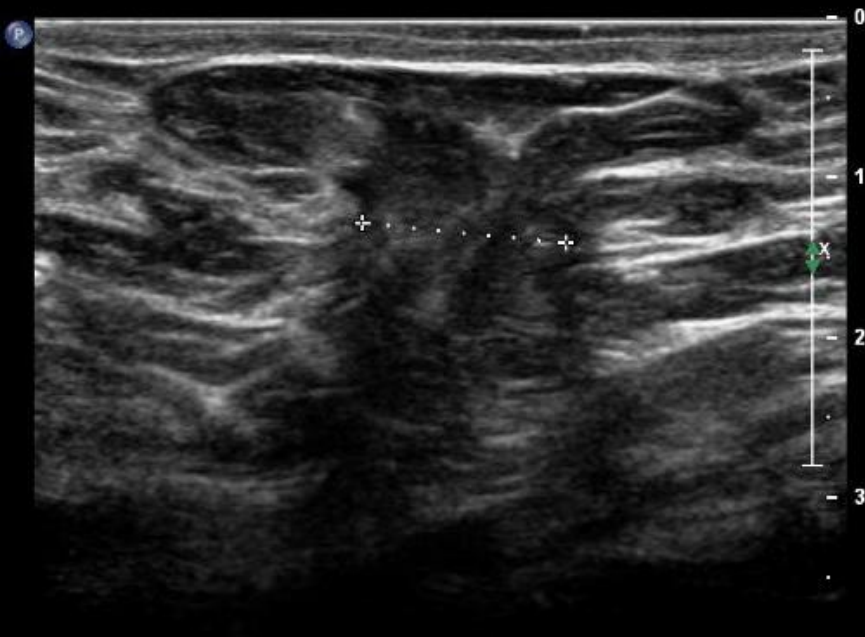
HERNIE OBTURATRICE

Agées + amaigrissement + Névralgies

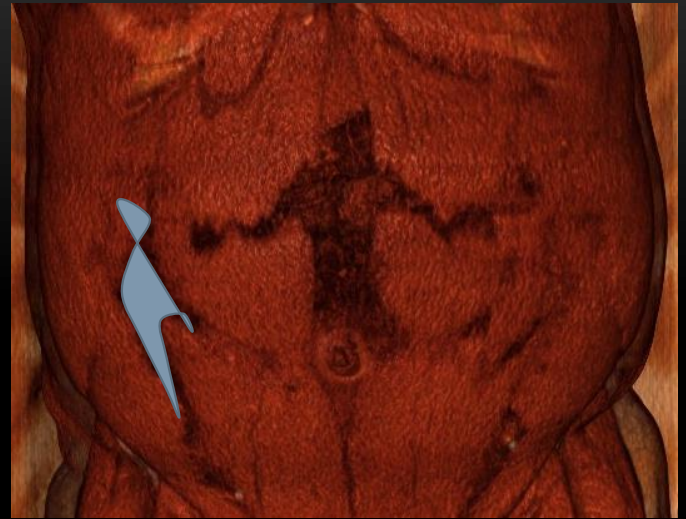
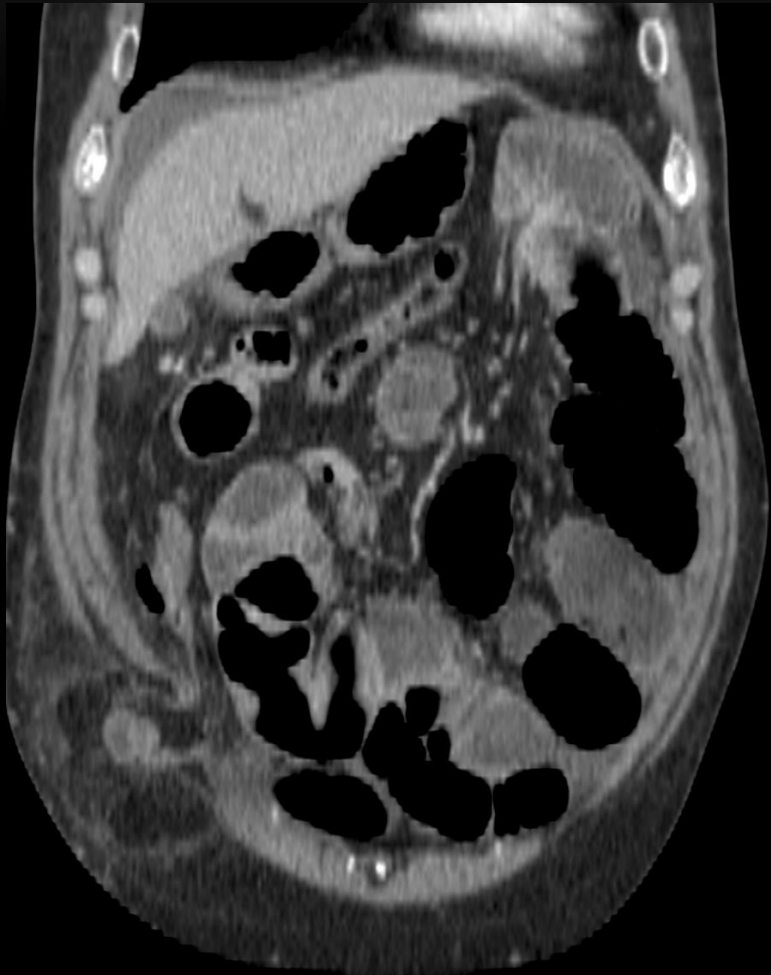


Hernie obturatrice (8), à travers le foramen obturateur, glissant entre le muscle pectiné (6) en avant et le muscle obturateur externe (5) en arrière. Muscles grand fessier (1), psoas iliaque (3) et vaisseaux fémoraux (4), pubis (7), tête fémorale (2).

HERNIE (PARA)-OMBILICALE



HERNIE DE SPIEGEL



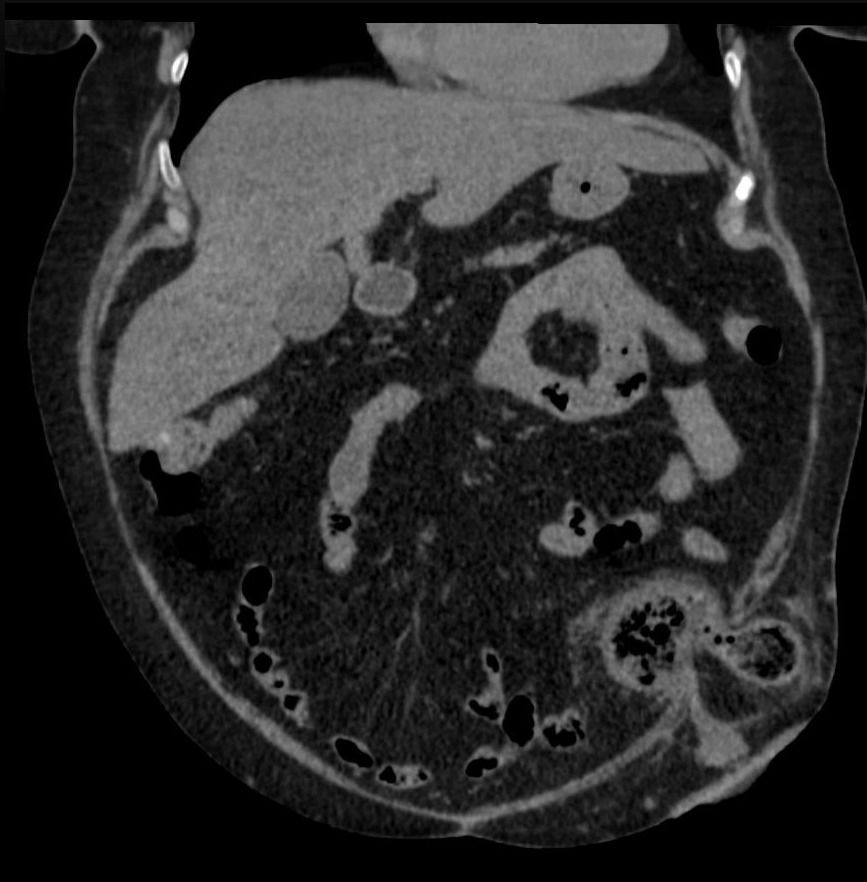
HERNIES INCISIONNELLES



HERNIES INCISIONNELLES



HERNIES INCISIONNELLES



PARASTOMIALE

HERNIES – EVENTRATIONS PARIÉTALES

L'attente du chirurgien ...

ATTENTE CHIRURGIEN

- 1 seule défec?
- Conformation pariétale globale : diastasis? (mise en place prothèse >10 cm)
- Type et contenu herniaire
- Complications éventuelles

- Cas particulier : - hernie para stomiale : si > 4 cm – Ø reconstruction coelio
 - Spiegel : faisabilité de la chirurgie coelio -taille du collet

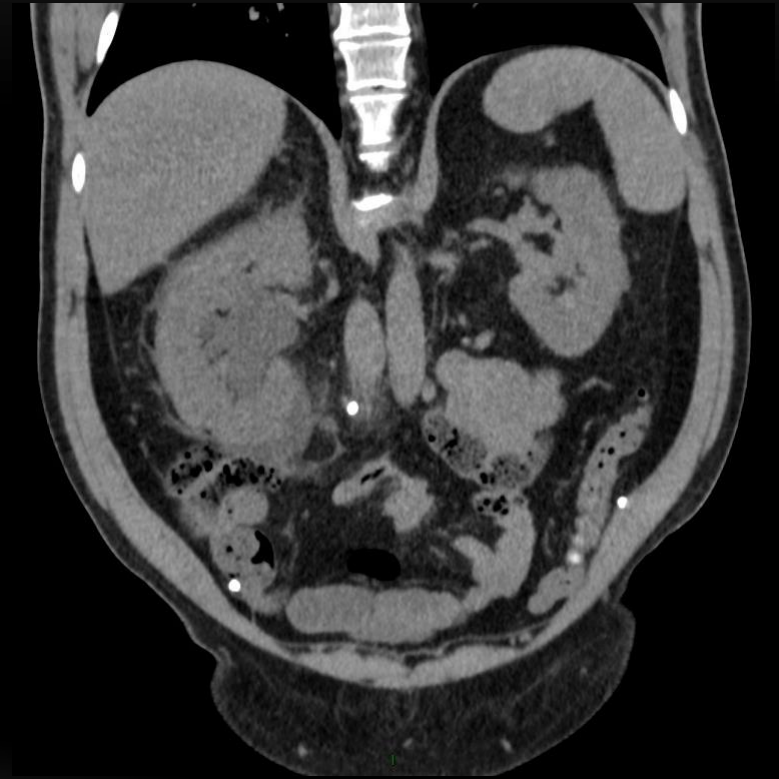
- Post op : collection, matériel en place

COMPLICATIONS

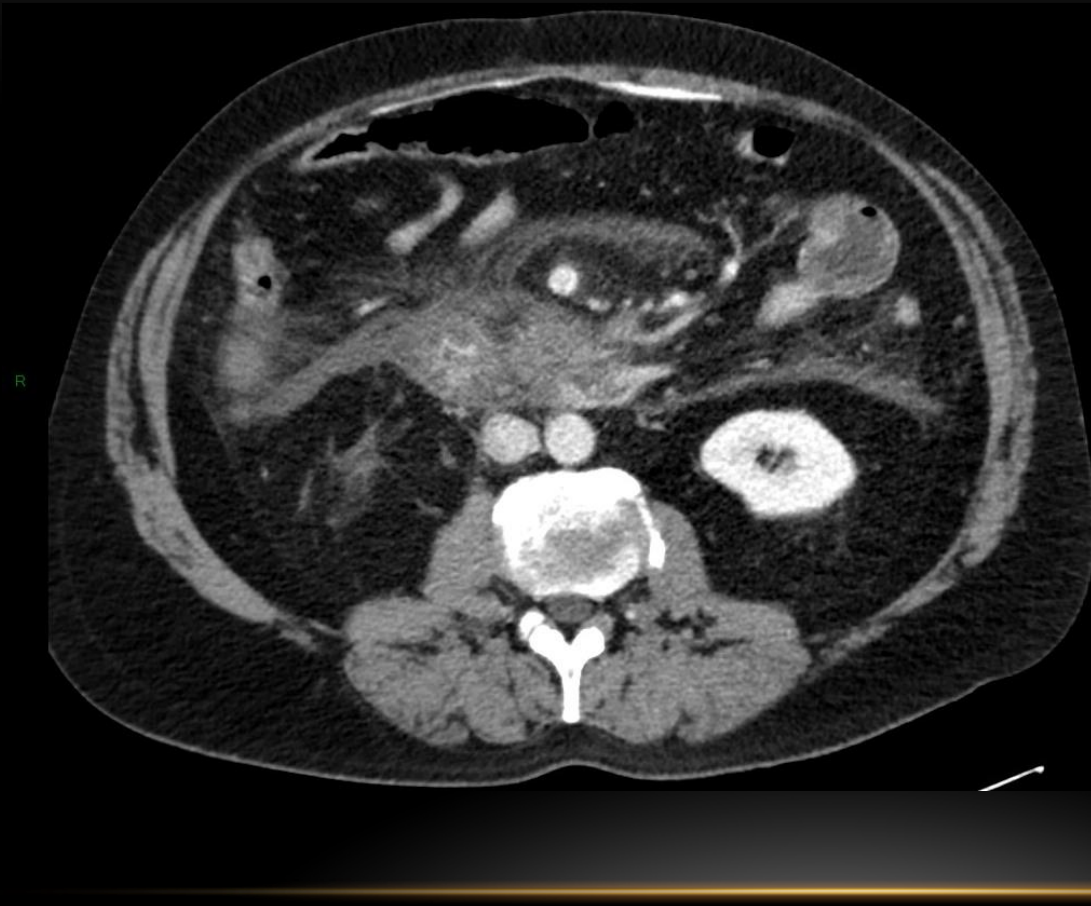
- Occlusion
- Strangulation
- Irréductibilité



MATÉRIEL CHIRURGICAL

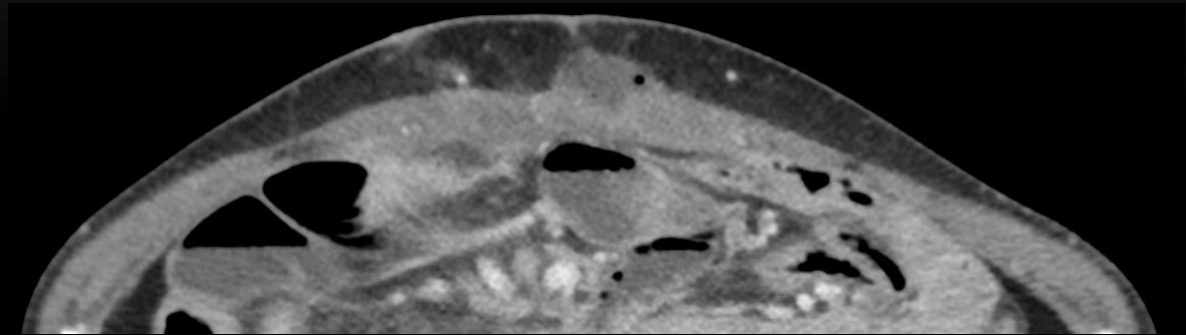


MATÉRIEL CHIRURGICAL



COMPLICATIONS CHIRURGICALES

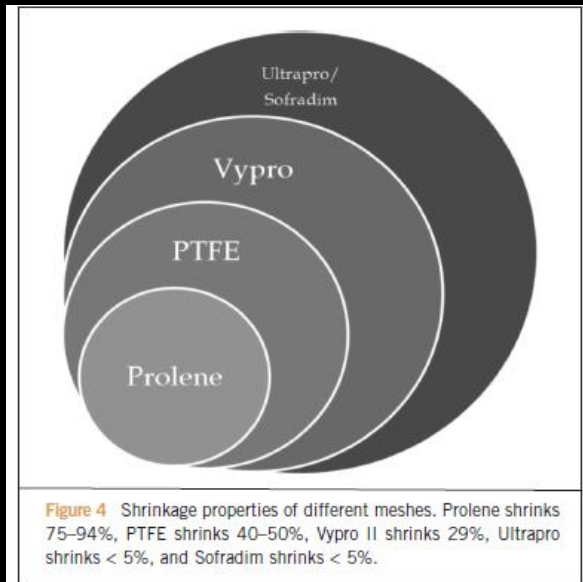
- Surinfection



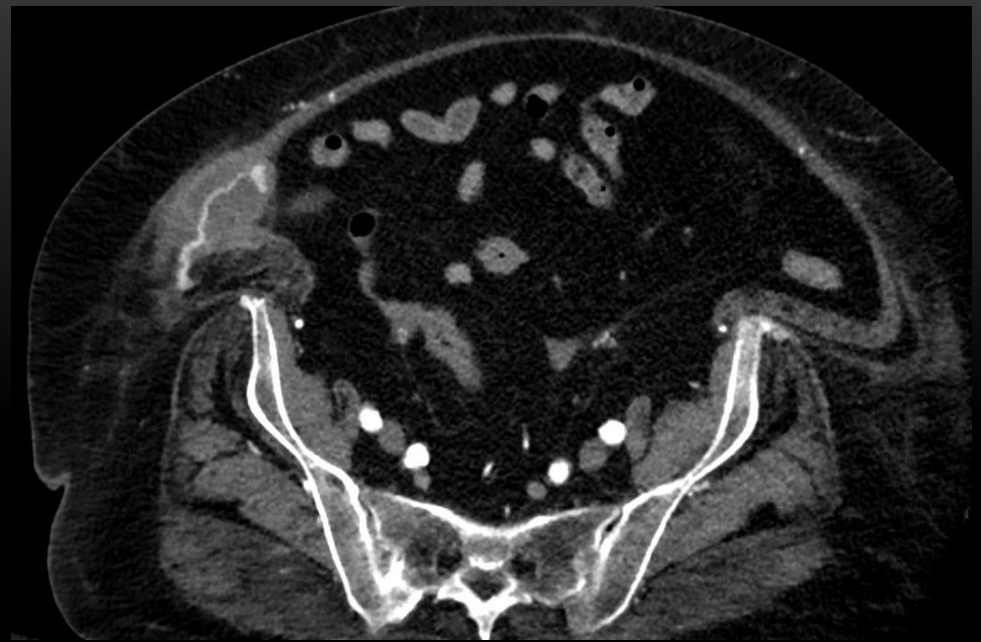
- Sérome



- **Rétrécissement matériel**



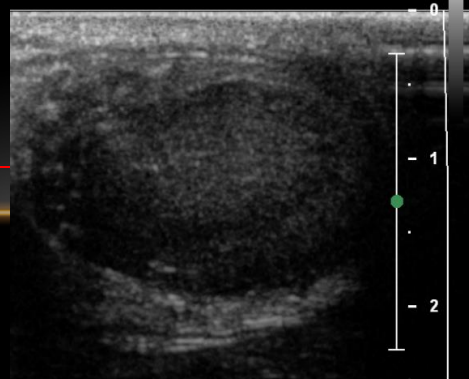
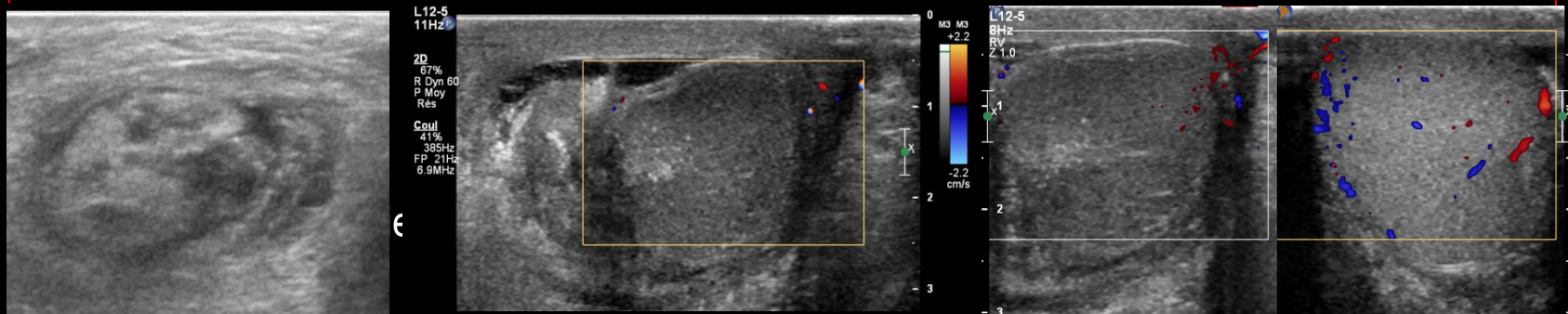
→ **Récidive herniaire**





D+ POST CURE HERNIE INGUINALE

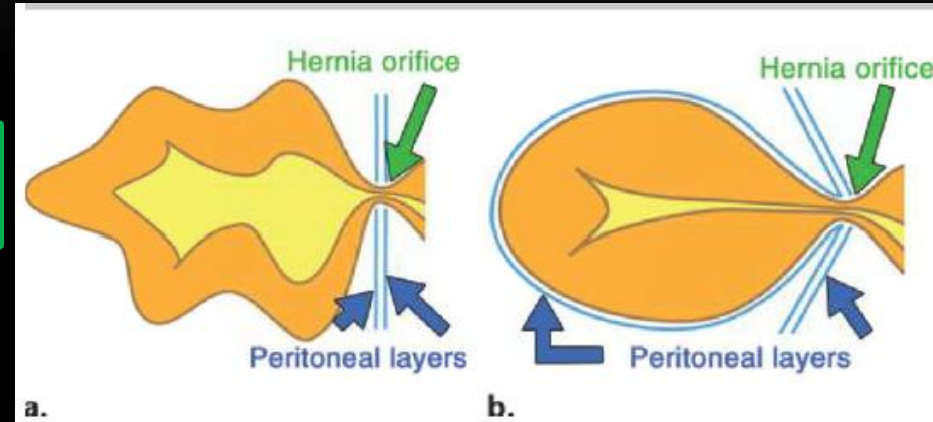
- Ischémie testiculaire



LES HERNIES INTERNES

CLEFS DIAGNOSTIQUES

- Contexte occlusif ou douleurs
- Recherche de « closed loop » U - C
- Identification orifice herniaire int



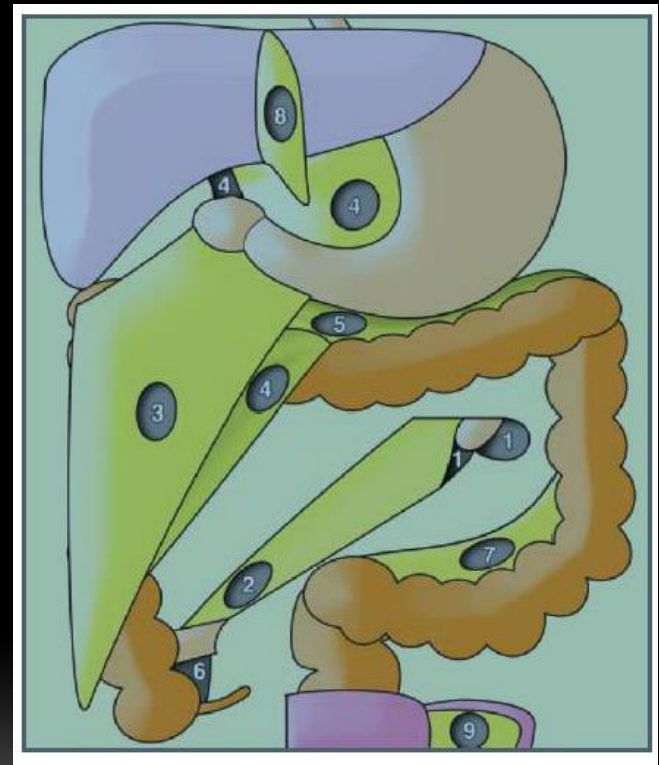
Doishita et al, *RadioGraphics* 2016; 36:88–106

-> déplacement structures vasculaires – digestives

- Aspect en « sac » ou non

LES PLUS FRÉQUENTES APRÈS LE BYPASS

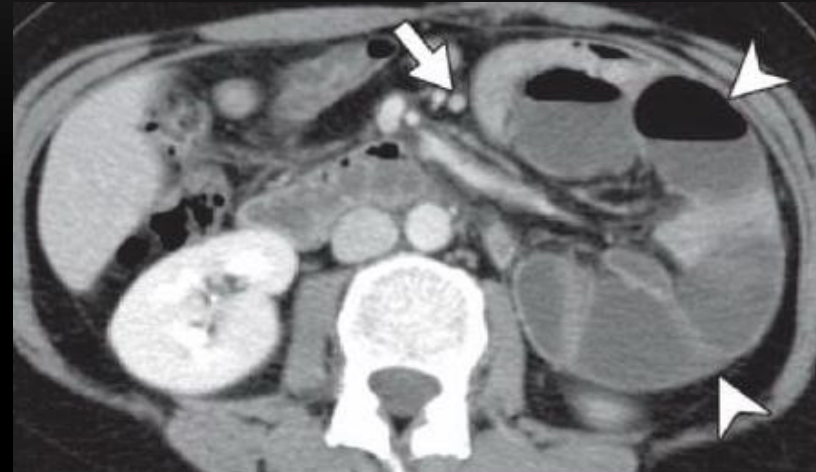
Type de hernie	Fréquence relative (%)
Para-duodénales	50-55
Péri-caecales	10-15
Trans-mésentériques	8-10
Foramen de Winslow	6-10
Inter sigmoïdiennes	4-8
Pelviennes	6
- dont ligament large	4-5



Doishita et al, **RadioGraphics** 2016; 36:88-106

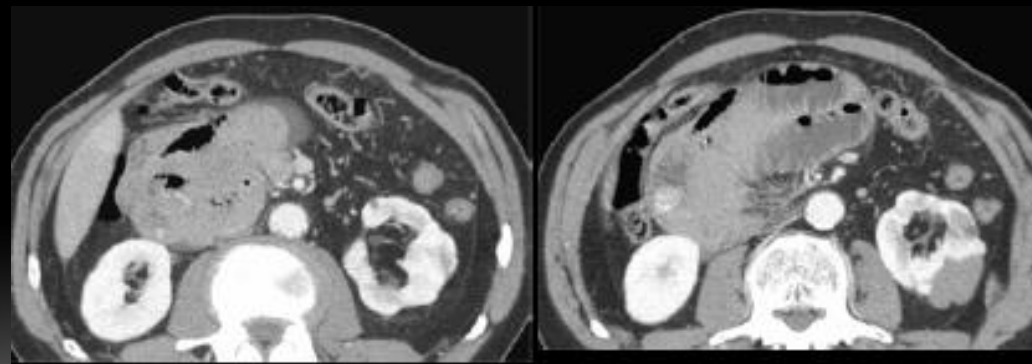
HERNIES PARA-DUODÉNALES

- À G : - VMI
 - anses grêles devant fascia para rénal antérieur G



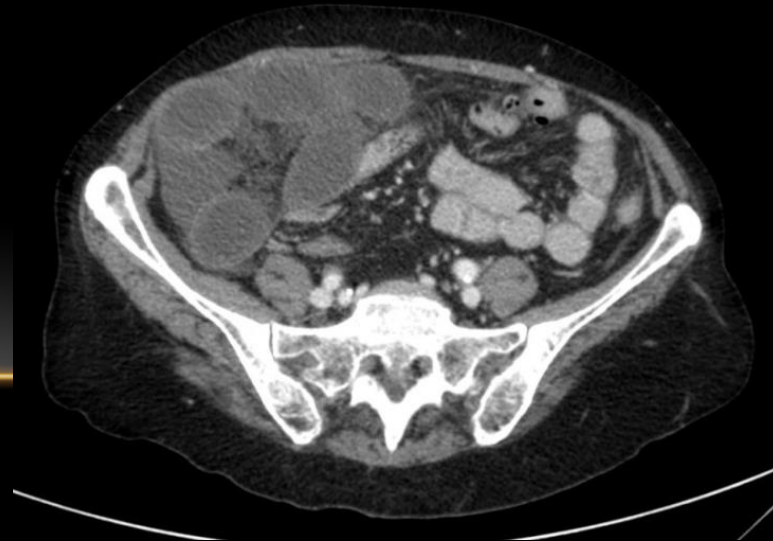
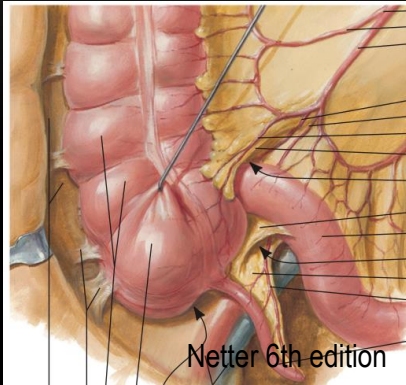
Doishita et al, *RadioGraphics* 2016; 36:88–106

- A D : - VMS et AMS
 - D3



Régent et al. *Hernies internes, les clés du diagnostic*

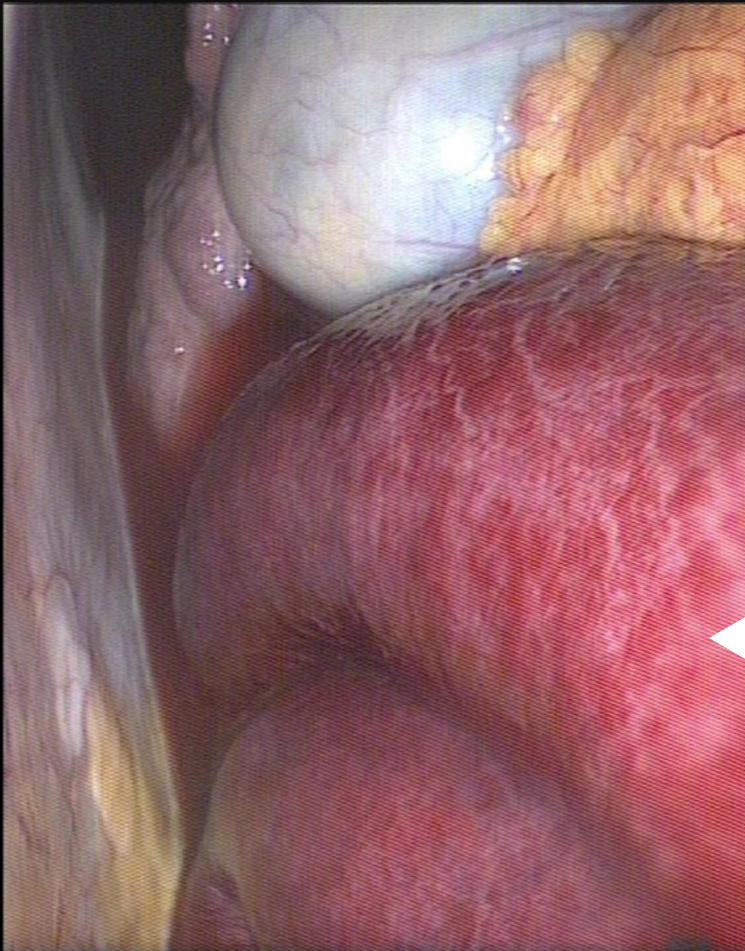
HERNIE PÉRI CAECALE



HERNIE PÉRI CAECALE



HERNIE PÉRI CAECALE



souffrance



CAS CLINIQUE



46 ans

Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication

CND



CAS CLINIQUE



46 ans

Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication

CND



CAS CLINIQUE



46 ans

Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication

CND



CAS CLINIQUE



46 ans

Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication
CND



CAS CLINIQUE



46 ans

Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication

CND



CAS CLINIQUE



46 ans

Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication
CND



CAS CLINIQUE



46 ans

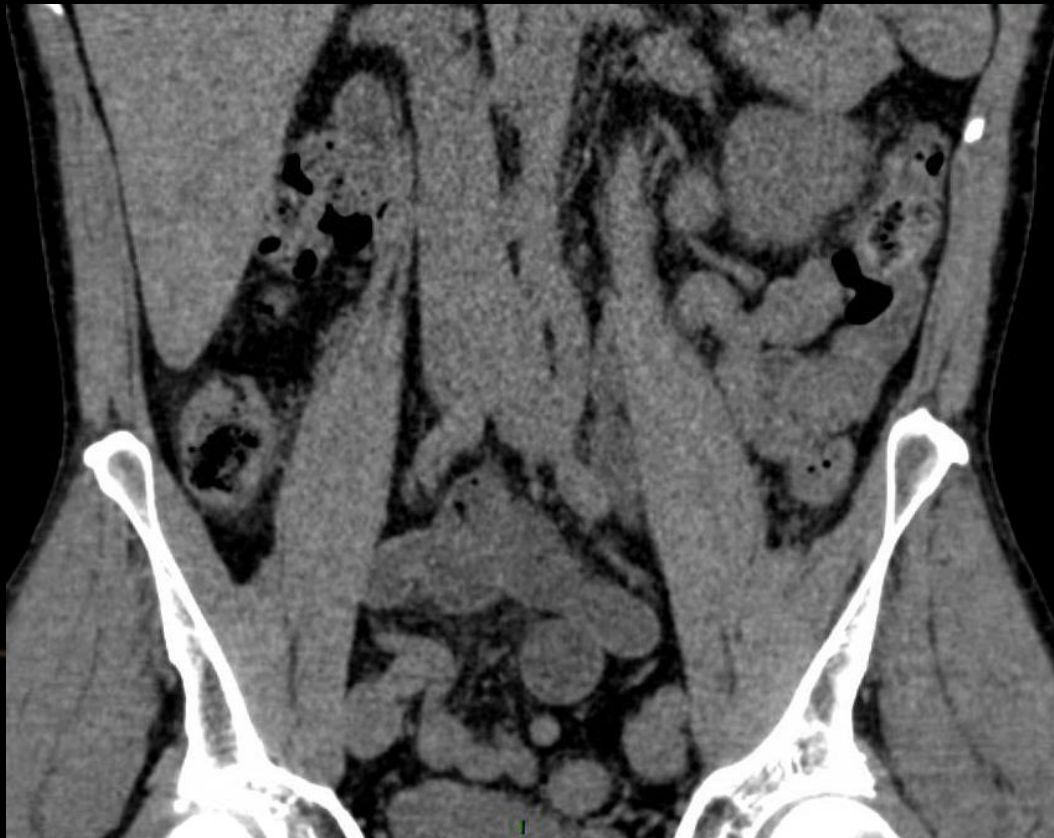
Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication

CND



CAS CLINIQUE



46 ans

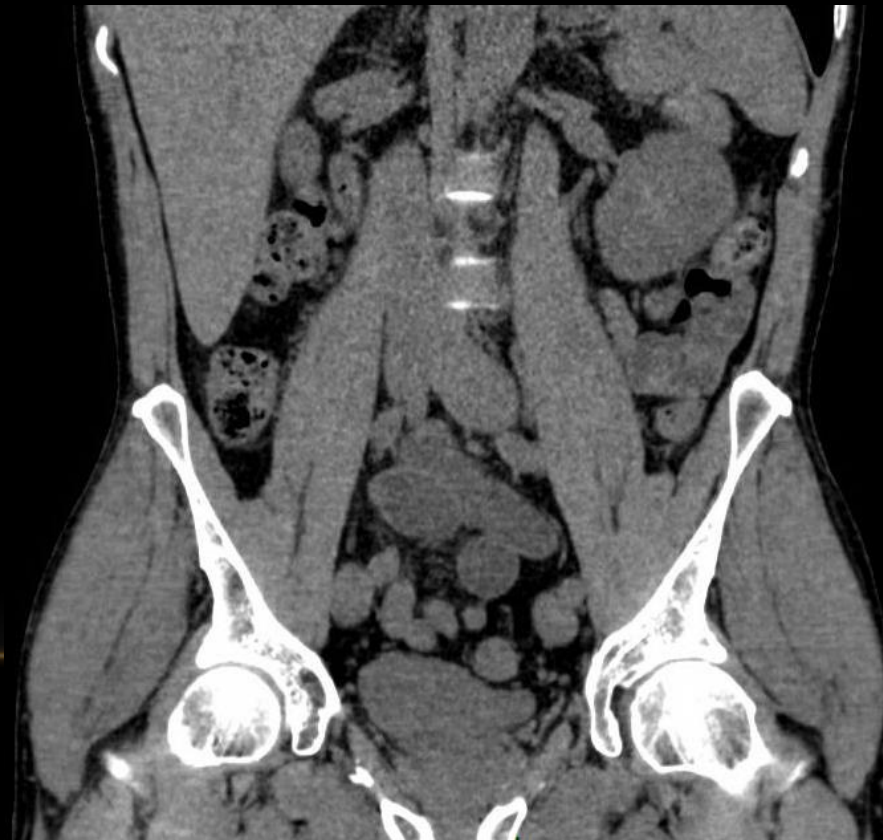
Cher Confrère, voici le résultat de l'examen réalisé le 18/06/09.

UroScanner

Appareil: CT BRILLIANCE 64

Indication

CND



HERNIE FORAMEN WINSLOW

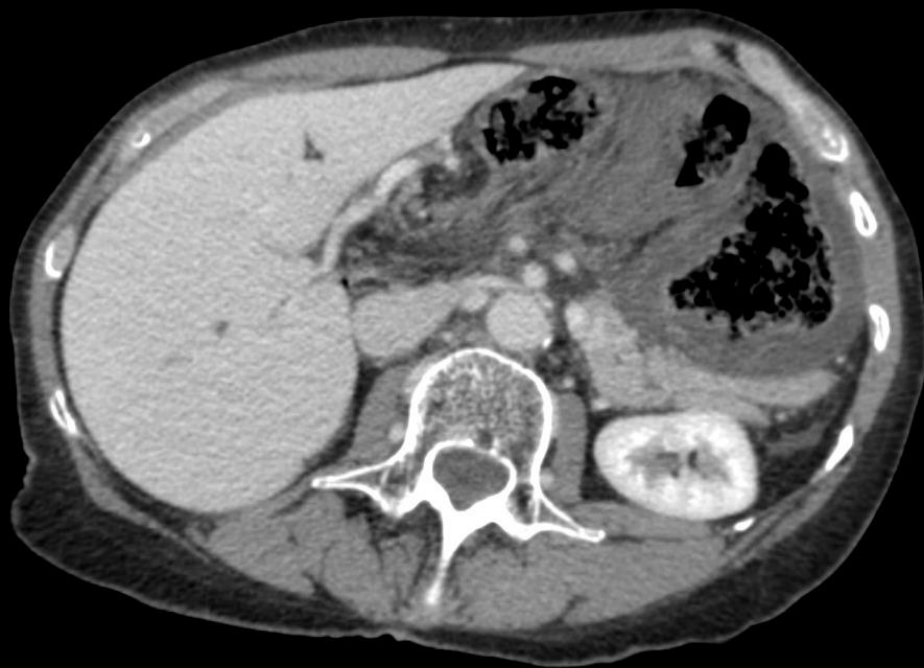
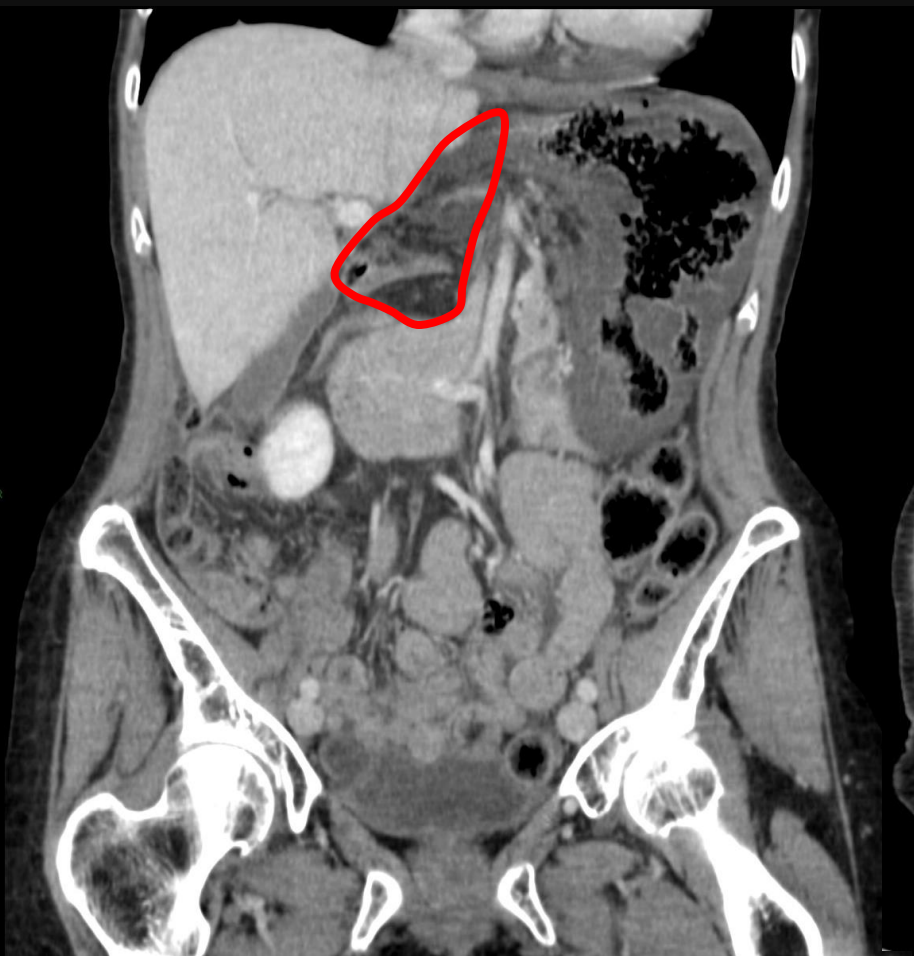
Espace virtuel entre VCI et VP



HERNIE FORAMEN WINSLOW

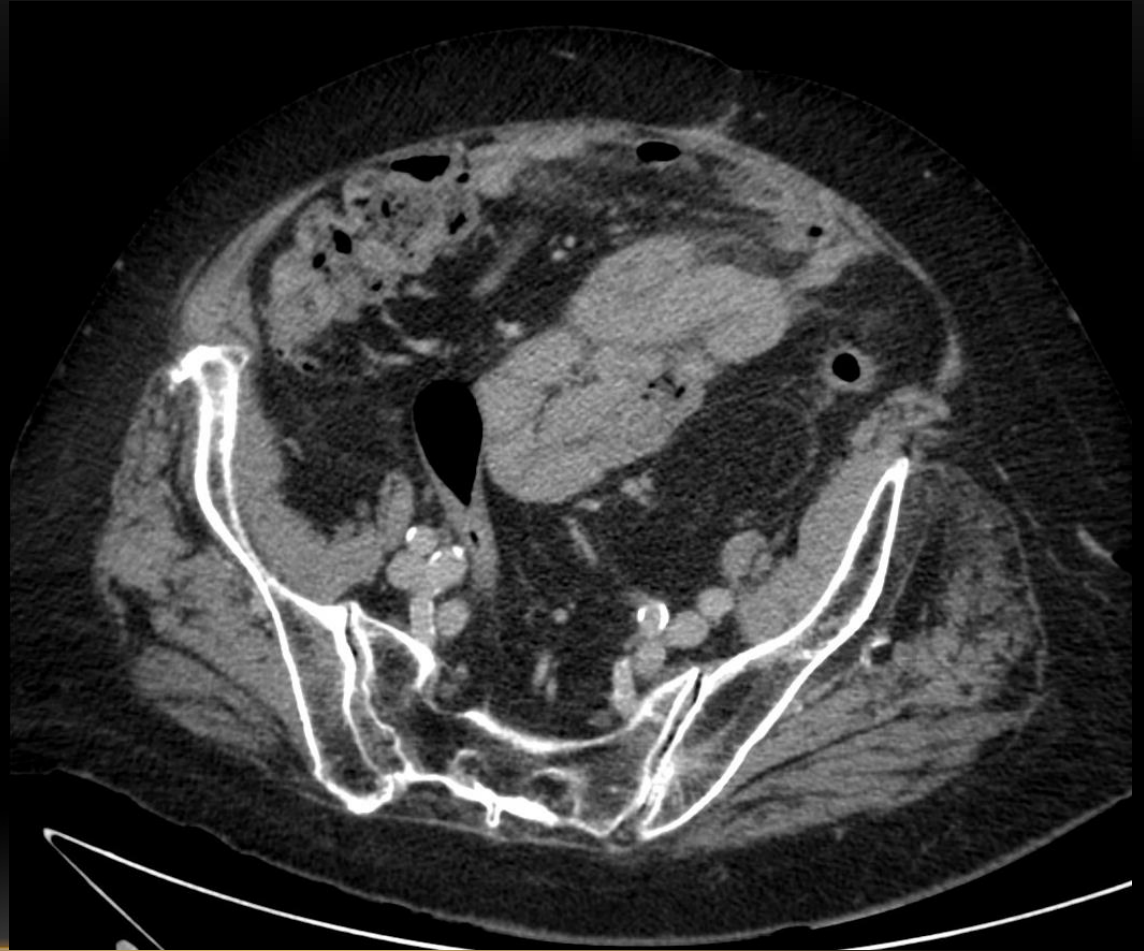


HERNIE FORAMEN WINSLOW

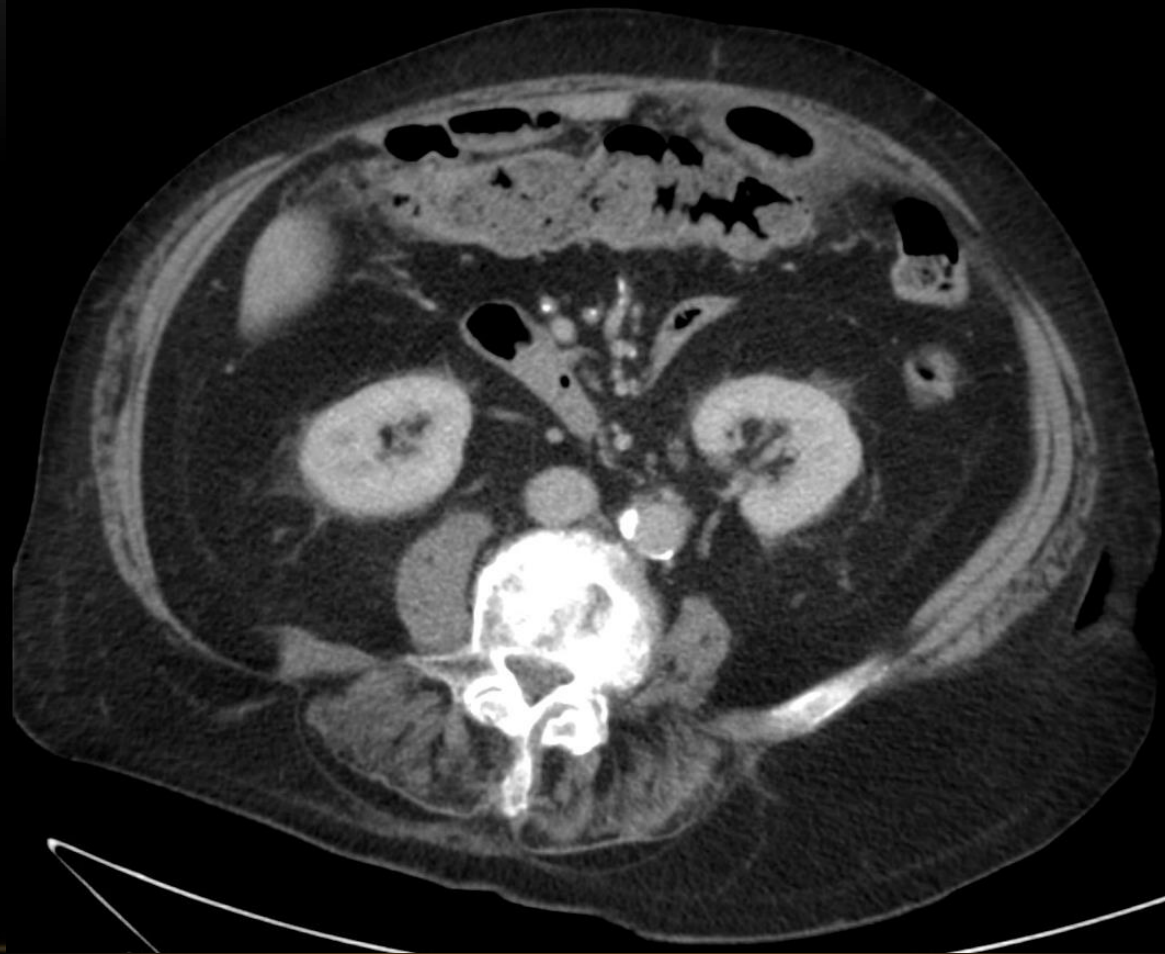


HERNIE TRANS-MÉSENTÉRIQUE

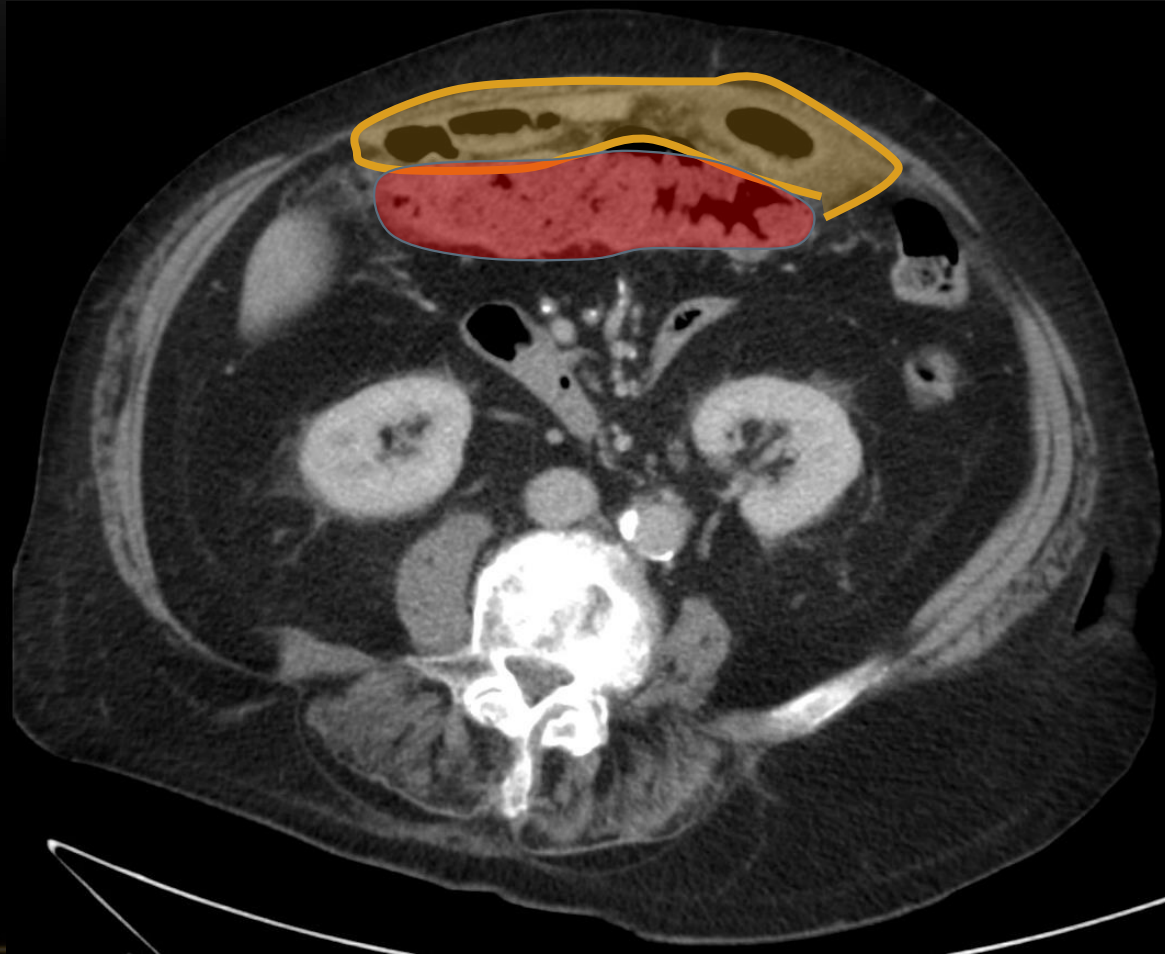
- Difficile
- Pas de sac
- Ant % colon



HERNIE TRANS-MÉSENTÉRIQUE



HERNIE TRANS-MÉSENTÉRIQUE



HERNIE TRANS-MÉSENTÉRIQUE



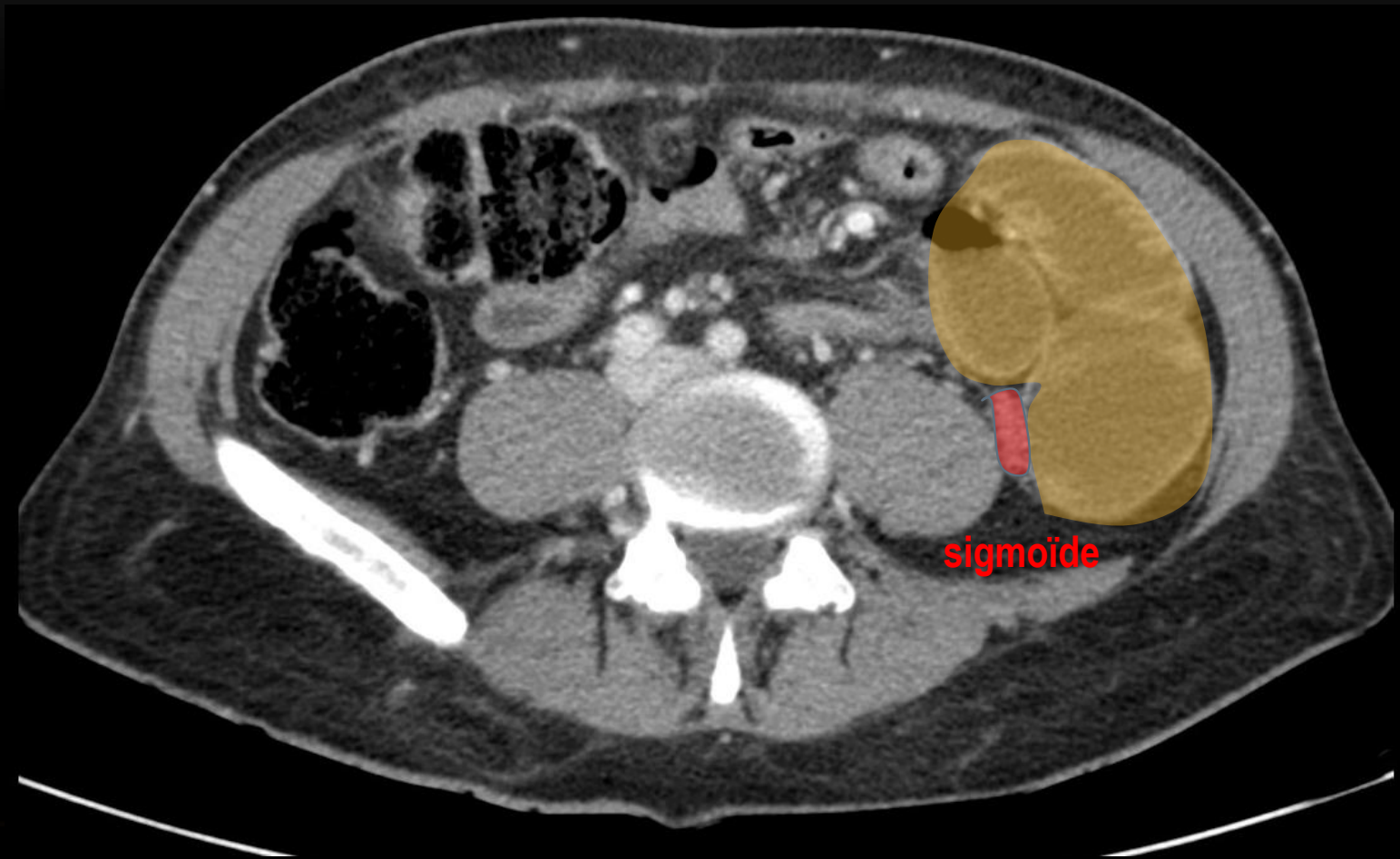
HERNIE INTER-SIGMOÏDIENNE



HERNIE INTER-SIGMOÏDIENNE



HERNIE INTER-SIGMOÏDIENNE



HERNIE INTER-SIGMOÏDIENNE



HERNIE PELVIENNE – LIGT LARGE



44 ans



HERNIE PELVIENNE – LIGT LARGE



44 ans

Closed loop



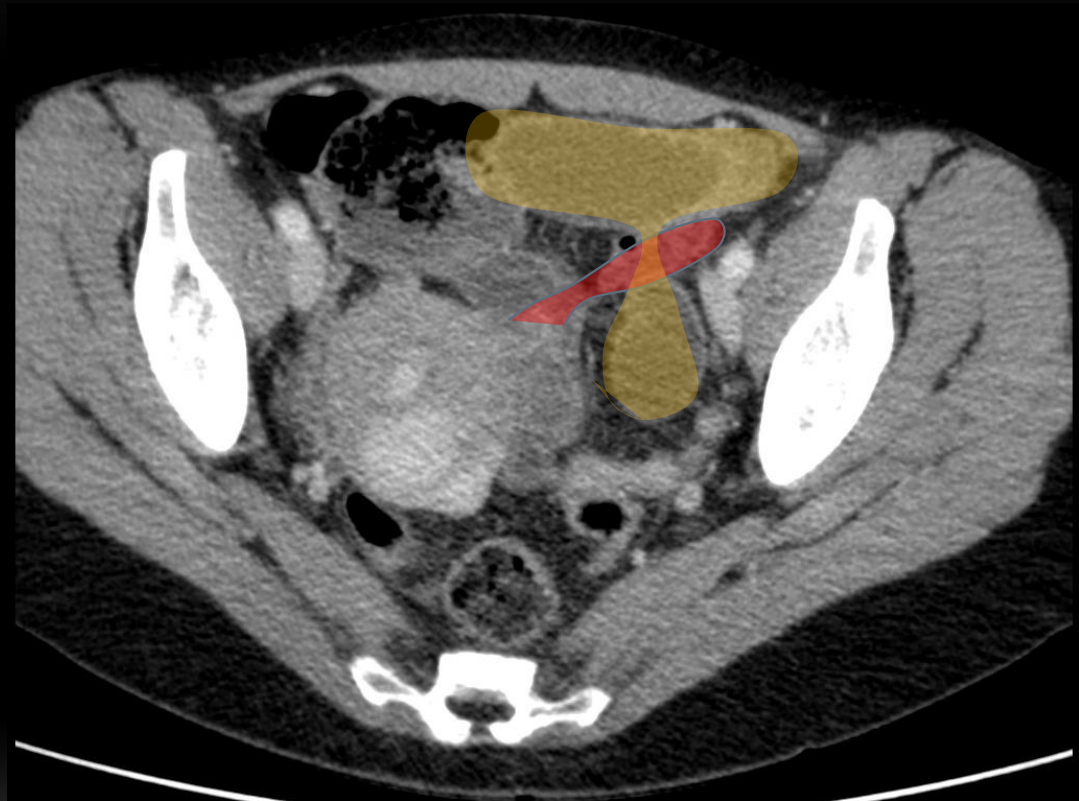
HERNIE PELVIENNE – LIGT LARGE



HERNIE PELVIENNE – LIGT LARGE

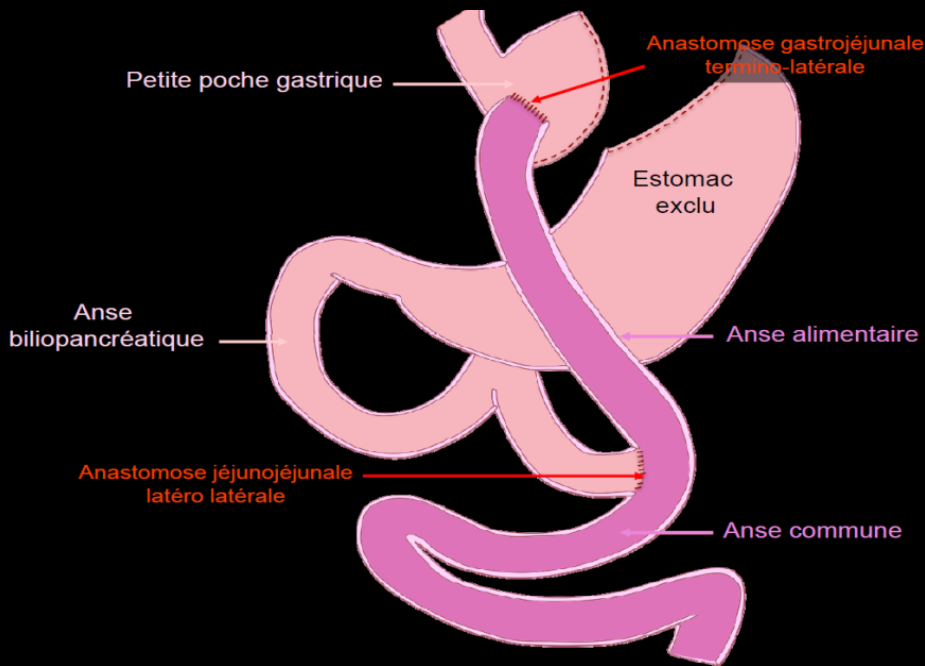


HERNIE PELVIENNE – LIGT LARGE

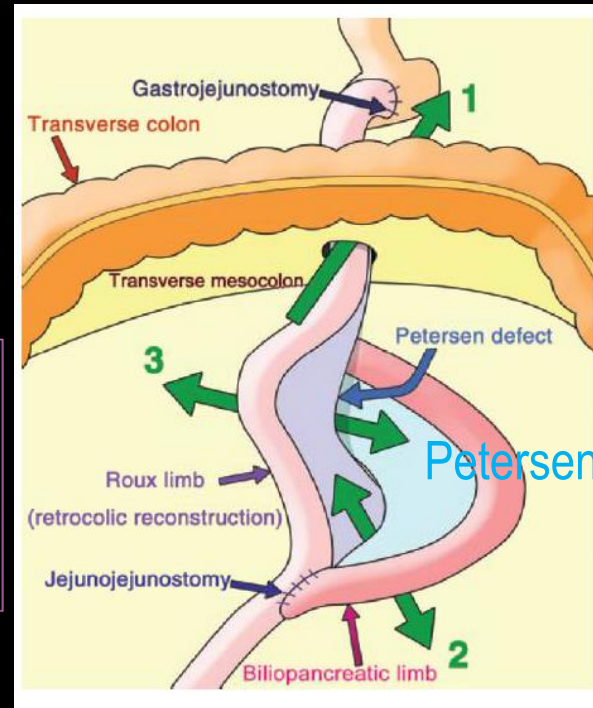


HERNIES INTERNES POST OP BYPASS

- 0,2-9%



ANSE MONTÉE



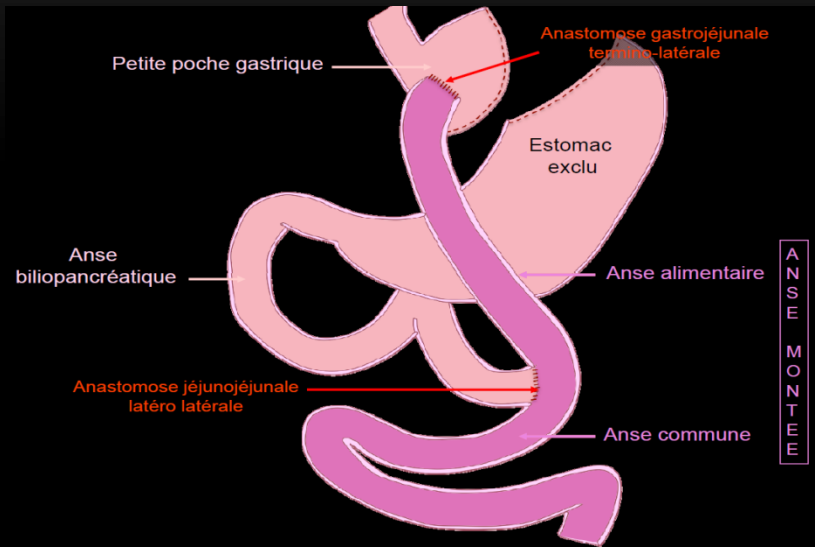
Trans mésocolique 80%

Montage rétro colique

Petersen 6%

Transmésentérique 14%

HERNIES INTERNES POST OP BYPASS



Internal Hernia After Gastric Bypass: Sensitivity and Specificity of Seven CT Signs with Surgical Correlation and Controls

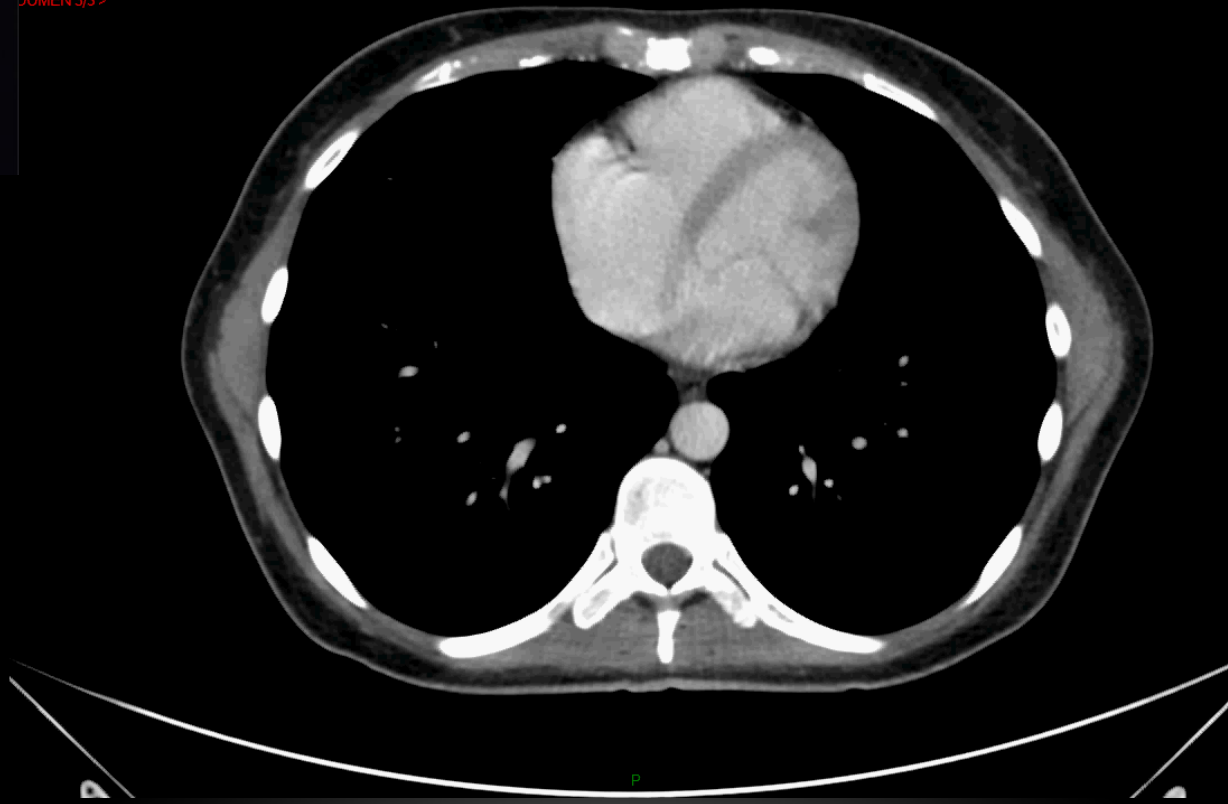
TABLE 2: Sensitivity and Specificity of Seven CT Signs of Internal Hernia

Sign	Sensitivity (%)			Specificity (%)		
	Reviewer 1	Reviewer 2	Reviewer 3 (Resident)	Reviewer 1	Reviewer 2	Reviewer 3 (Resident)
Swirled mesentery	61	78	83	94	89	67
Mushroom	33	72	33	89	89	100
Hurricane eye	17	11	6	100	100	100
Small-bowel obstruction	11	28	39	94	89	83
Clustered loops	17	6	6	72	78	83
Small-bowel behind superior mesenteric artery	0	22	44	100	89	94
Right-sided anastomosis	11	6	6	100	100	100
Overall impression	56	78	72	89	78	78

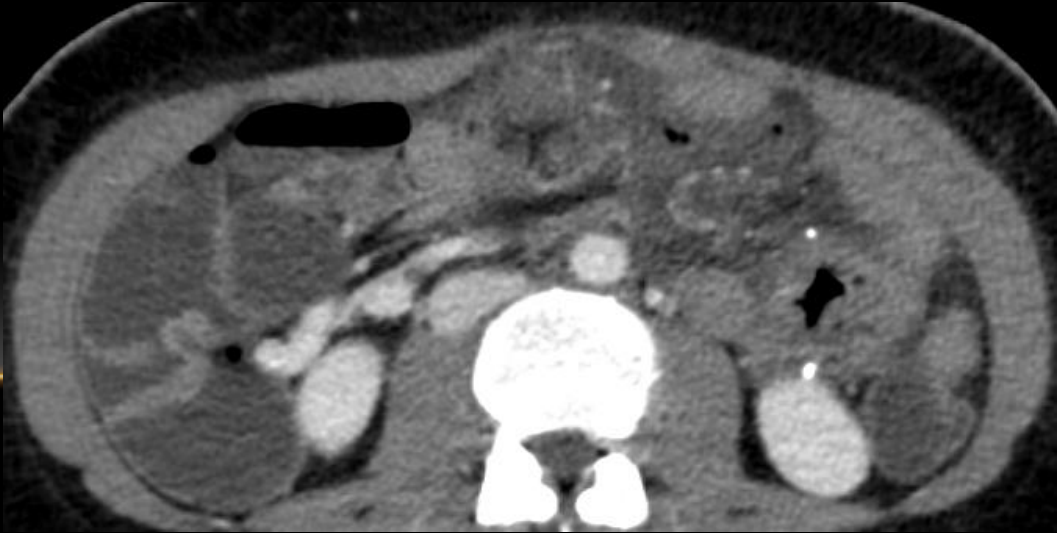
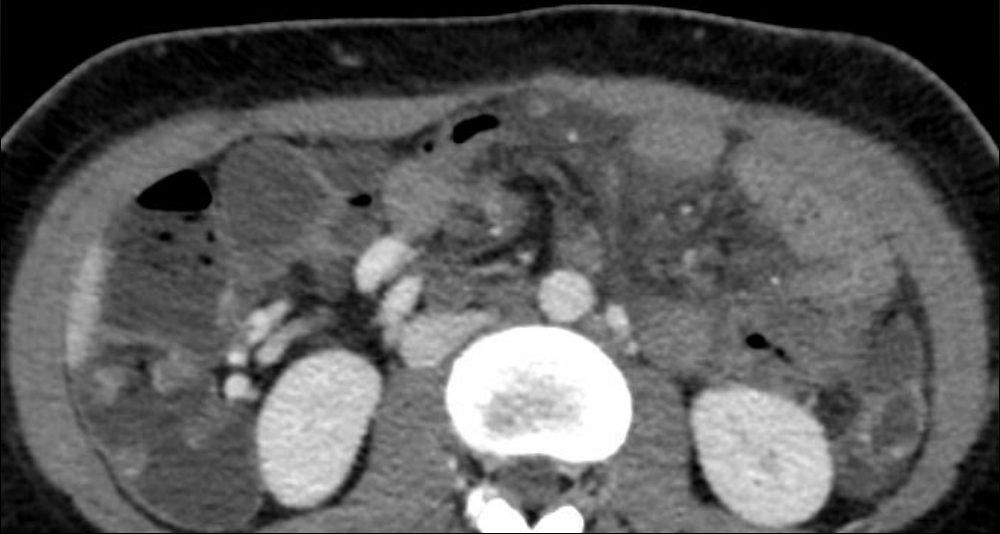
HERNIE DE PETERSEN



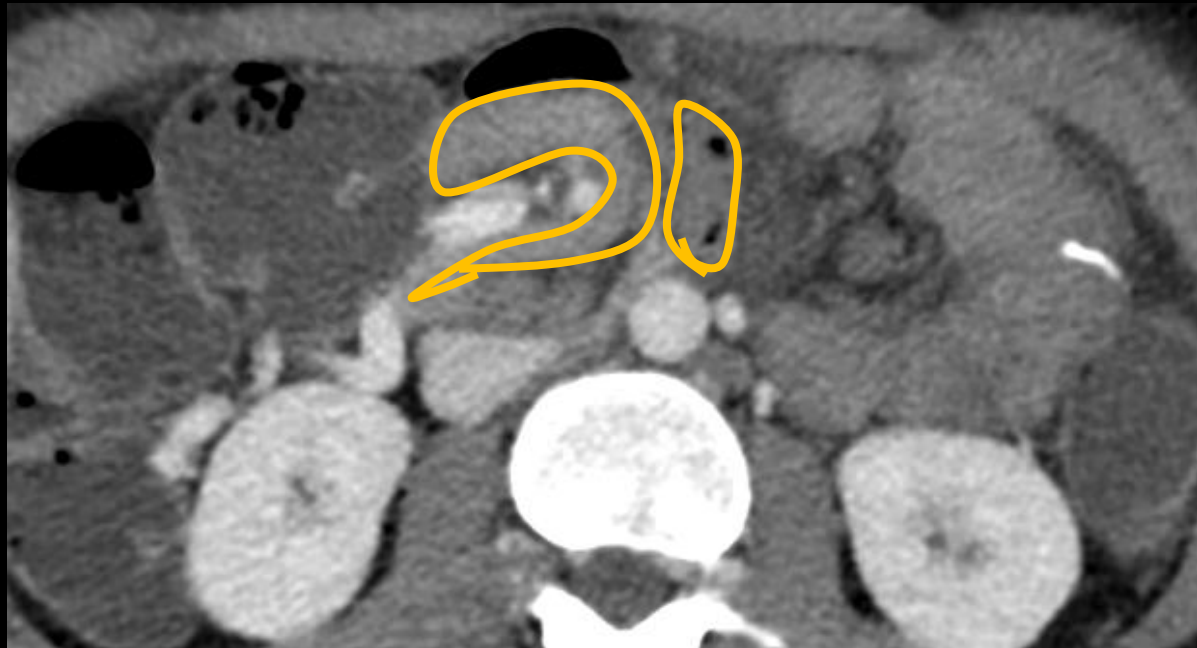
DOMEN 3/3 >



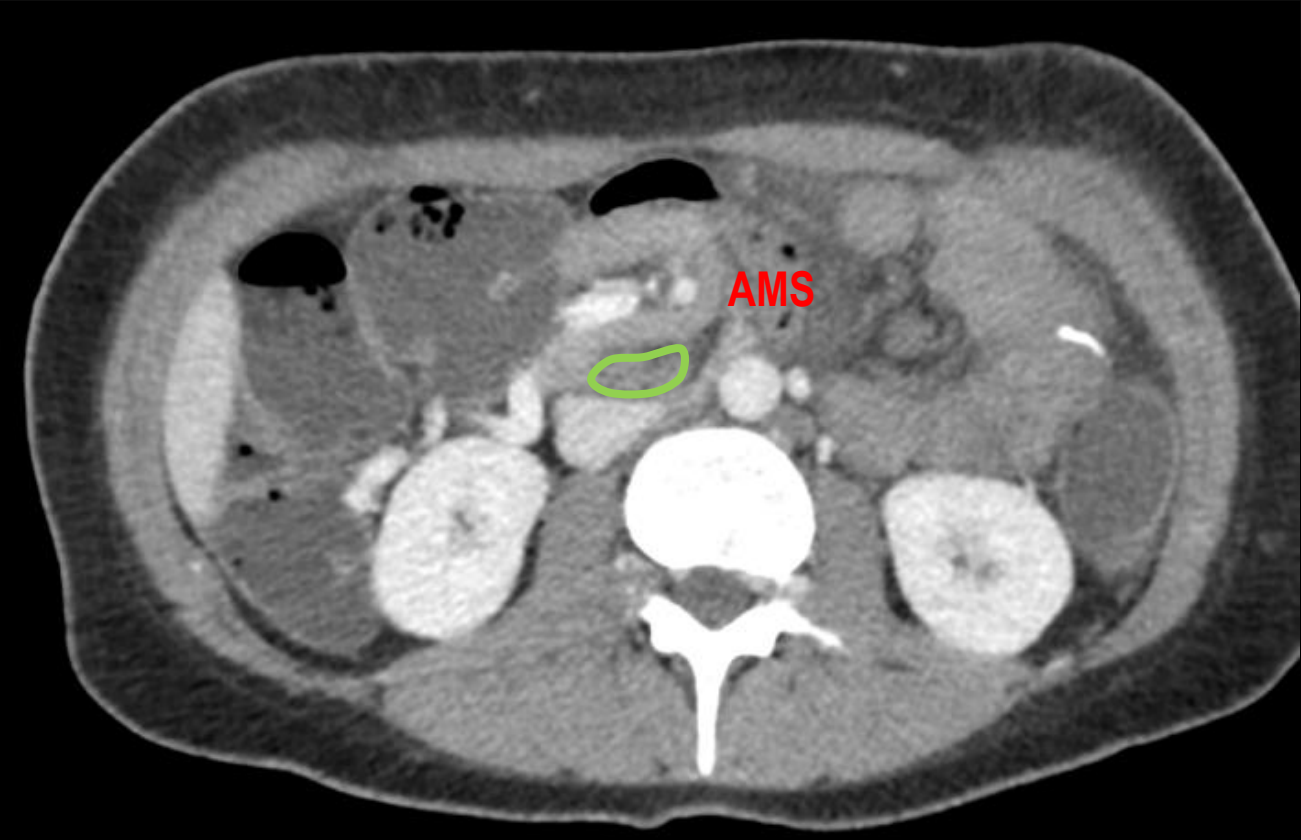
WHIRL SIGN



MUSHROOM SIGN



ABSENCE DE GRELE EN ARRIERE DE L'AMS



INFILTRATION DU MÉSENTÈRE



ANSES ANTÉRIEURES



CONCLUSION



Sonography of Inguinal Region Hernias

David A. Jamadar¹
Jon A. Jacobson¹
Yoav Morag¹
Gandikota Girish¹
Farhad Ebrahim¹
Thomas Gest²
Michael Franz²

OBJECTIVE. The purpose of this article is to describe the anatomy of the inguinal region in a way that is useful for sonographic diagnosis of inguinal region hernias, and to illustrate the sonographic appearance of this anatomy. We show sonographic techniques for evaluating inguinal, femoral, and spigelian hernias and include surgically proven examples.

CONCLUSION. Understanding healthy inguinal anatomy is essential for diagnosing inguinal region hernias. Sonography can diagnose and differentiate between various inguinal region hernias.

Abdominal Wall Hernias: Imaging Features, Complications, and Diagnostic Pitfalls at Multi-Detector Row CT¹

Abbreviations: MPR = multiplanar reformatted, PTFE = polytetrafluoroethylene

RadioGraphics 2005; 25:1501-1520 • Published online 10.1148/rg.256055018 • Content Codes:  

A. Madoz, E. Frampas, A. d'Alincourt, C. Perret, F. Leaute, B. Liebault, B. Dupas. Imagerie des hernies pariétales abdominales. EMC 33-015-A-39

LES HERNIES

Attente chirurgien:

Dr Laurent Coubeau

Pariétales Internes

Internal Hernia After Gastric Bypass: Sensitivity and Specificity of Seven CT Signs with Surgical Correlation and Controls

Lockhart et al, AJR 2007; 188:745-750

Internal Hernias in the Era of Multidetector CT: Correlation of Imaging and Surgical Findings¹

RadioGraphics 2016; 36:88-106