

DIU D'ECHOGRAPHIE ET TECHNIQUES ULTRA SONORES

MODULE DIGESTIF

2020/2021



SCIENCES FONDAMENTALES
ET BIOMÉDICALES

Sciences

Université de Paris

LE TUBE DIGESTIF EN ECHO

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1200 Bruxelles



Docteur Pascale PLAQUET CAMUS
CHU Amiens - Péronne



LE TUBE DIGESTIF EN ECHO

Cible : toute pathologie inflammatoire / ... »ite«

orientation clinique

- Douleurs abdominales
++FID , FIG

- Signes digestifs et
généraux

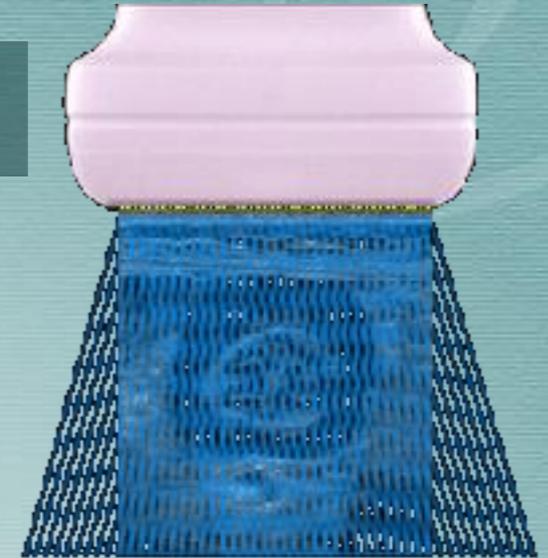
Découverte fortuite sur
examen global

1er choix :

Appendicite
Colites / MICI
diverticulite

Pédiatrie / IIA, SHP

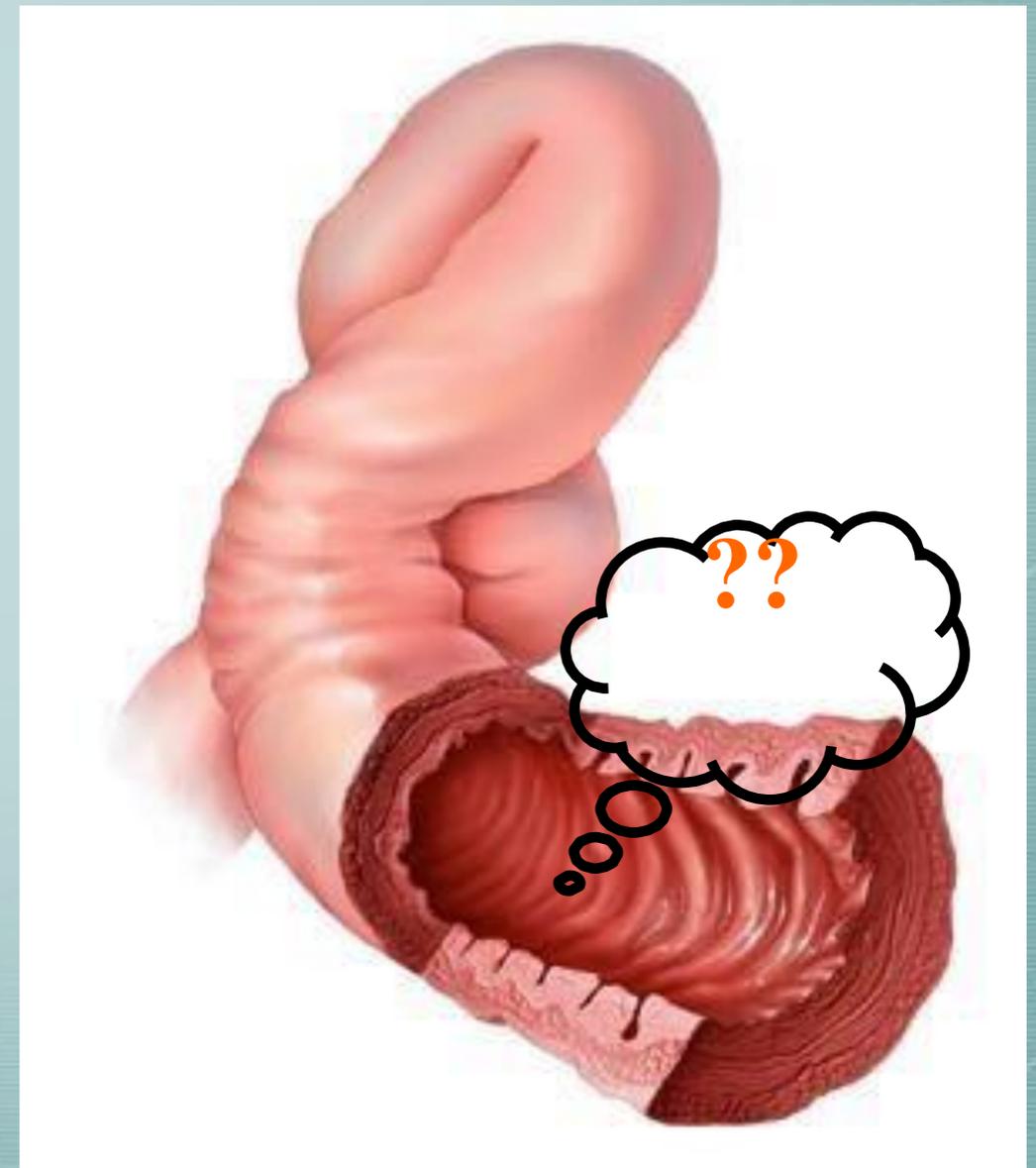
LE TUBE DIGESTIF EN ECHO



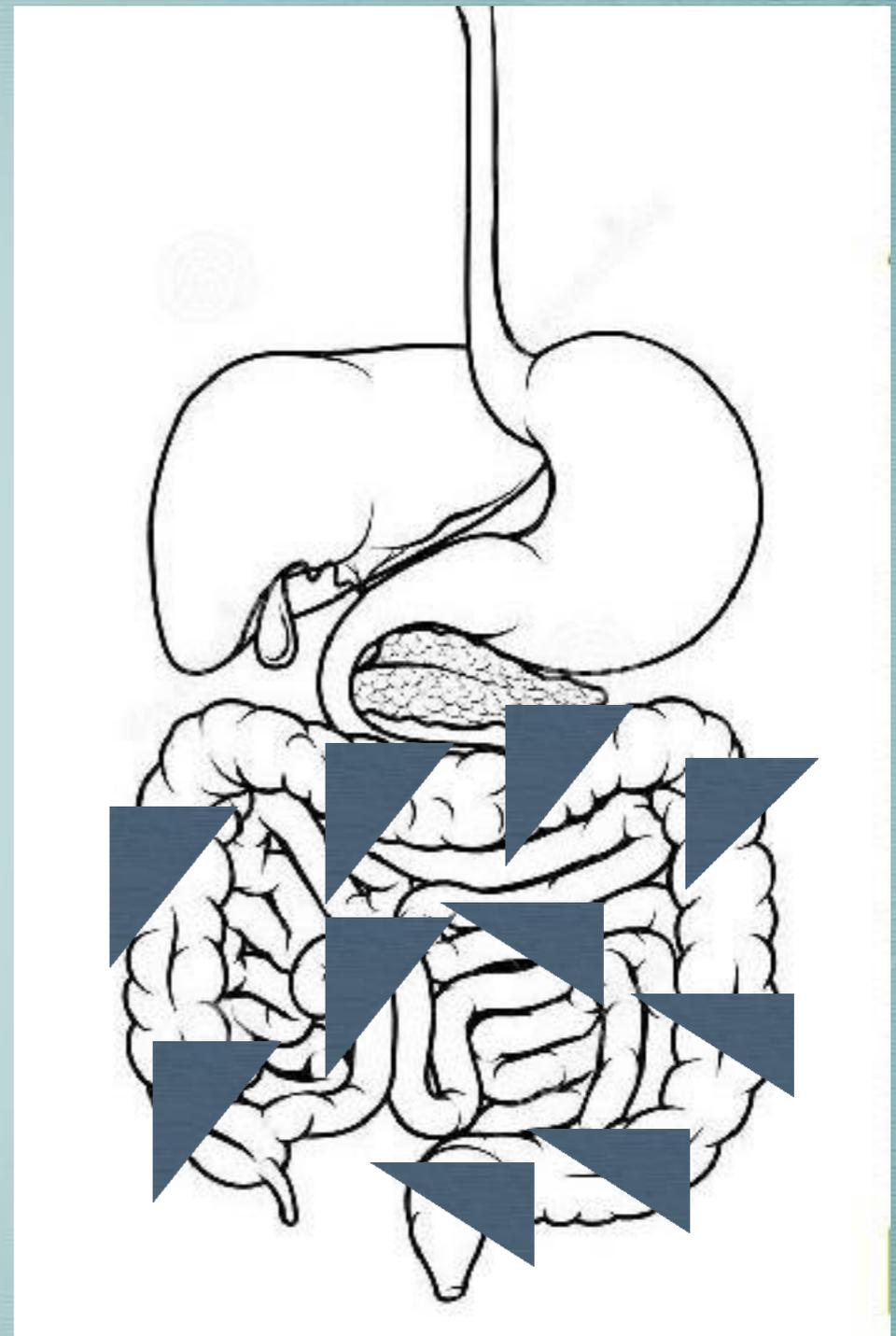
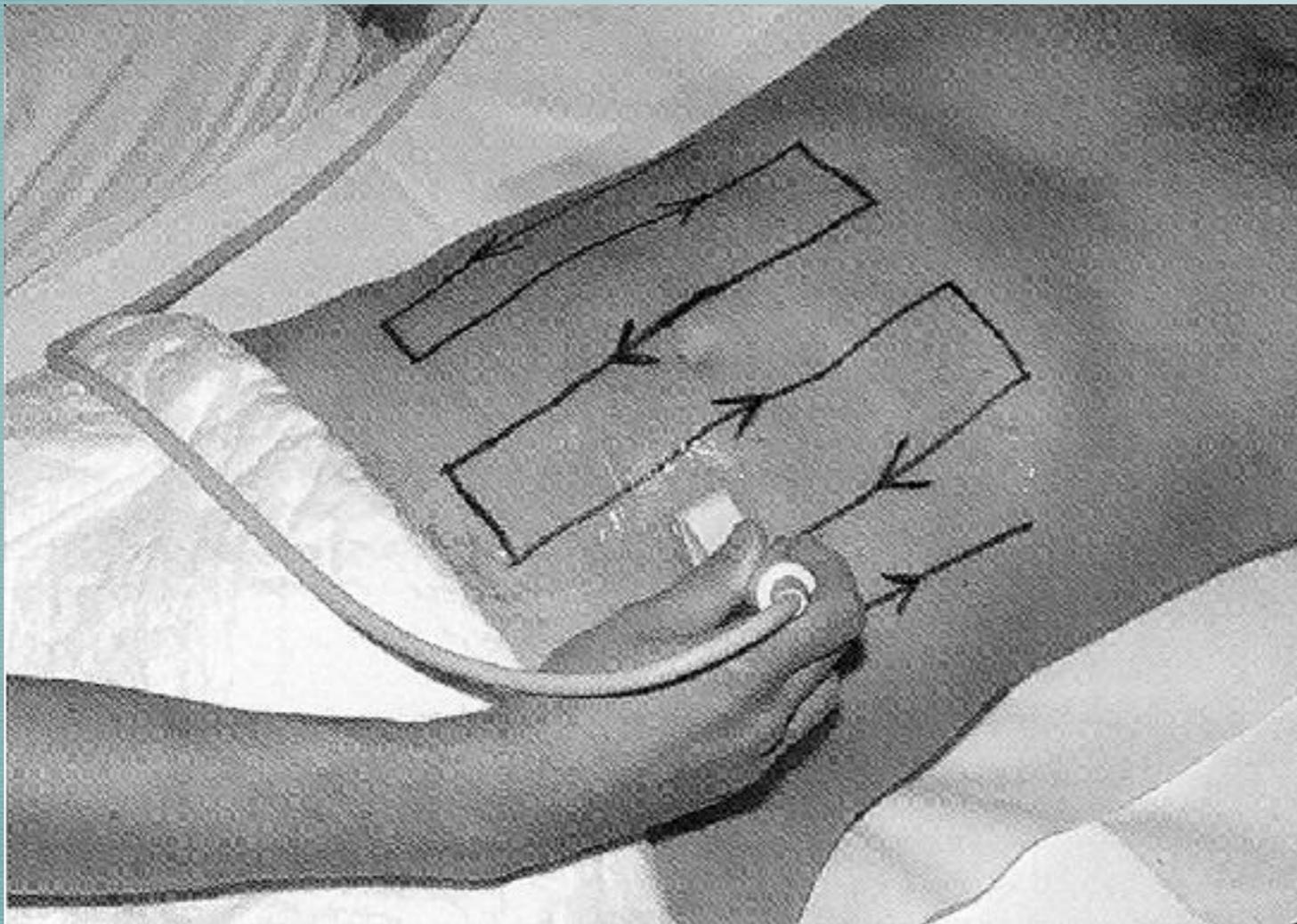
Après examen abdominal général
Examen ciblé/changement de sonde

⇒ Segments

Oesophage
Estomac
Grêle
Appendice
Colon



Technique



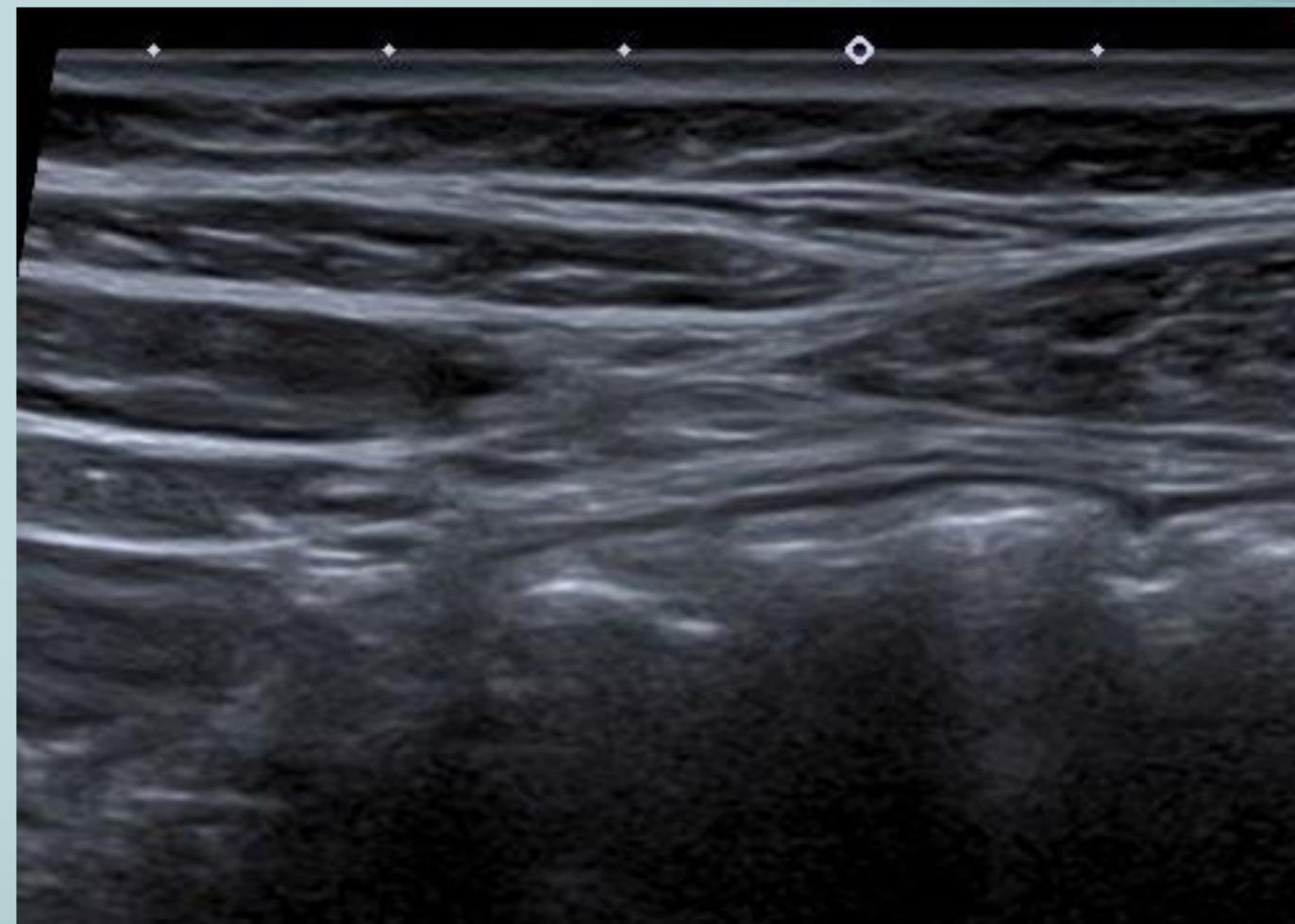
Sturm et al Eur Radiol, 2004

Réglages adaptés !.....

Analyse du tube digestif en US



Sonde de basse fréquence



Sonde de haute fréquence

Où est le tube digestif

REPERES ANATOMIQUES

épigastre : estomac / duodénum

HC droit : duodénum / colon dt

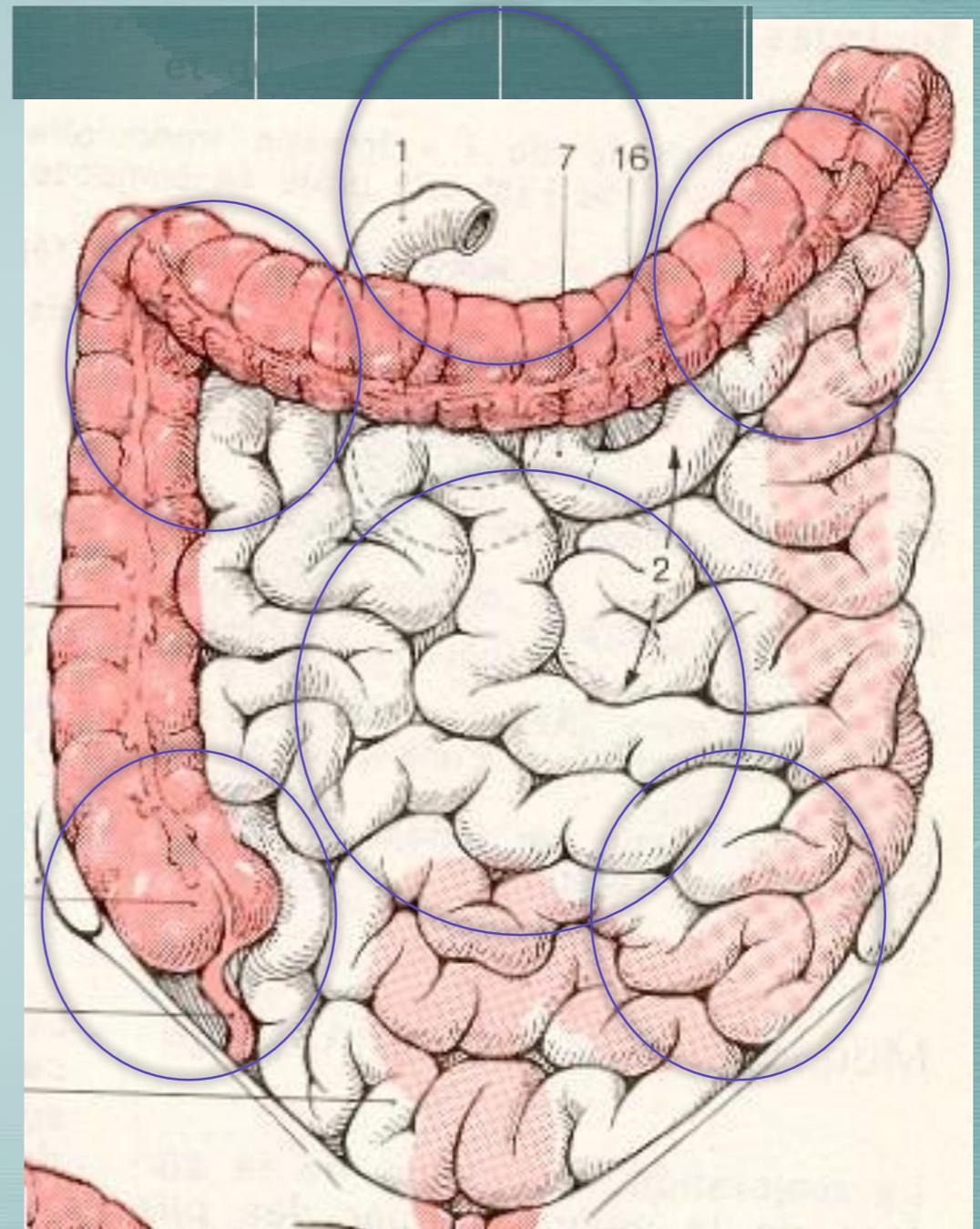
Flanc droit : colon

FID : caecum / appendice

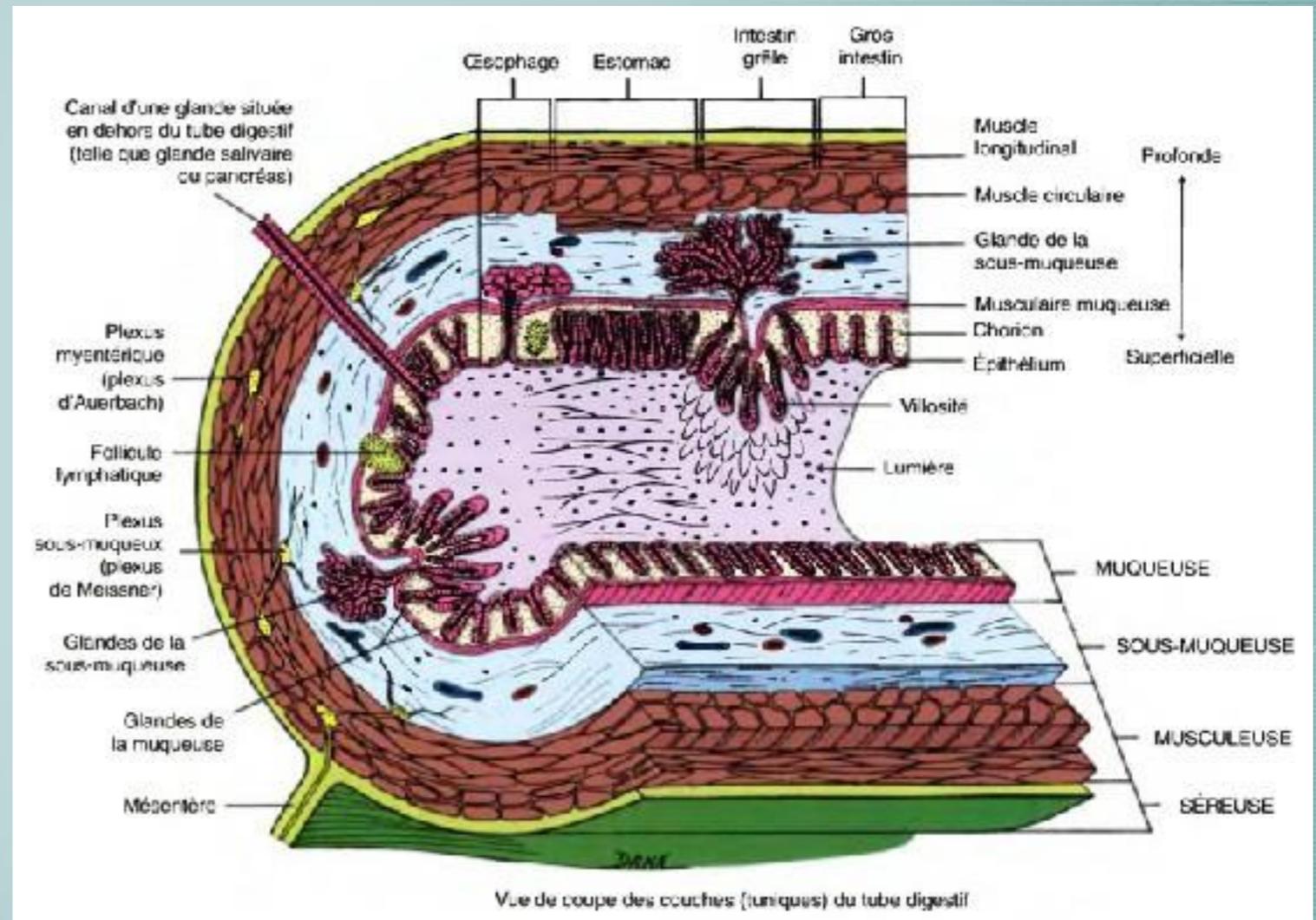
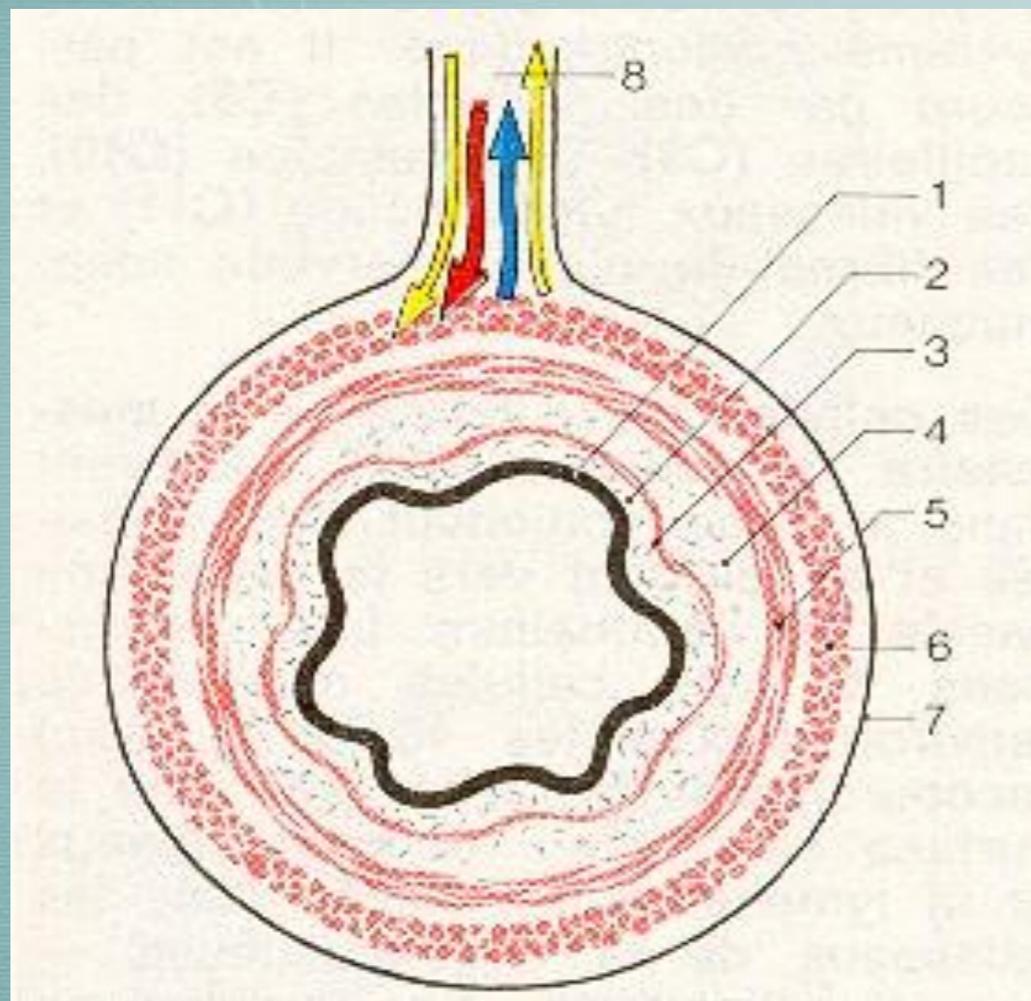
compartiment médian : grêle

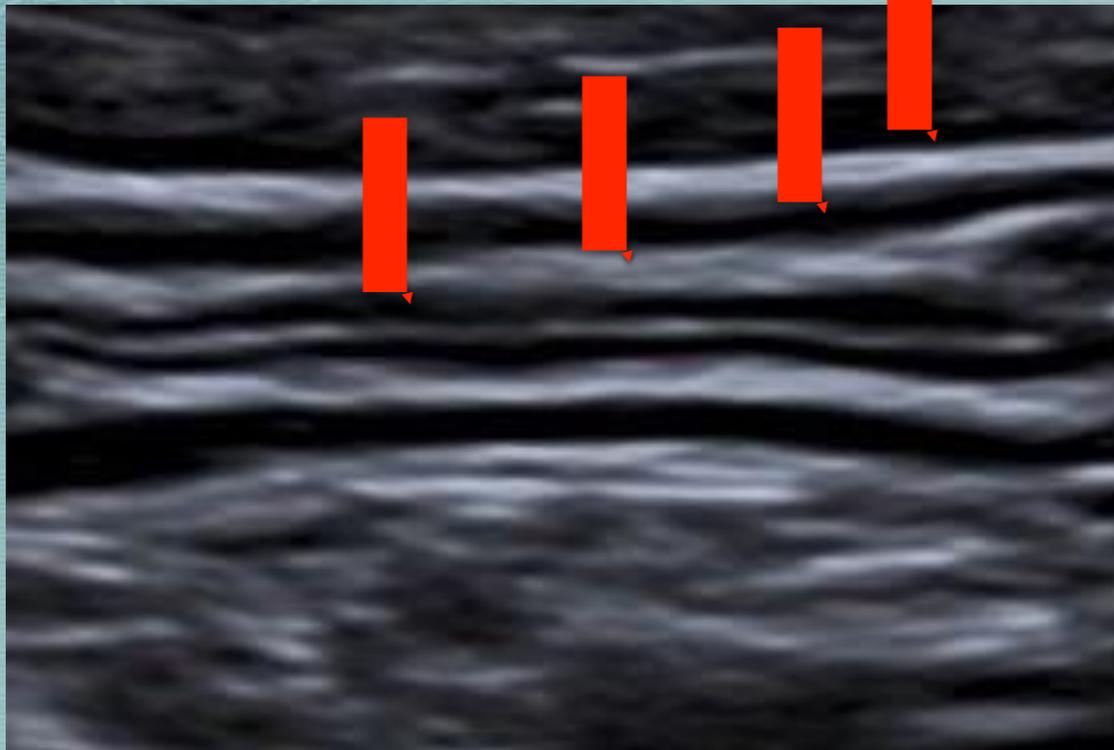
HC , flanc gauche : colon g

FIG : sigmoïde



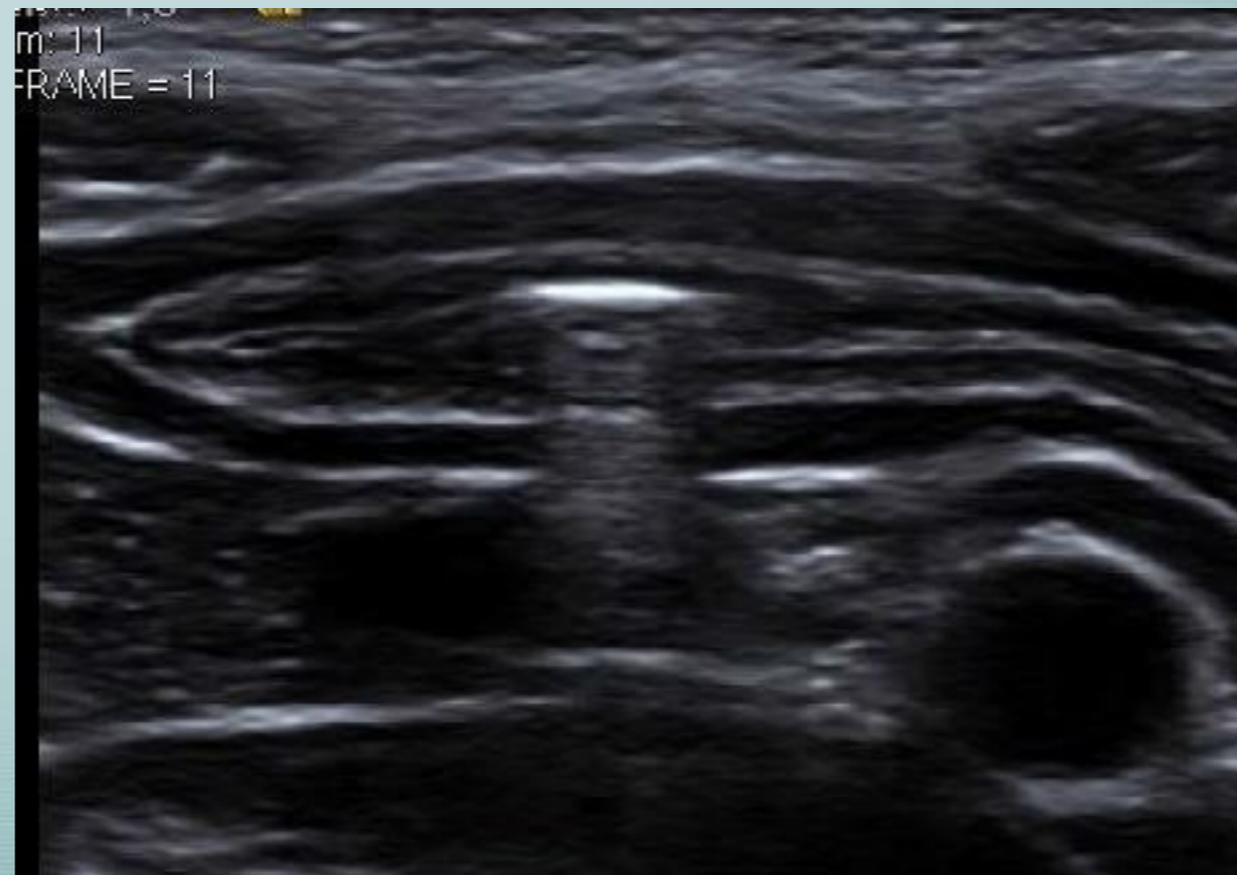
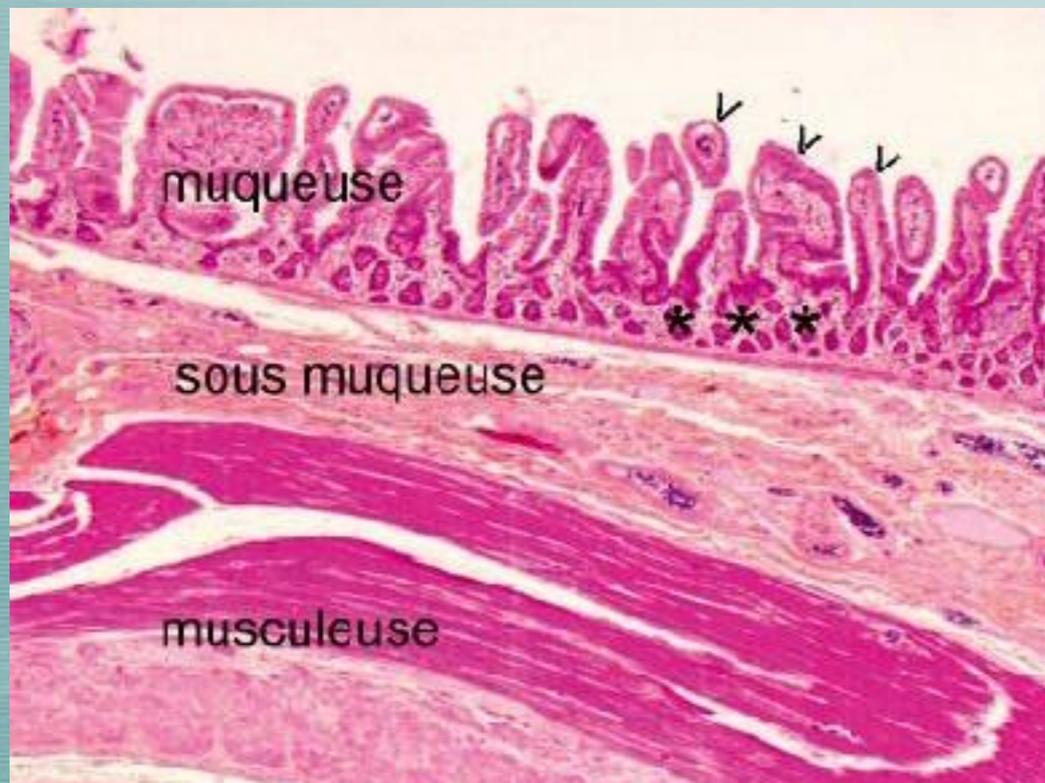
Aspect US normal du tube digestif : la signature digestive



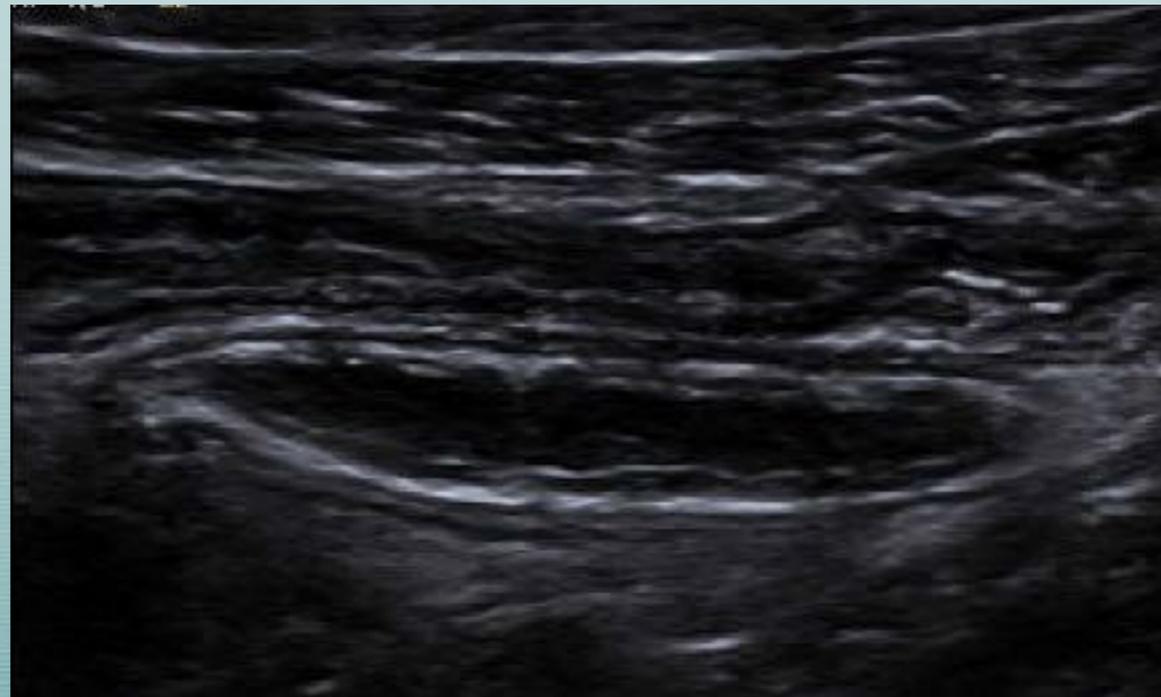
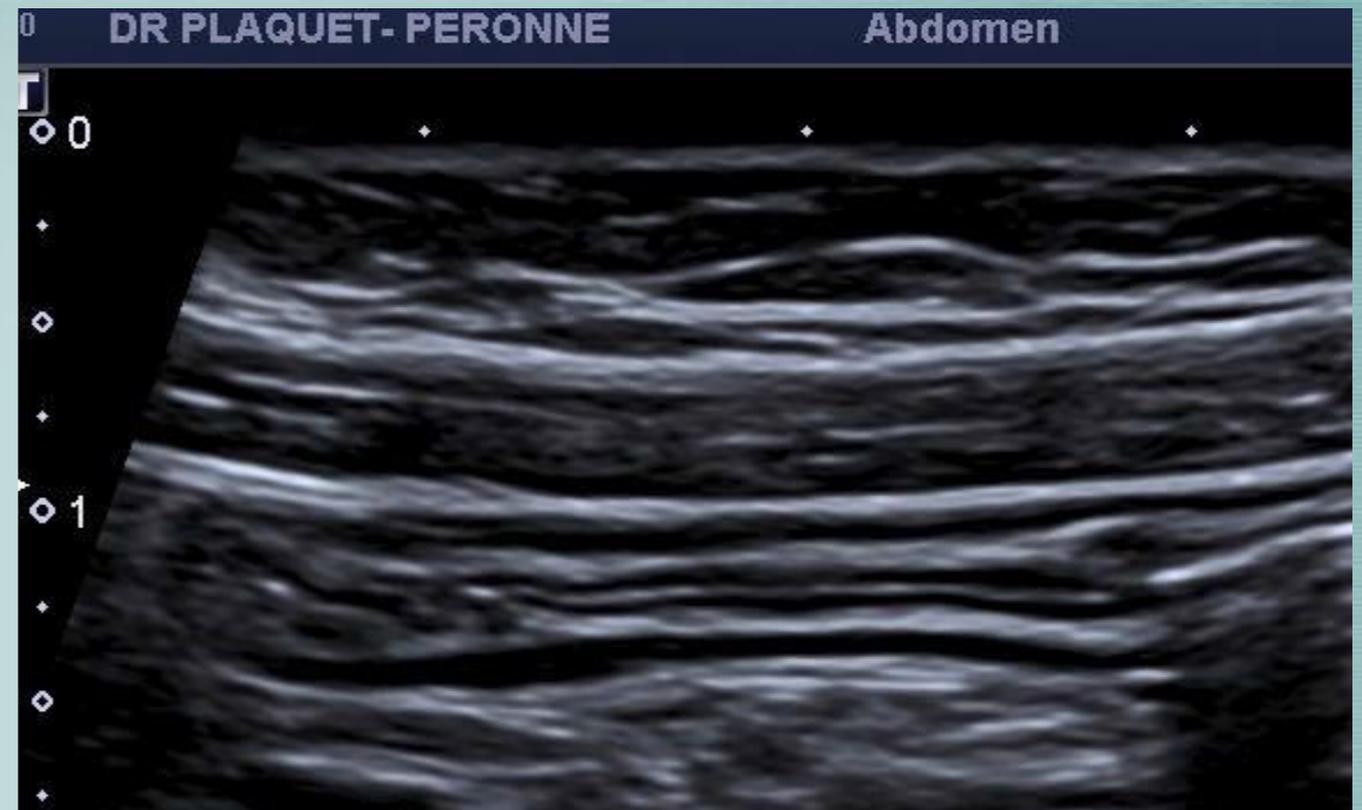


Paroi digestive normale

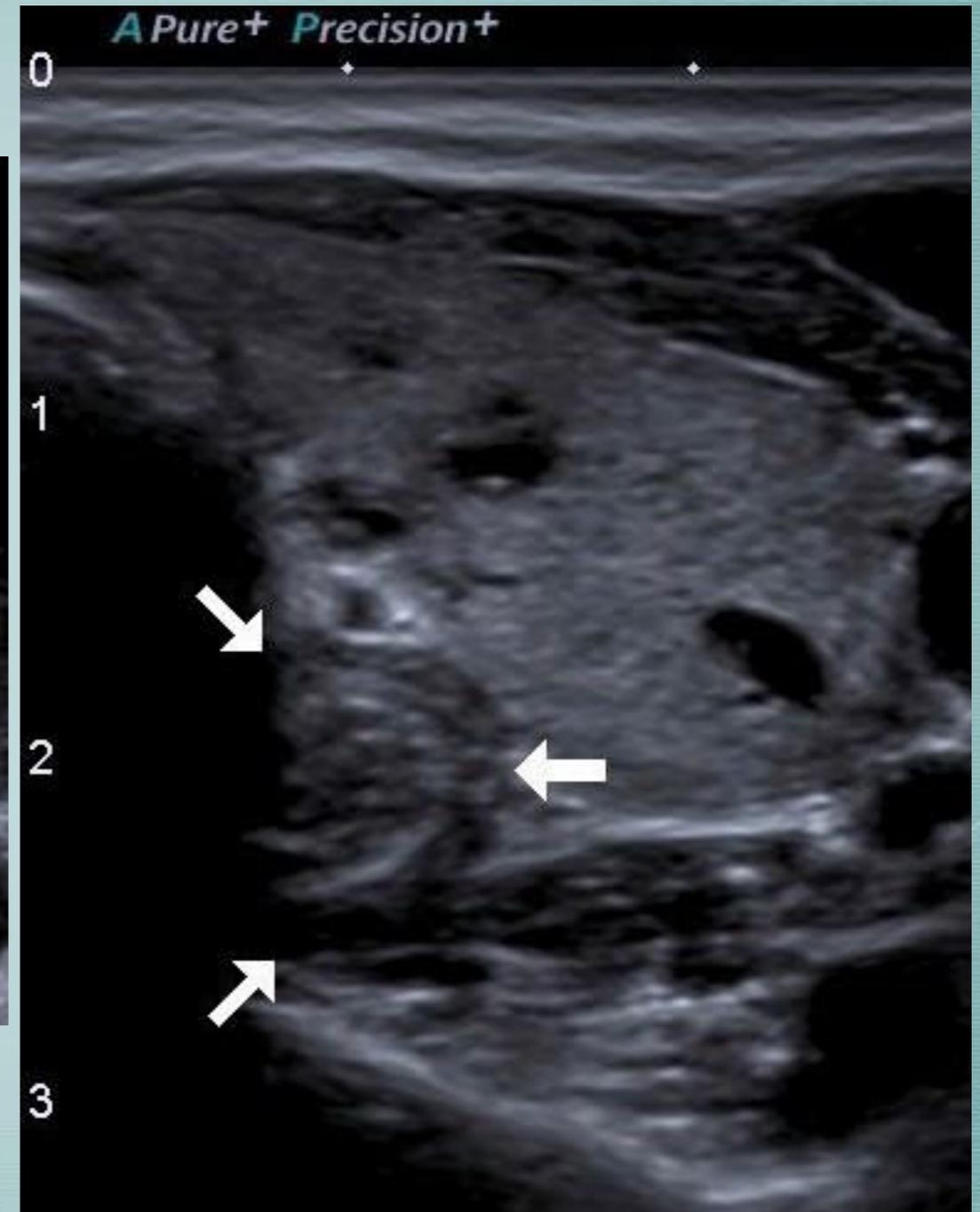
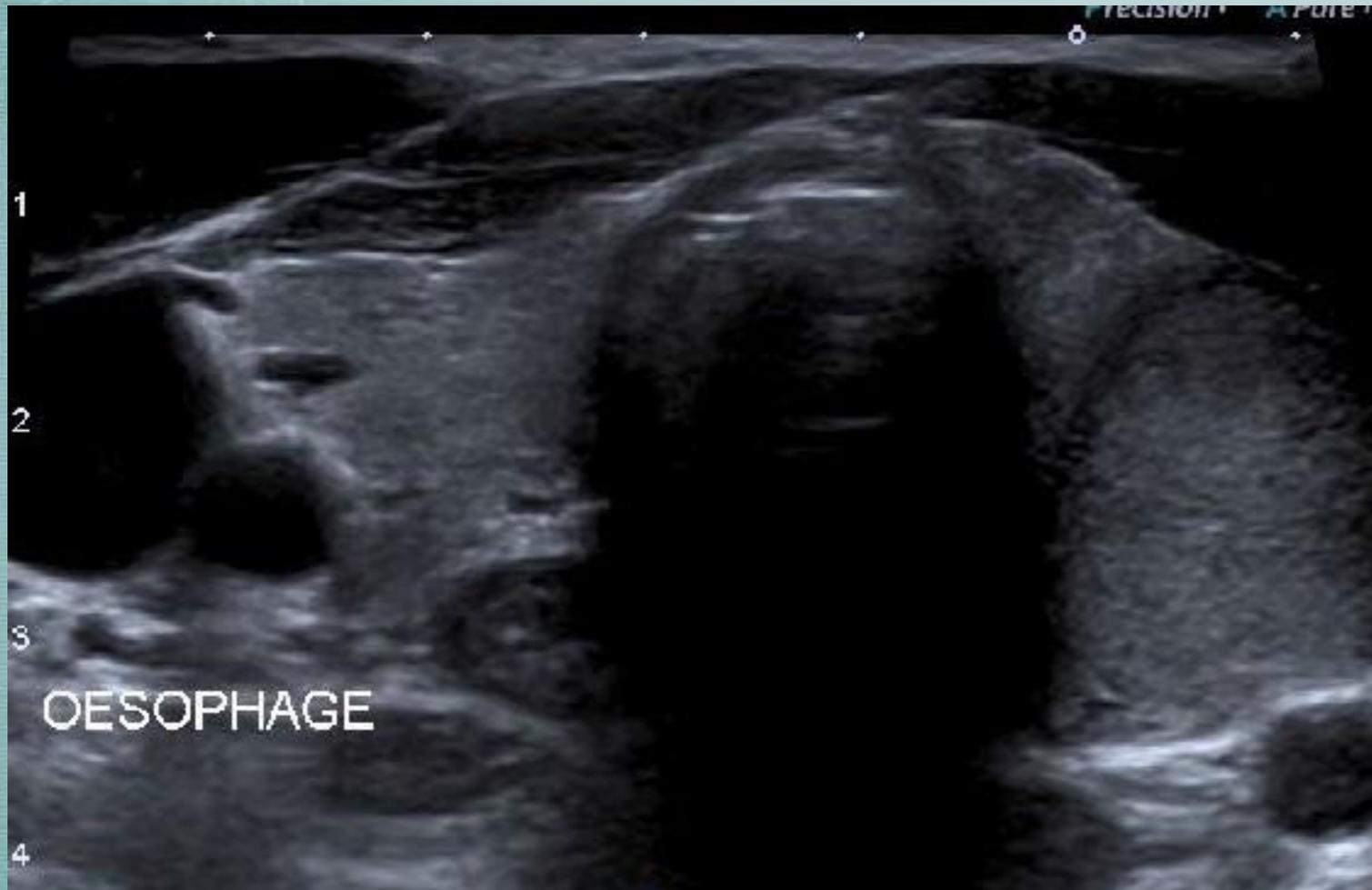
muqueuse : hypo
 ss muqueuse : hyper
 musculieuse : hypo
 fine séreuse: hyper



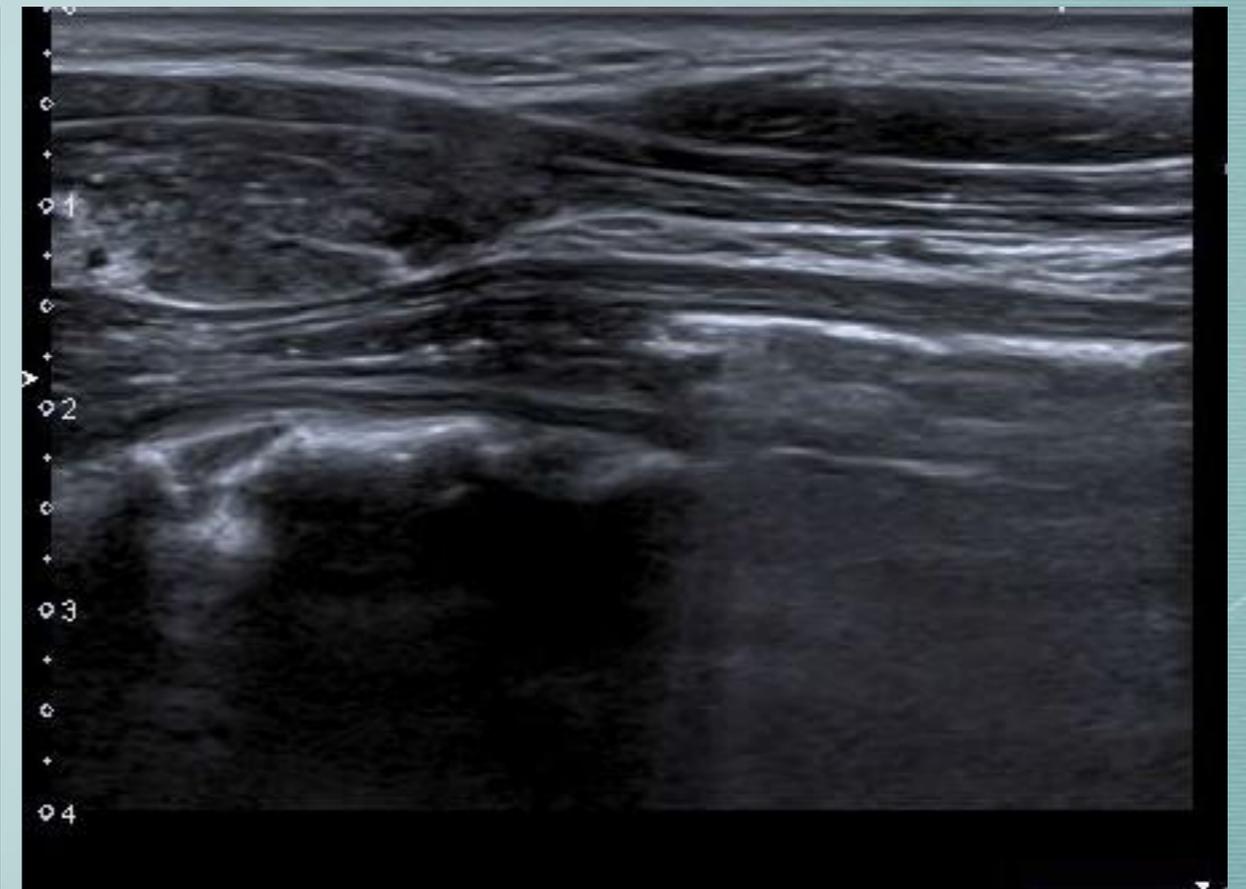
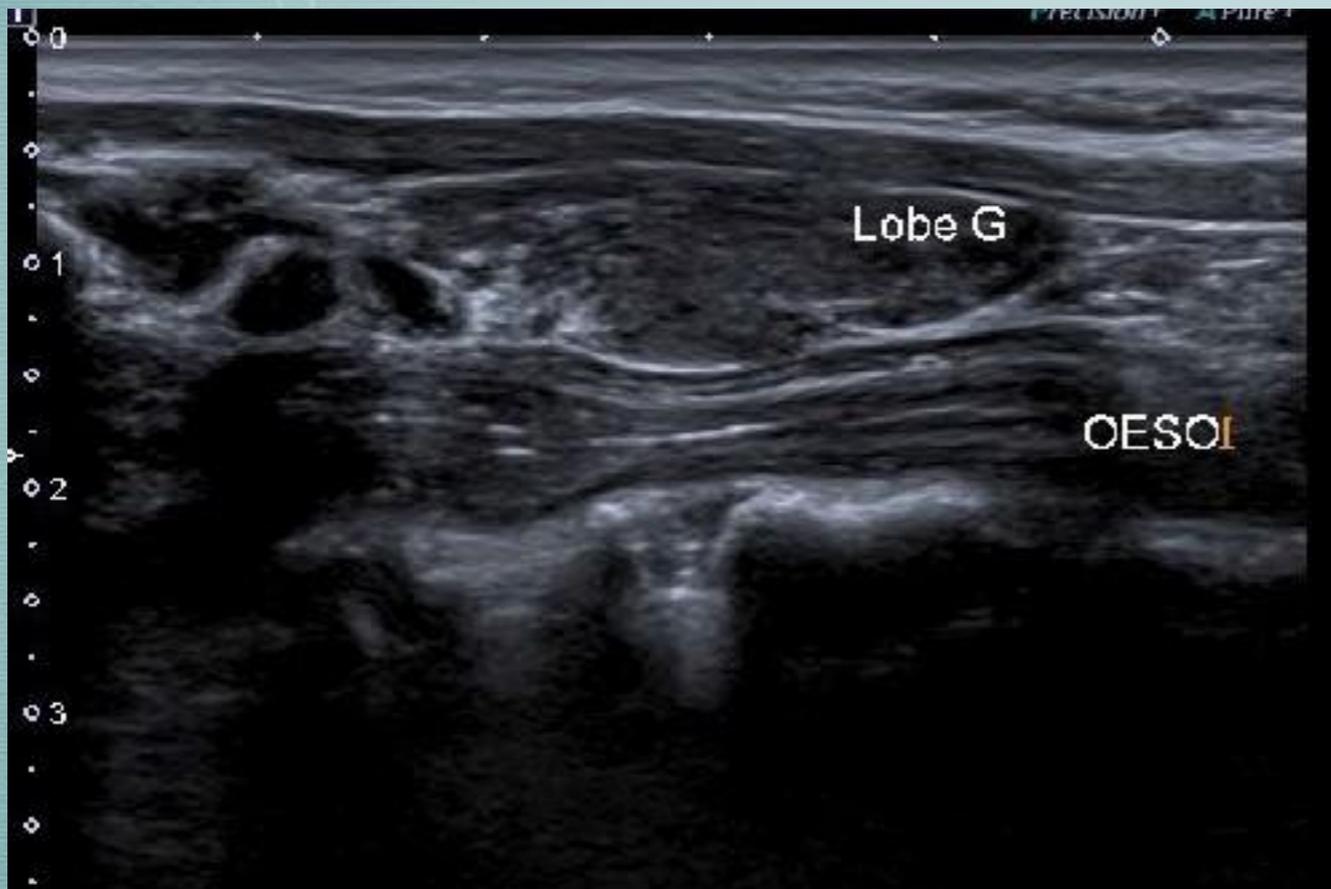
PAROI DIGESTIVE NORMALE



Oesophage

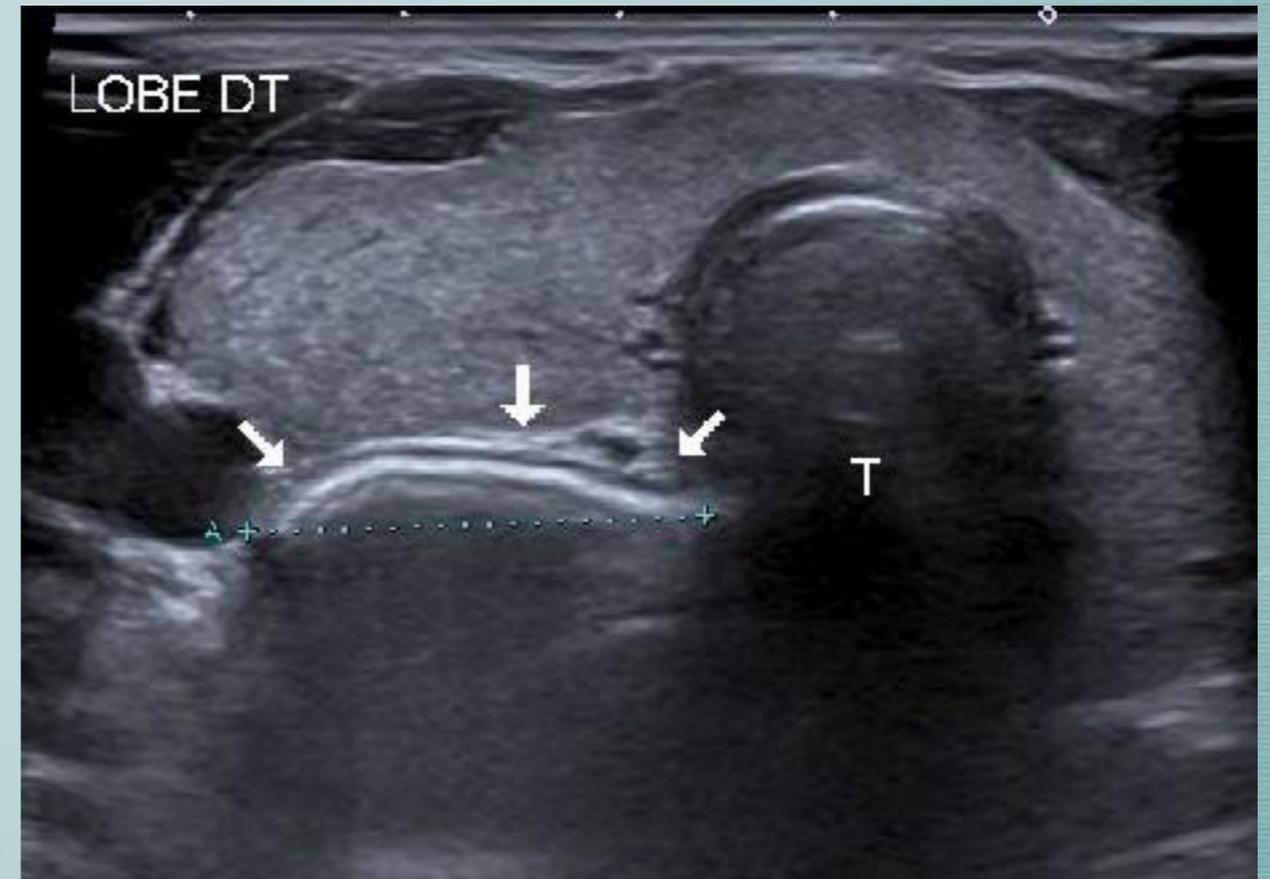
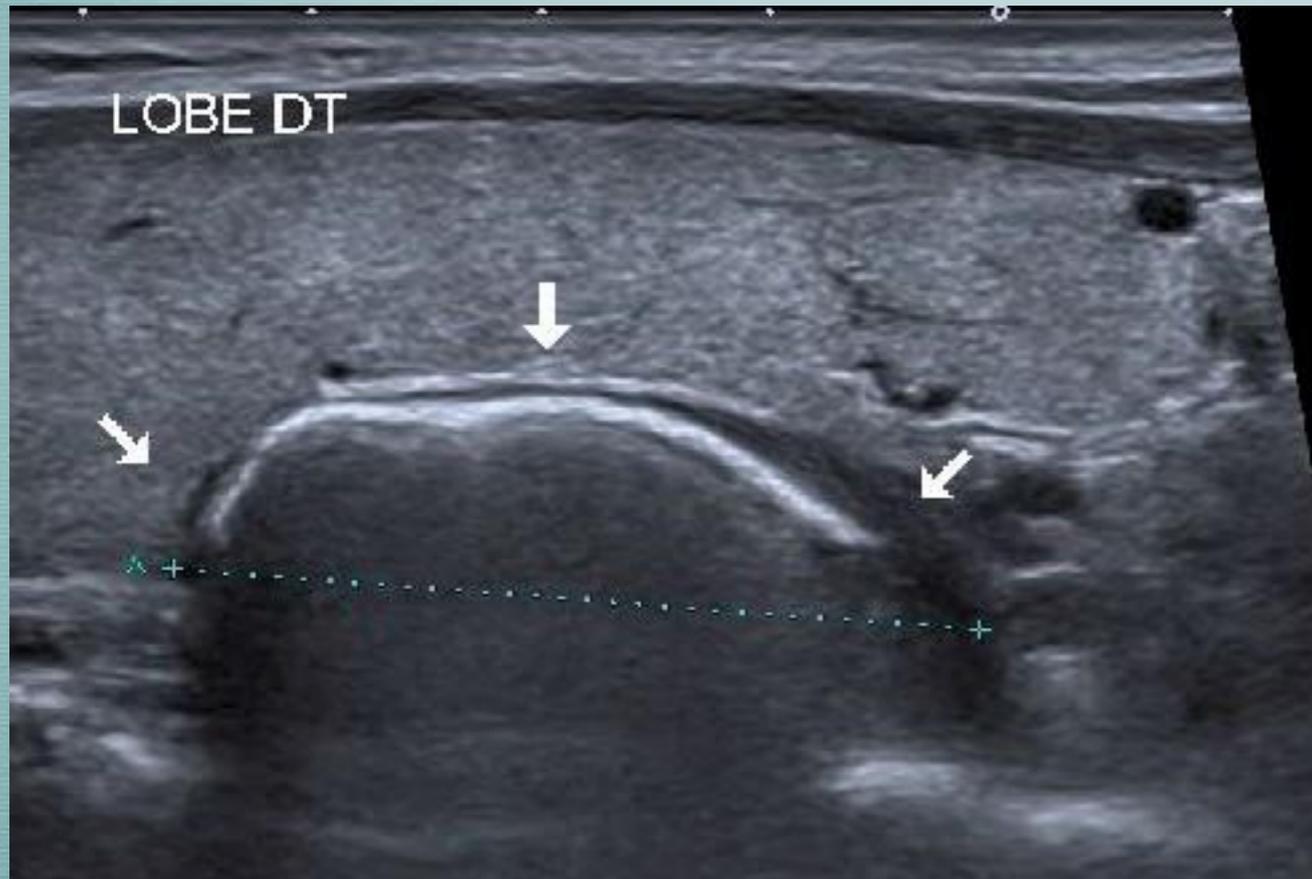


Oesophage



Oesophage

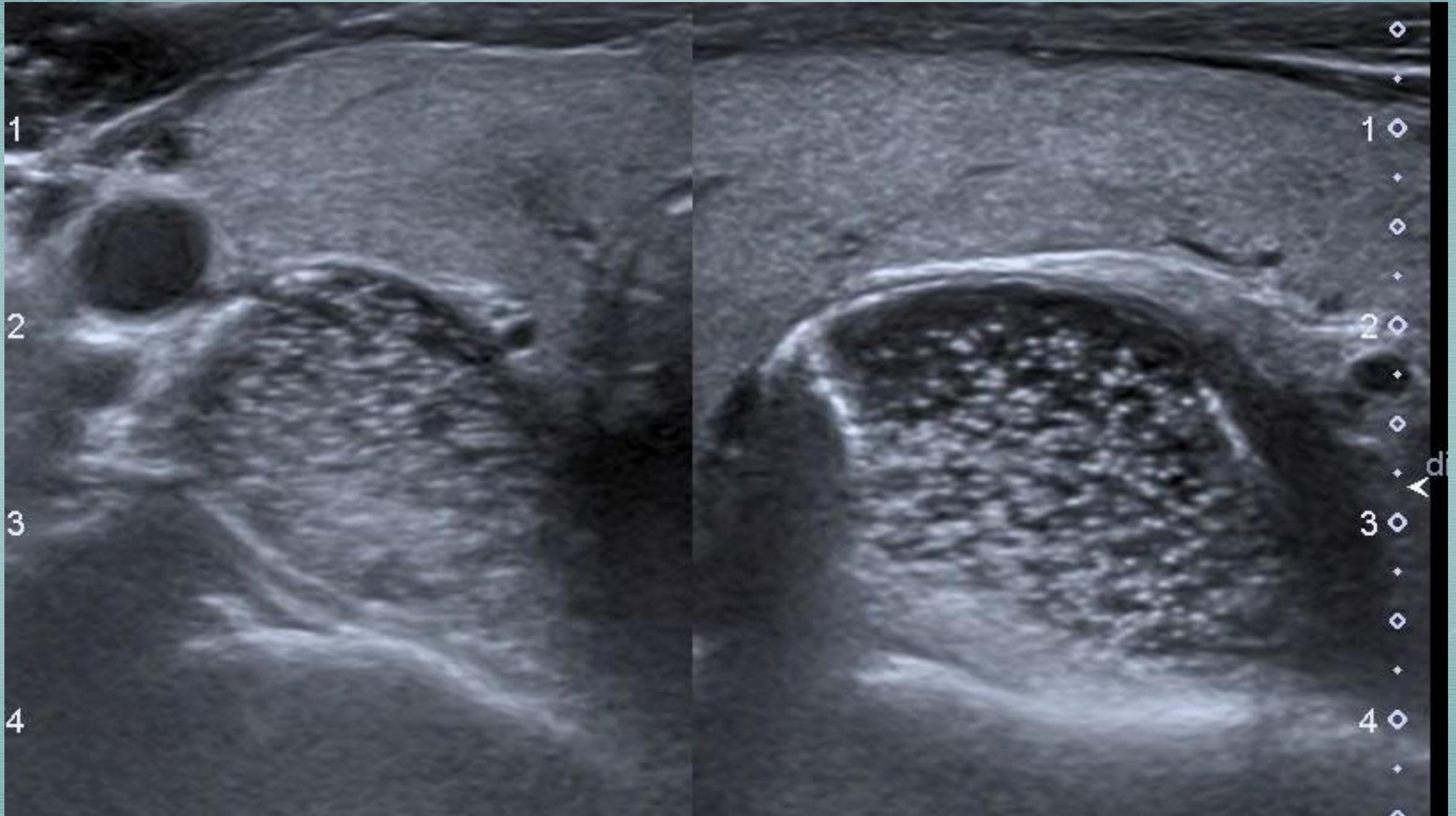
....



Oesophagege

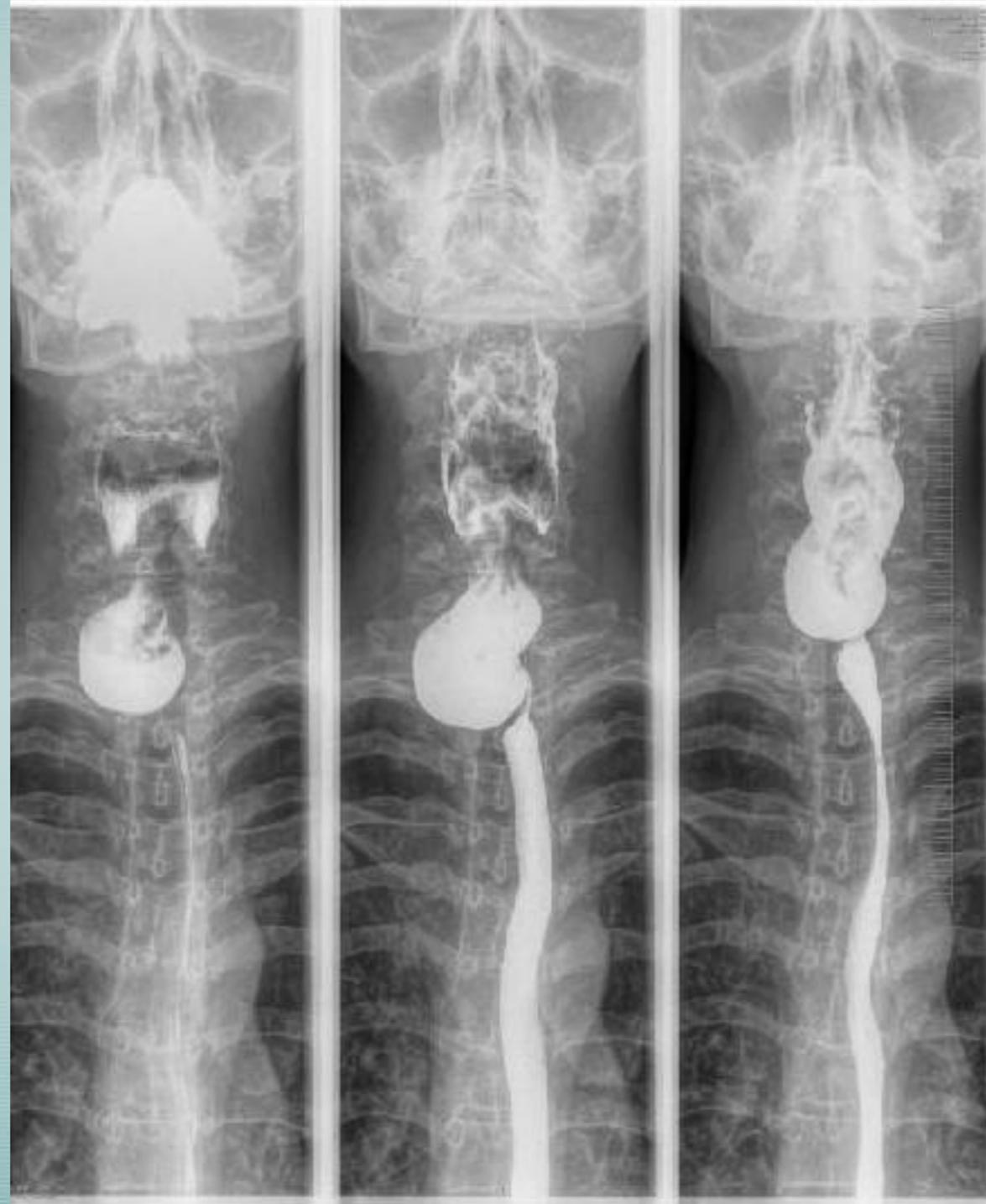


Oesophagege

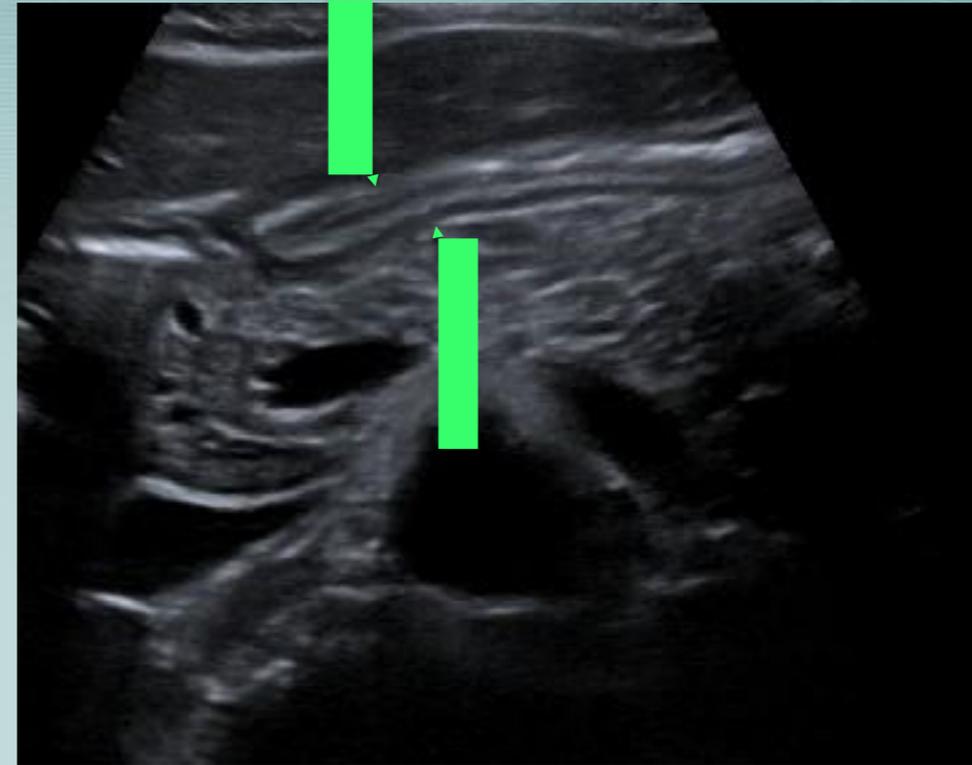


Diverticule oesophagien de Zenker

Diverticule oesophagien de Zenker



Estomac



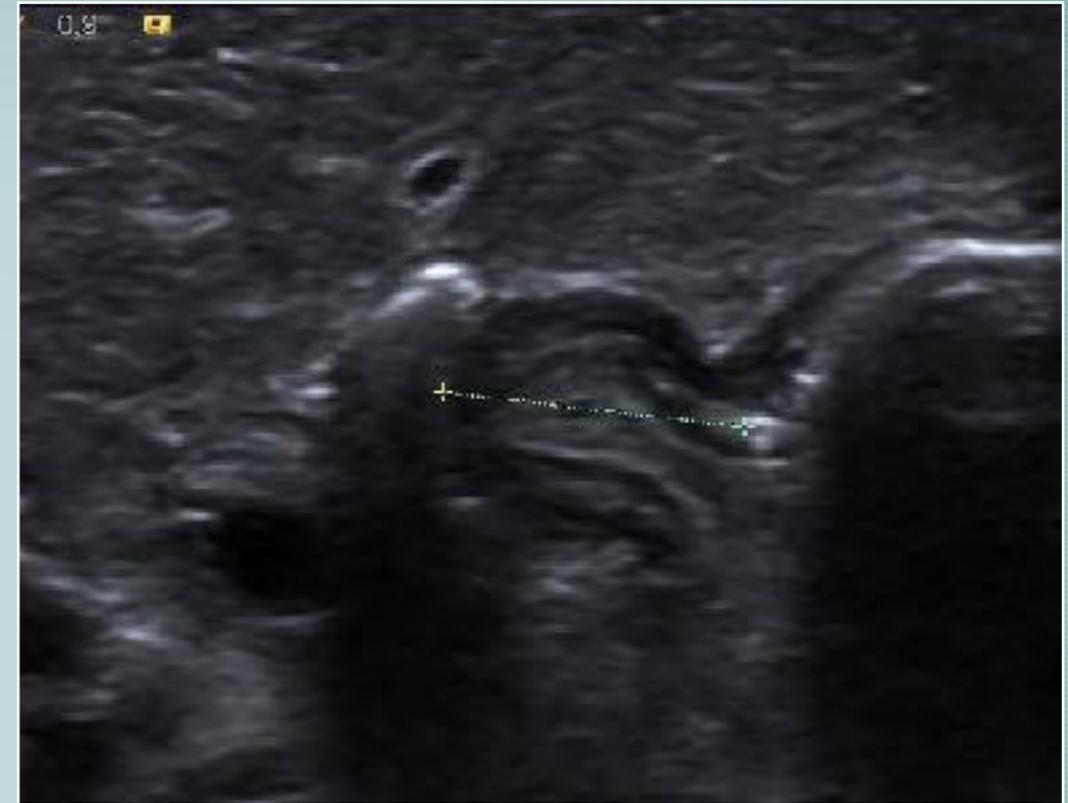
Estomac



léiomyome gastrique



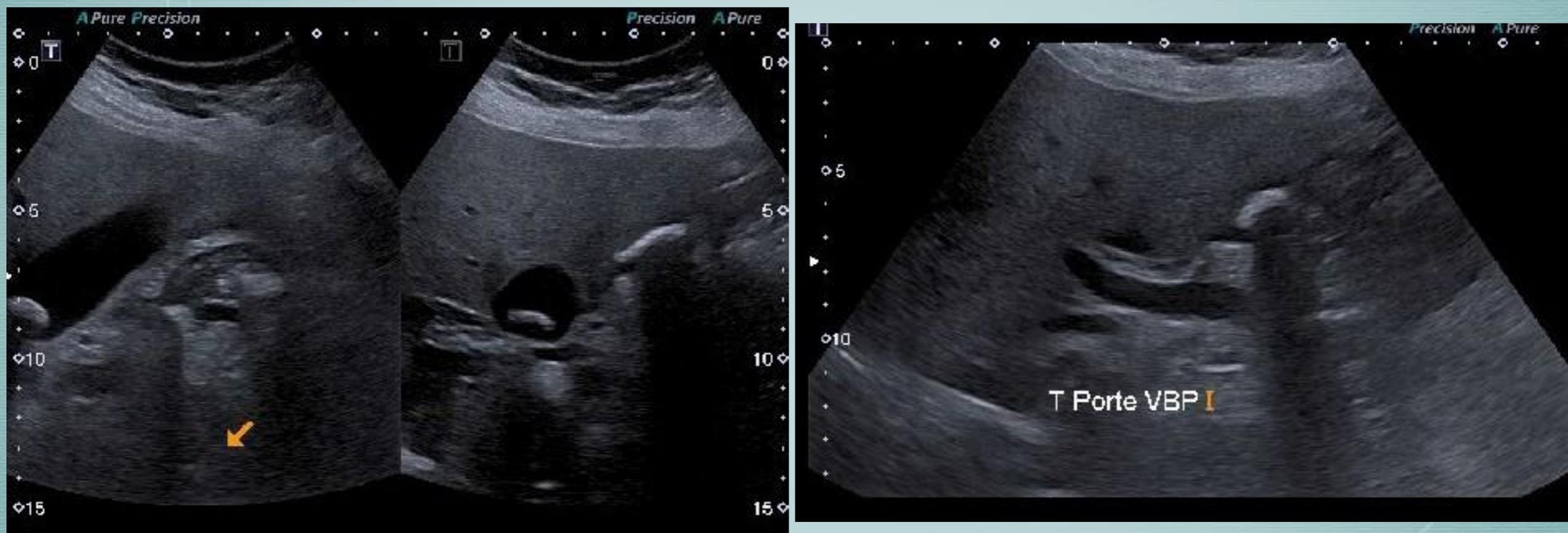
PYLORE



SHP

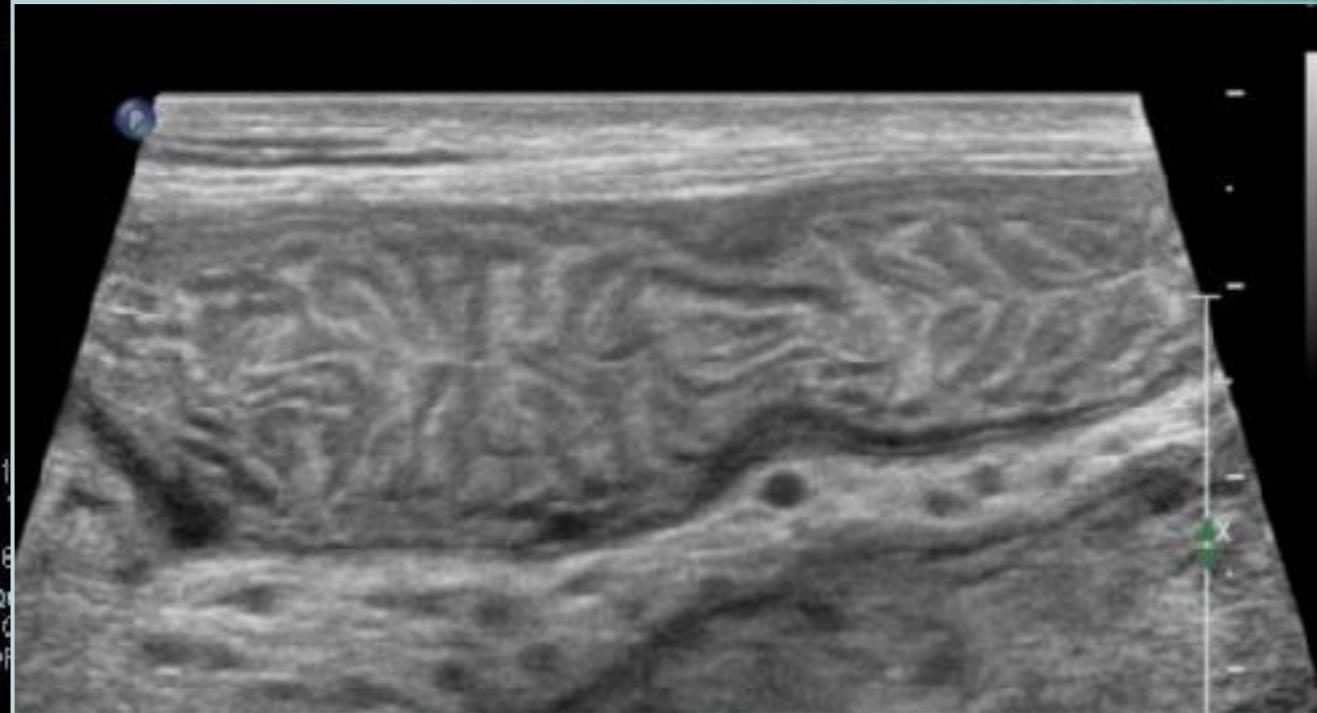
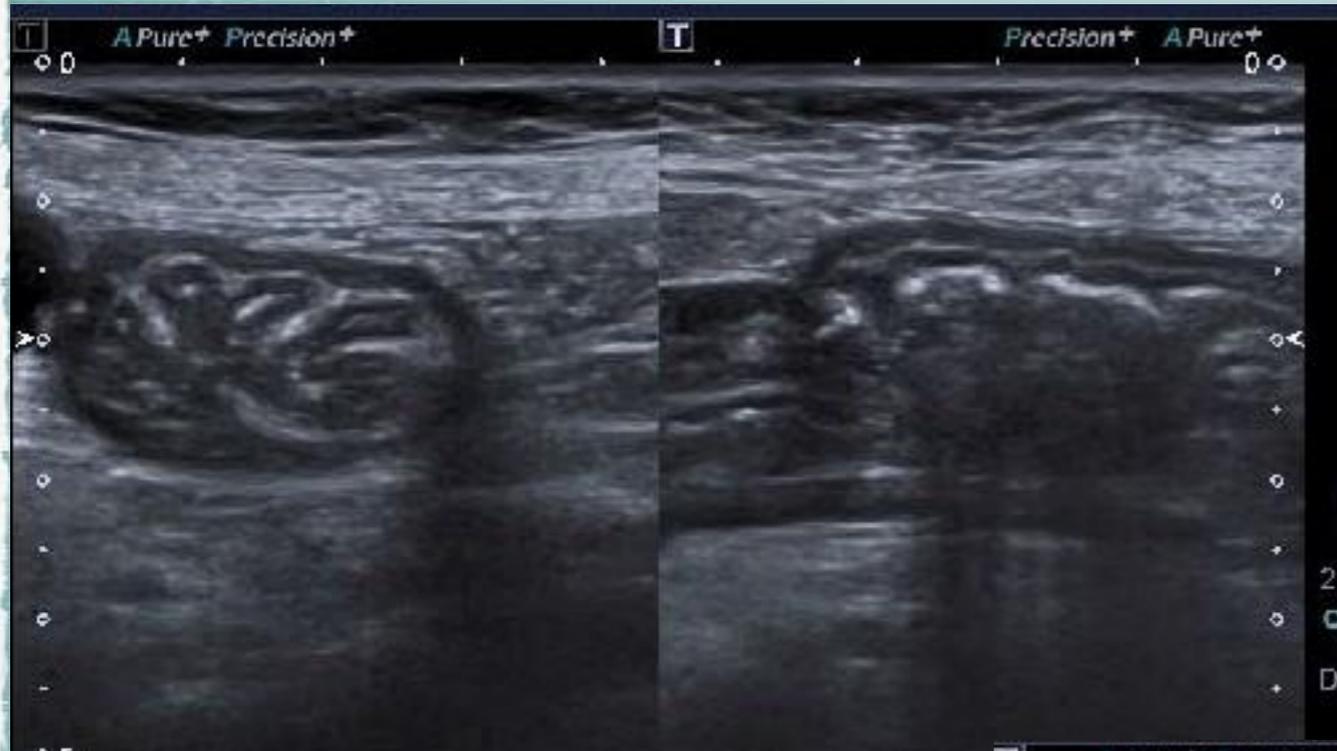


DUODENUM



Grêle

jejunum



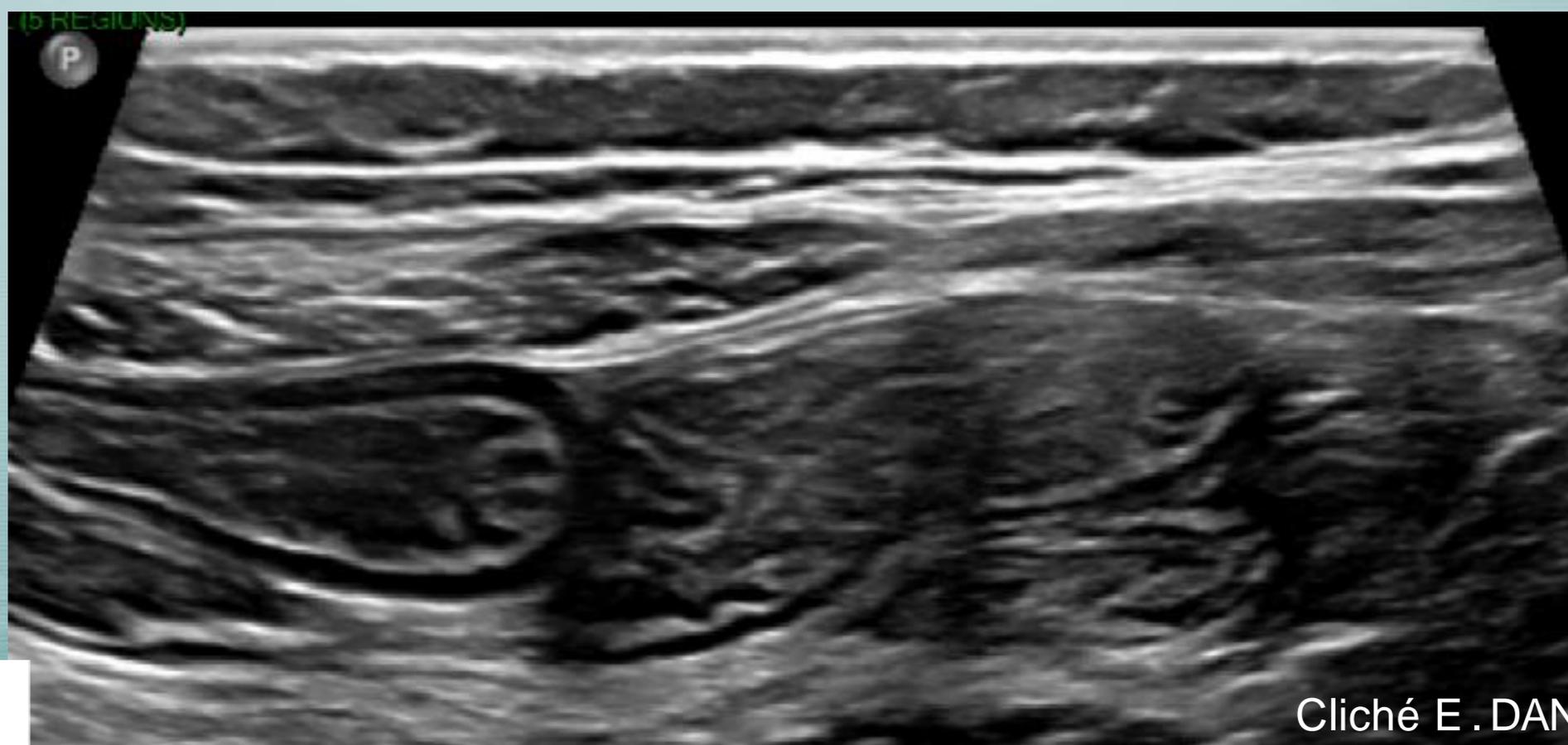
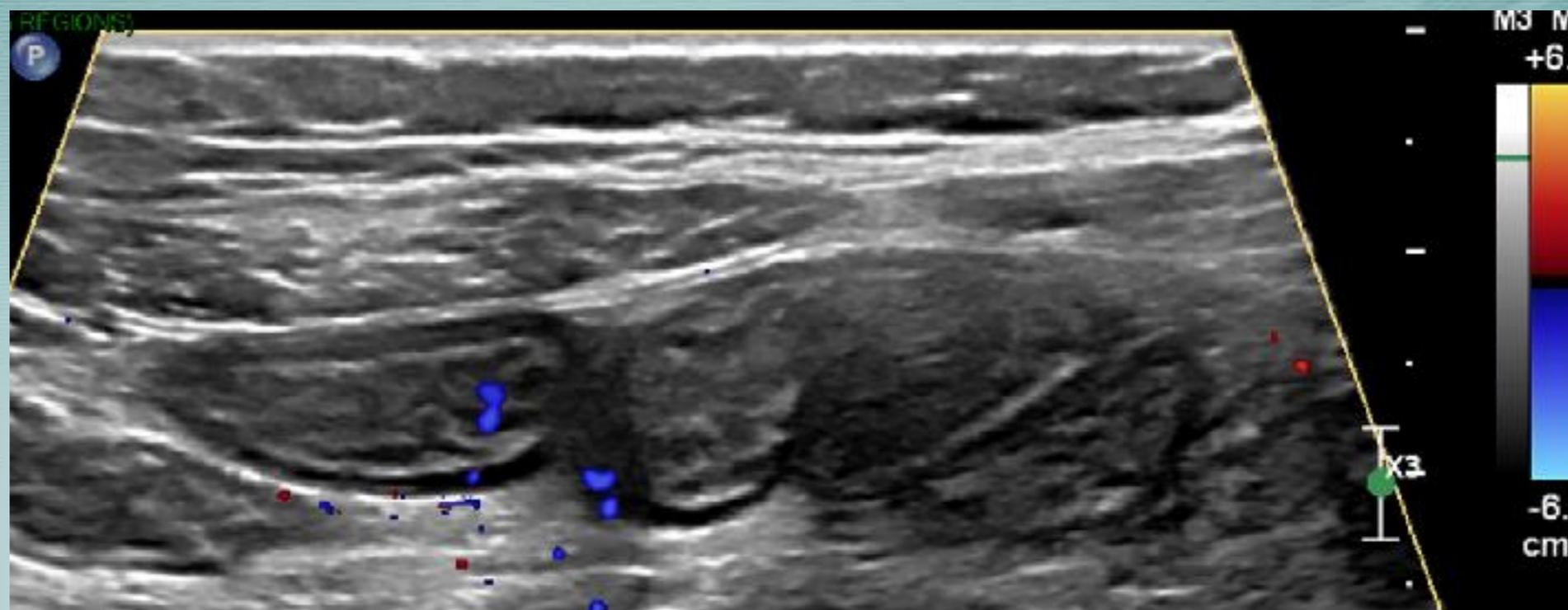
iléon

Paroi < 3 mm

Stratification



Vascularisation / Environnement



Qu'est ce qu'on cherche ?

Signes pathologiques :

un épaissement pariétal

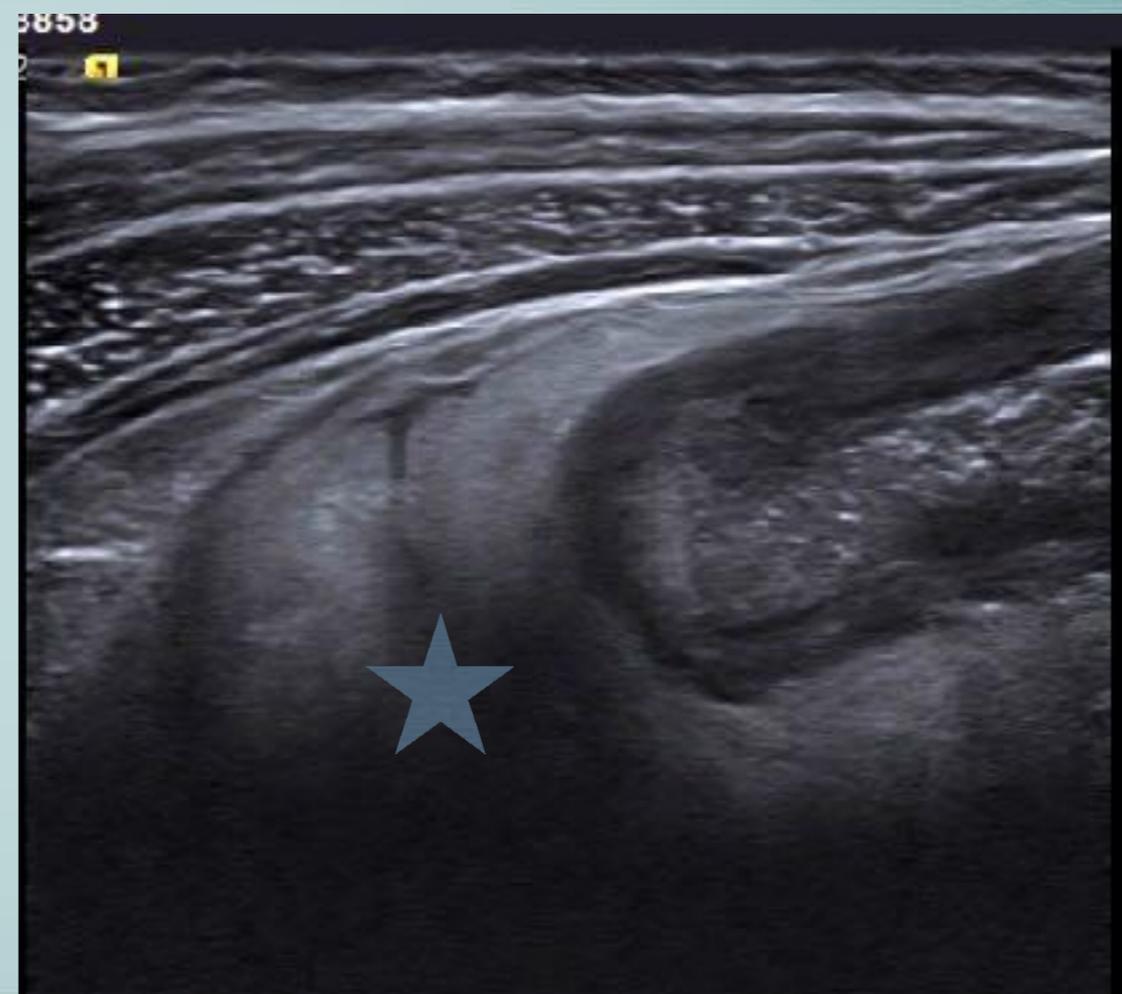
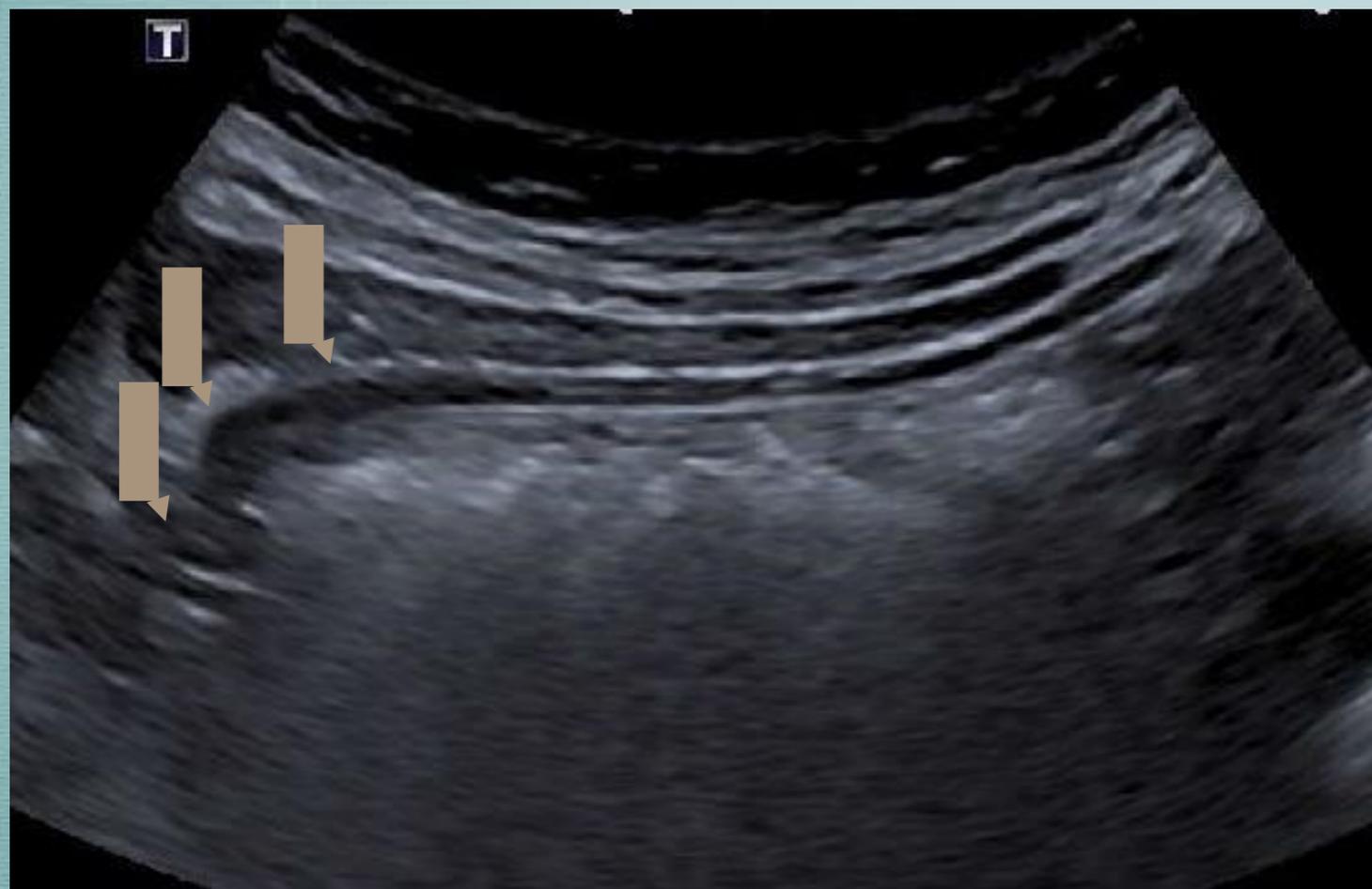
+/- une hyperhémie

une infiltration de la graisse satellite

un syndrome de masse

une dilatation

Environnement : la graisse péritonéale le fil d'Ariane +++



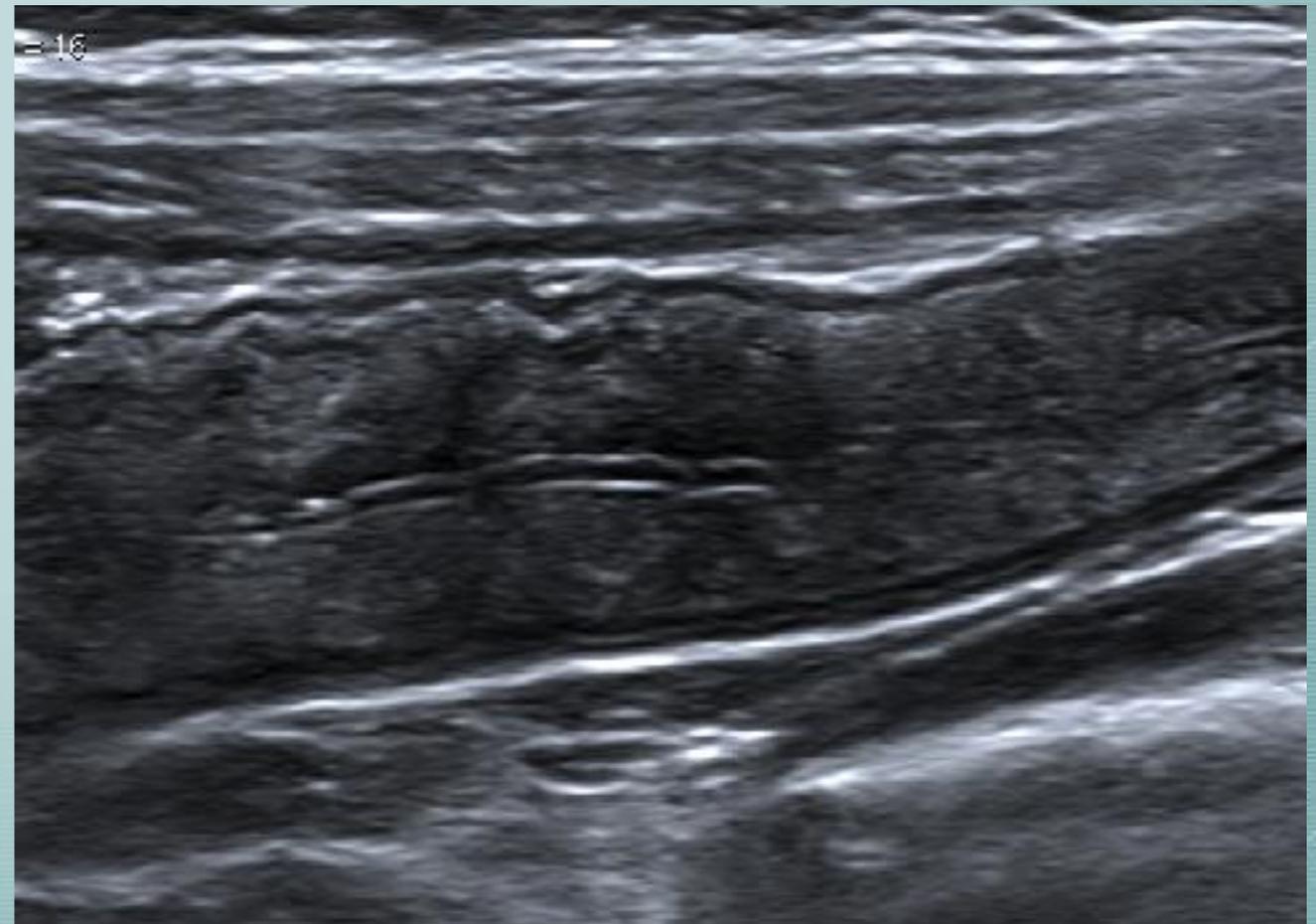
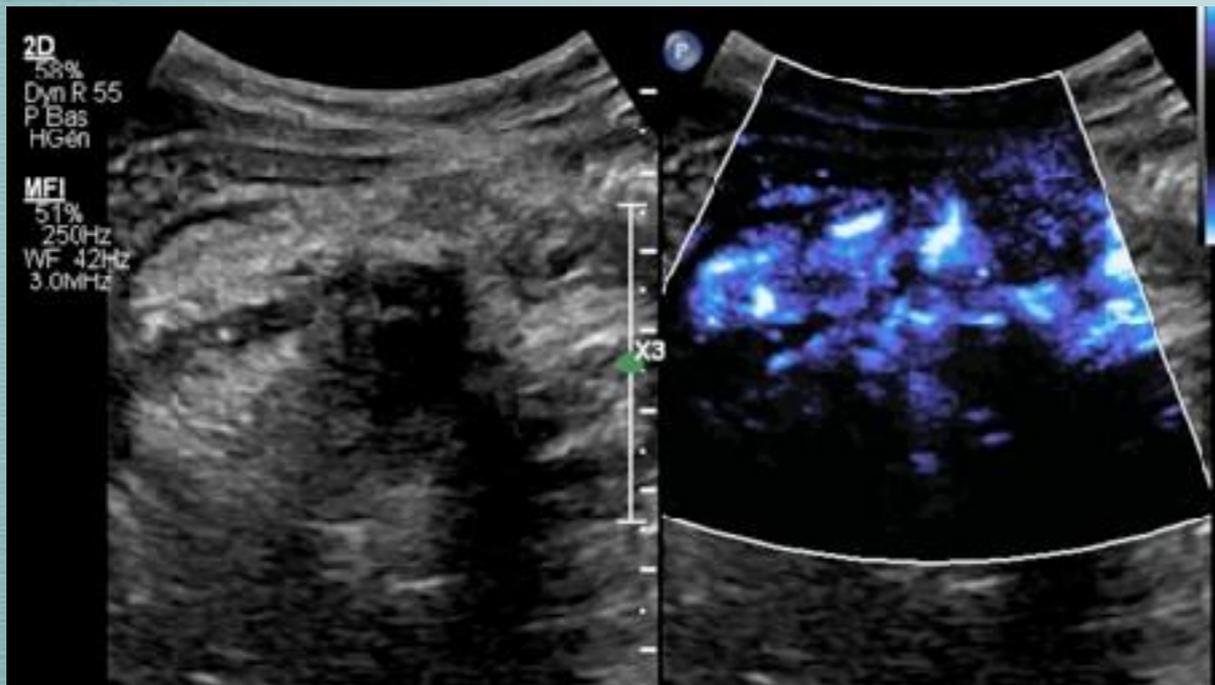
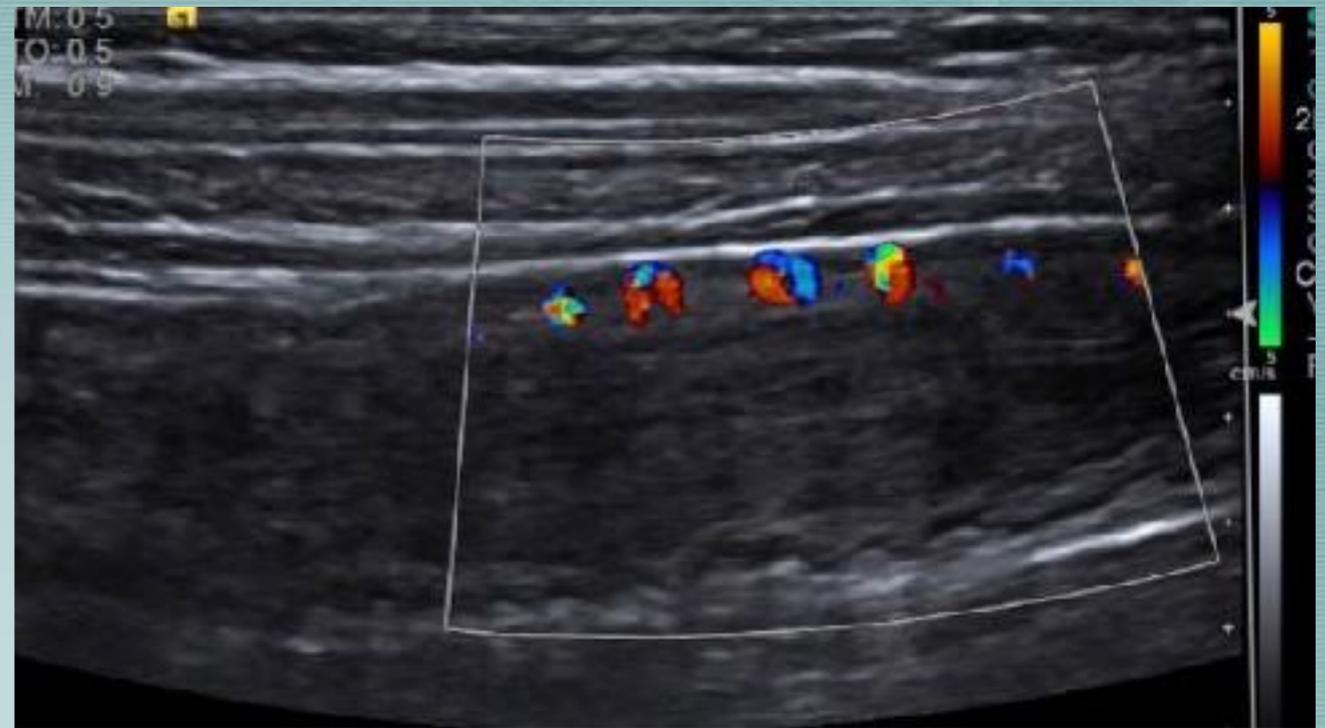
Signature inflammatoire

Iléite terminale Crohn

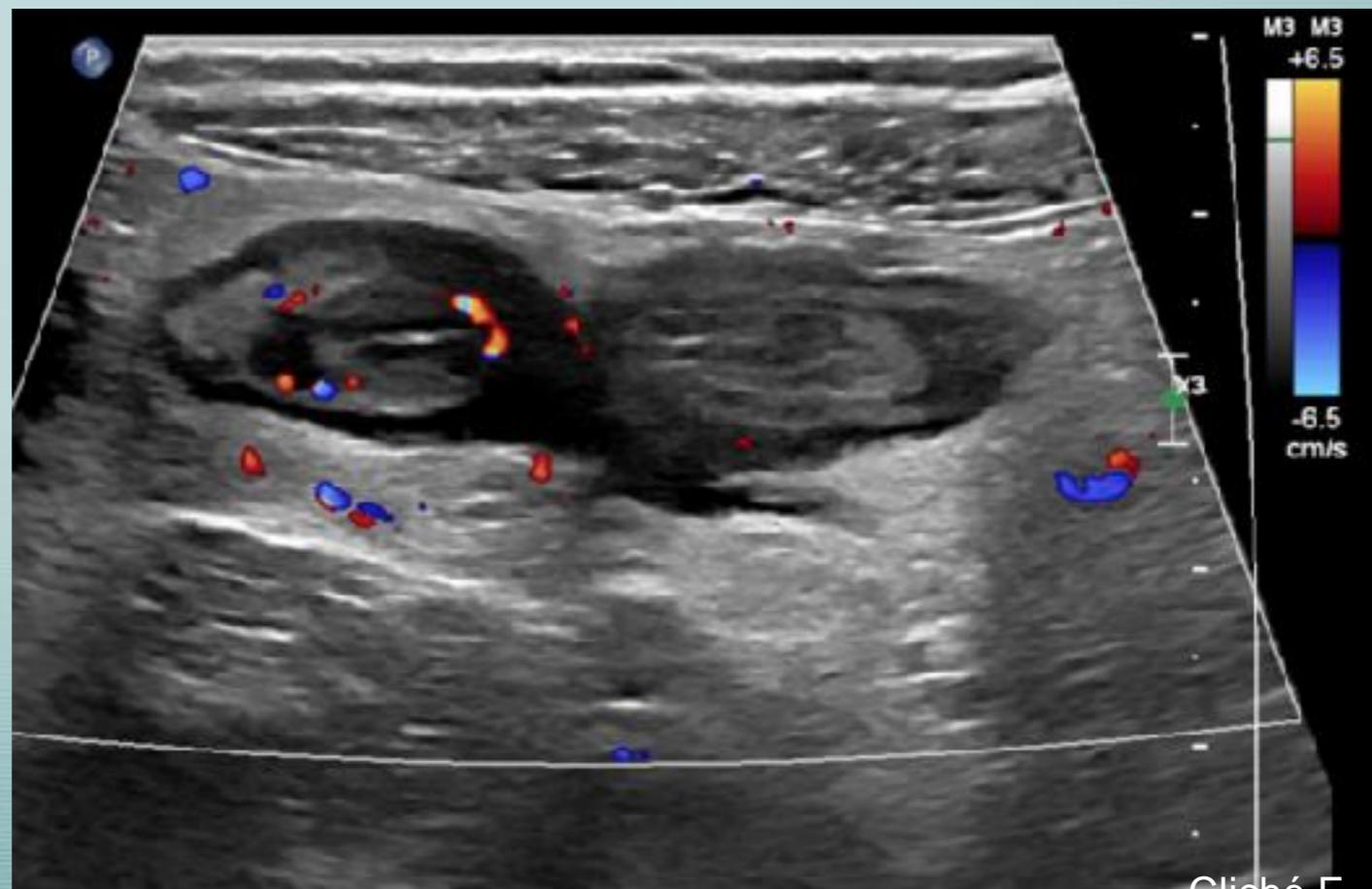
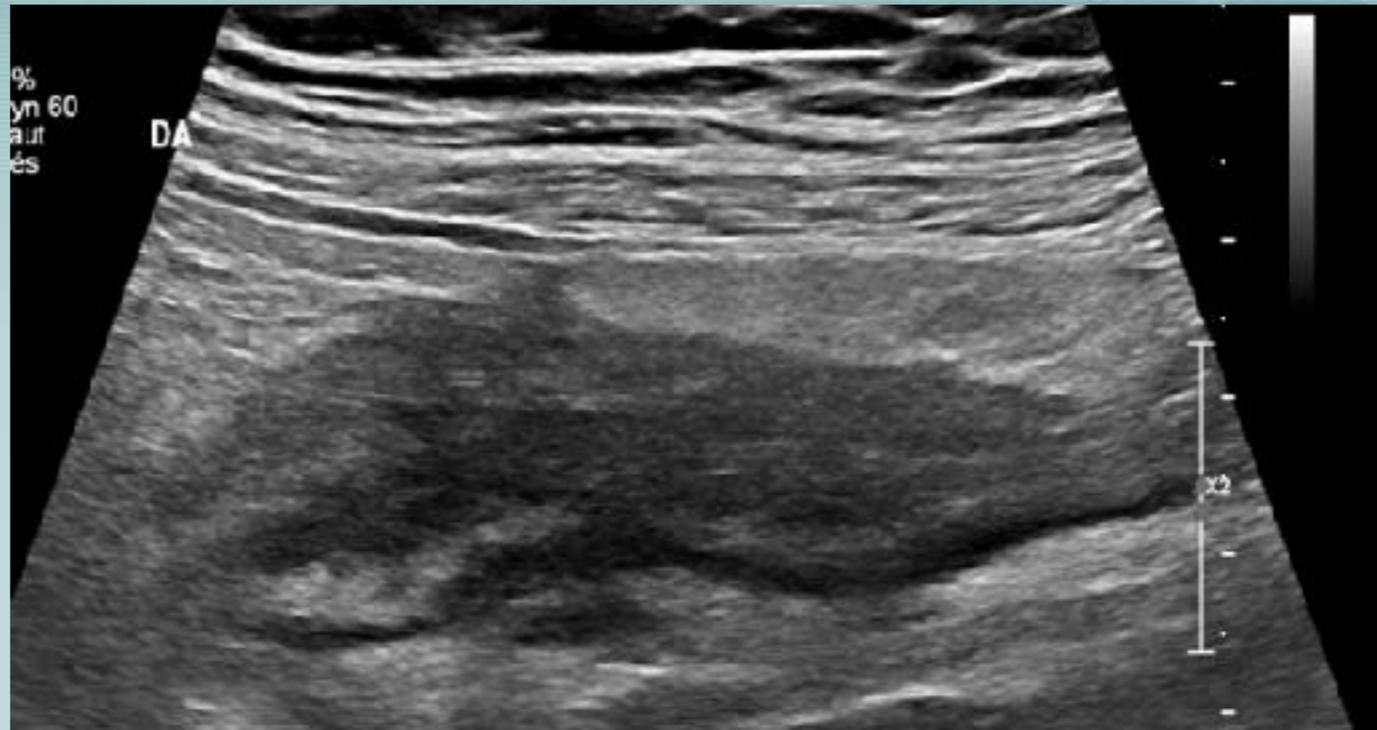
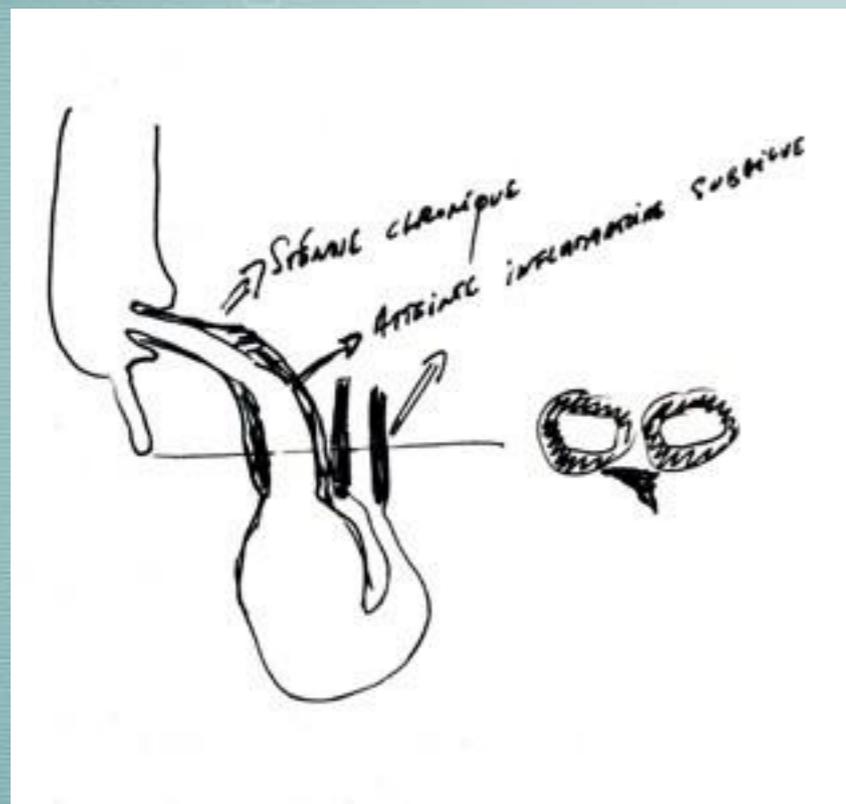
topographie Extension	couches atteintes	épaississement	stratification	Doppler couleur	signes associés
Iléon terminal +/- étendue Discontinue	sous muqueuse Transmurale	7 / 8 mm	Conservée si forme aigue dédiérenciation au stade chronique	++	GG , fistules , abcès



Iléite terminale Crohn

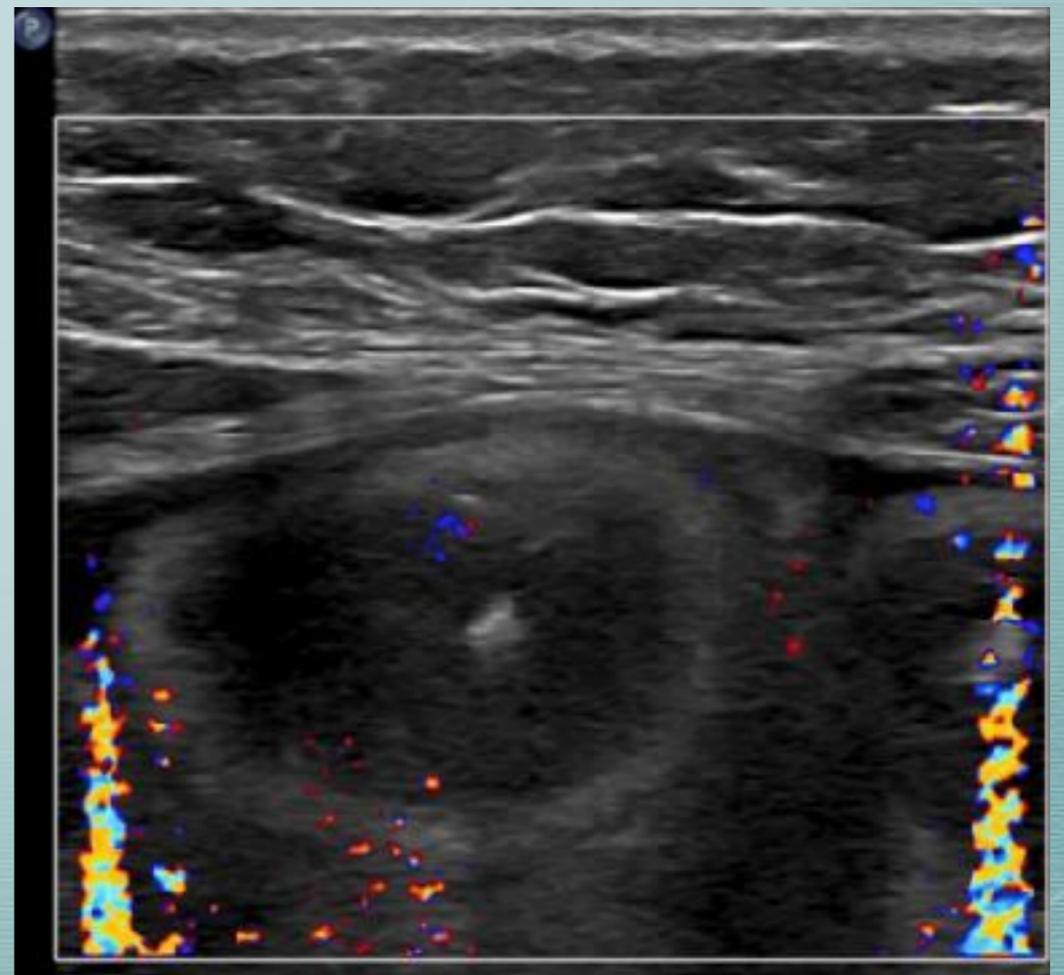


Iléite terminale Crohn



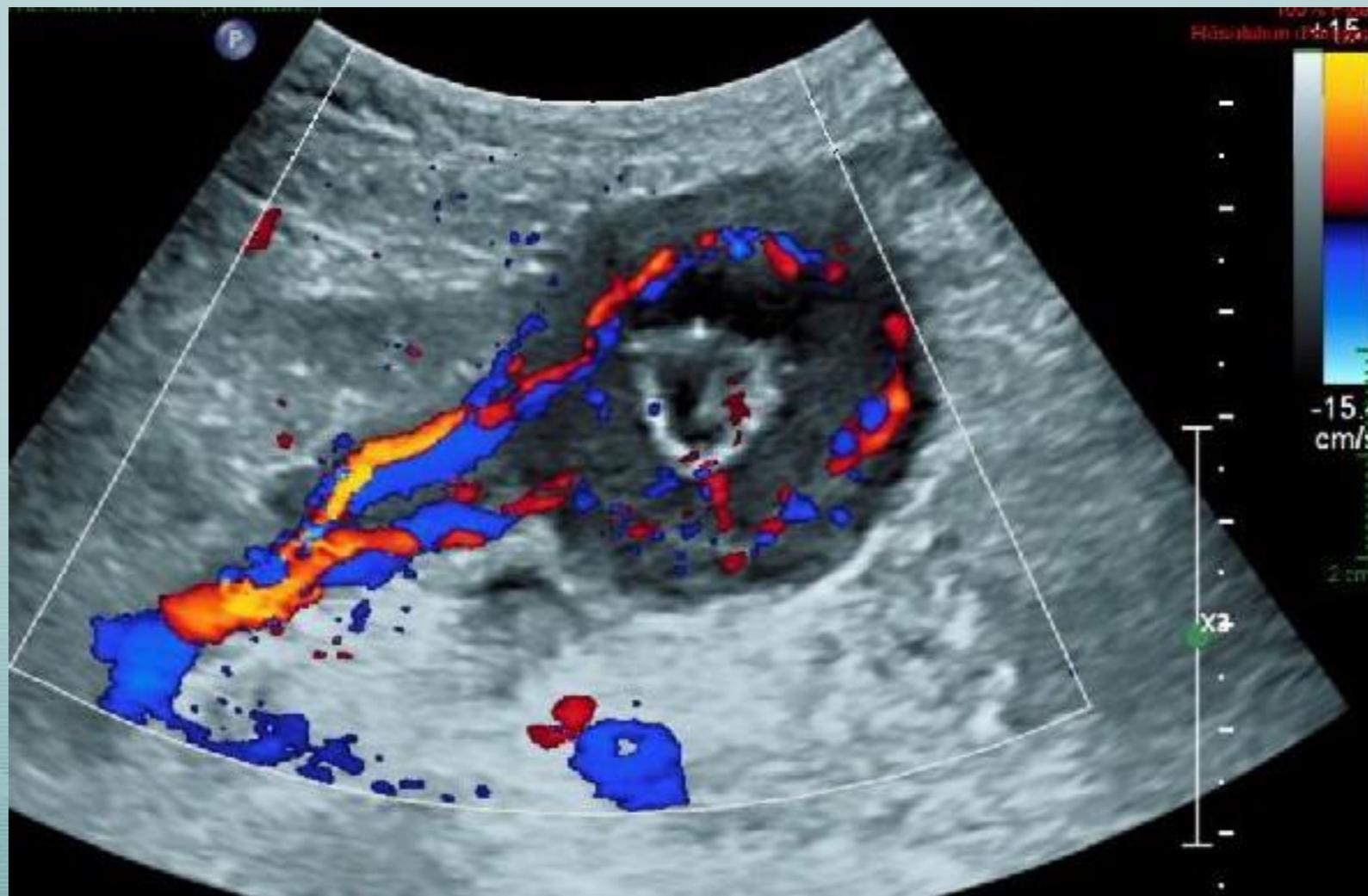
Iléite ischémique

topographie Extension	couches atteintes	épaississement	stratification	Doppler couleur	signes associés
étendue > 30 cm continue	sous muqueuse Transmurale	9mm	dédifférenciée dans formes graves	-	Ascite



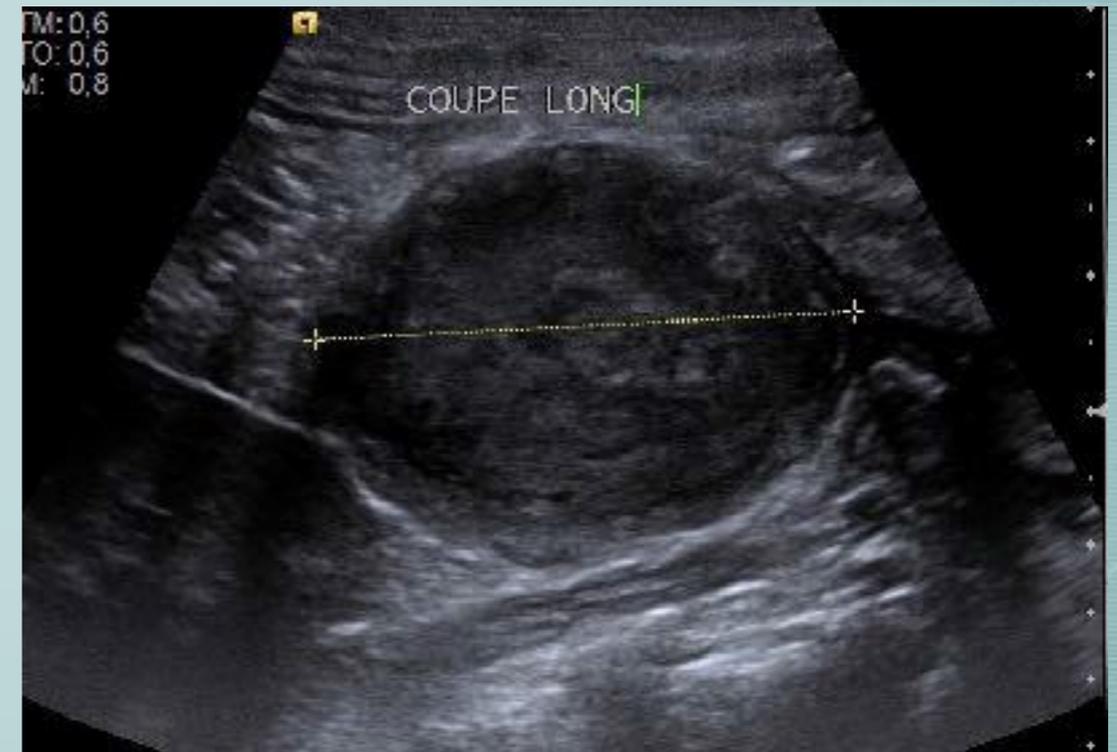
Entérite néoplasique

topographie Extension	couches atteintes	épaississement	stratification	Doppler couleur	signes associés
Focalisée < 10 cm	Toutes asymétrique	+++ > 3 cm	dédifférenciée	+	Ascite GG

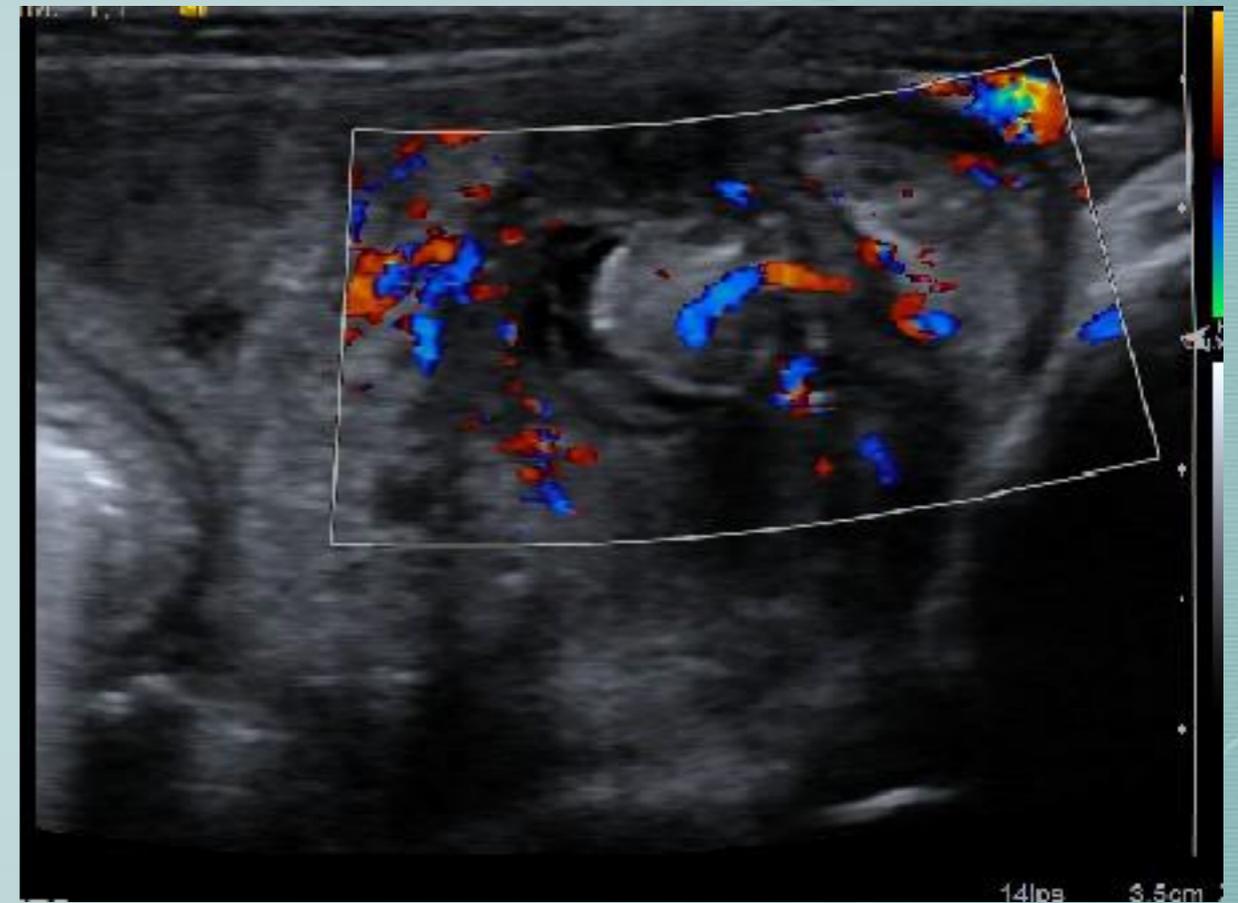
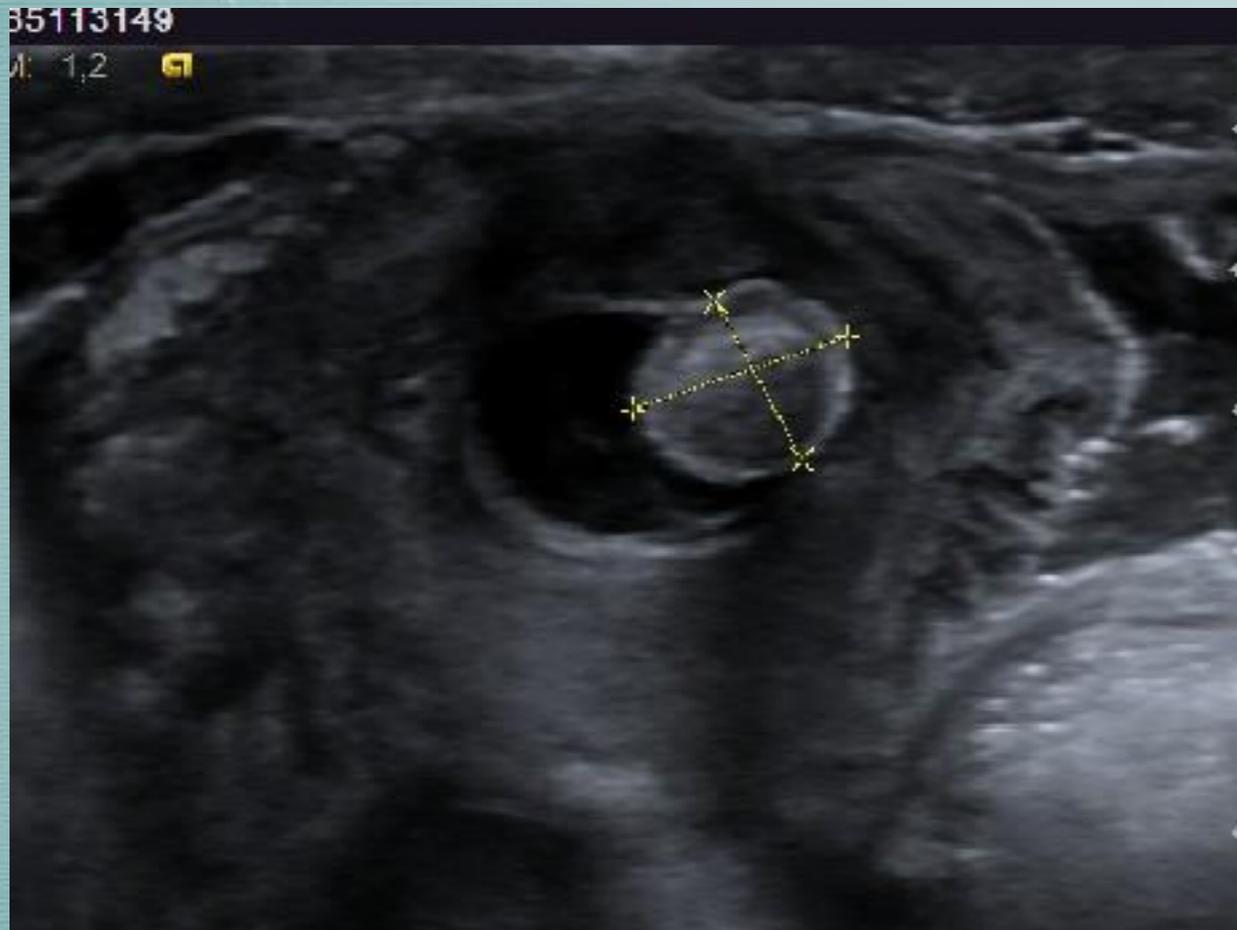


ILÉITE Néoplasique (au décours d'une invagination)

Lymphome du grêle

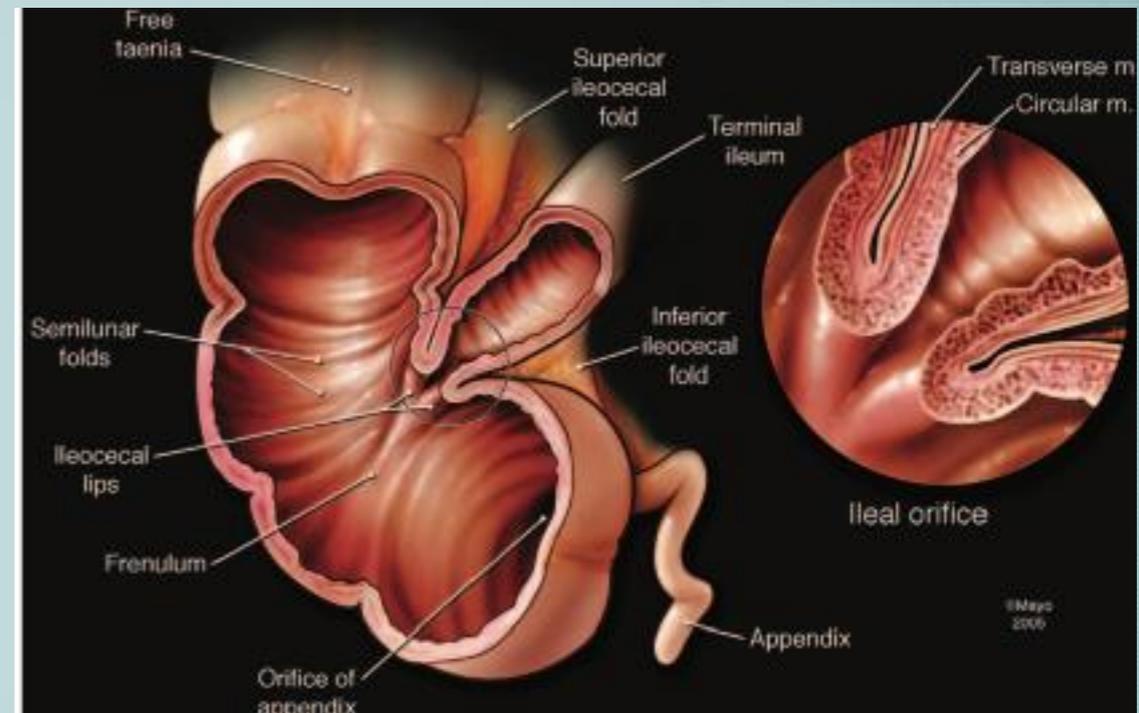
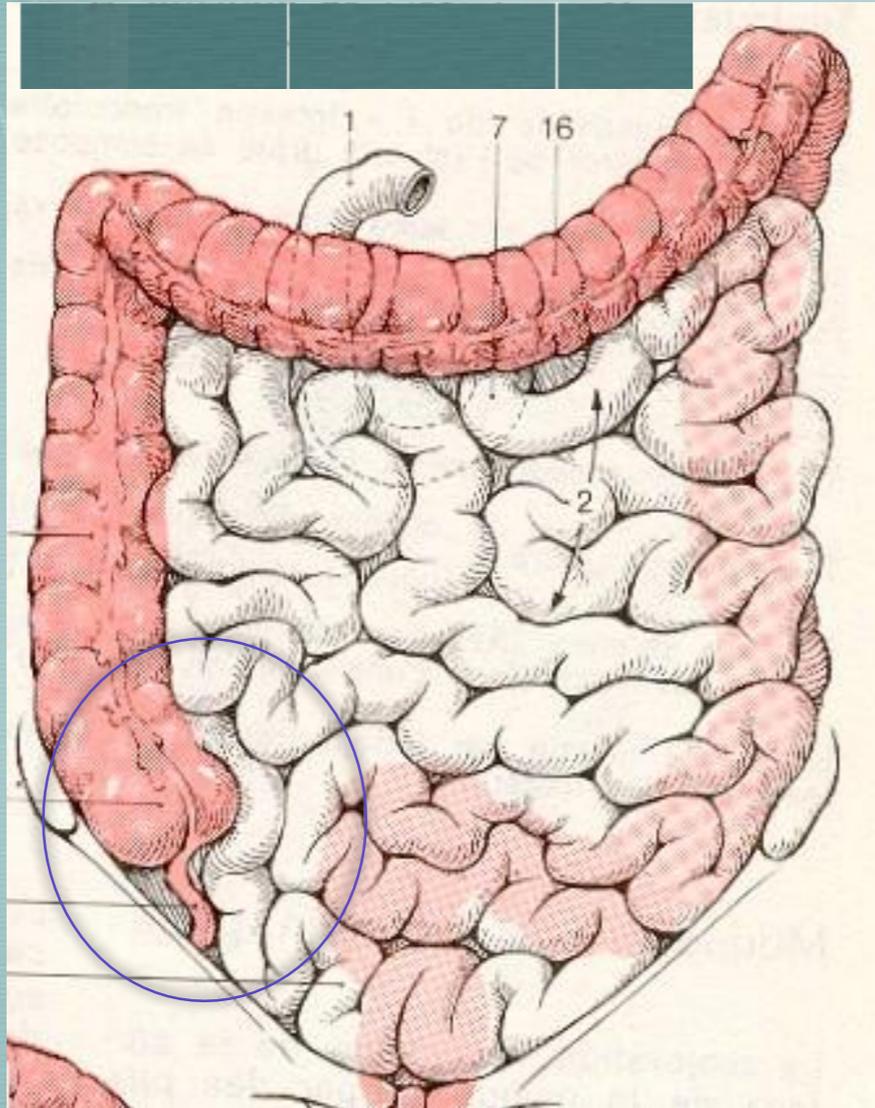


Grêle



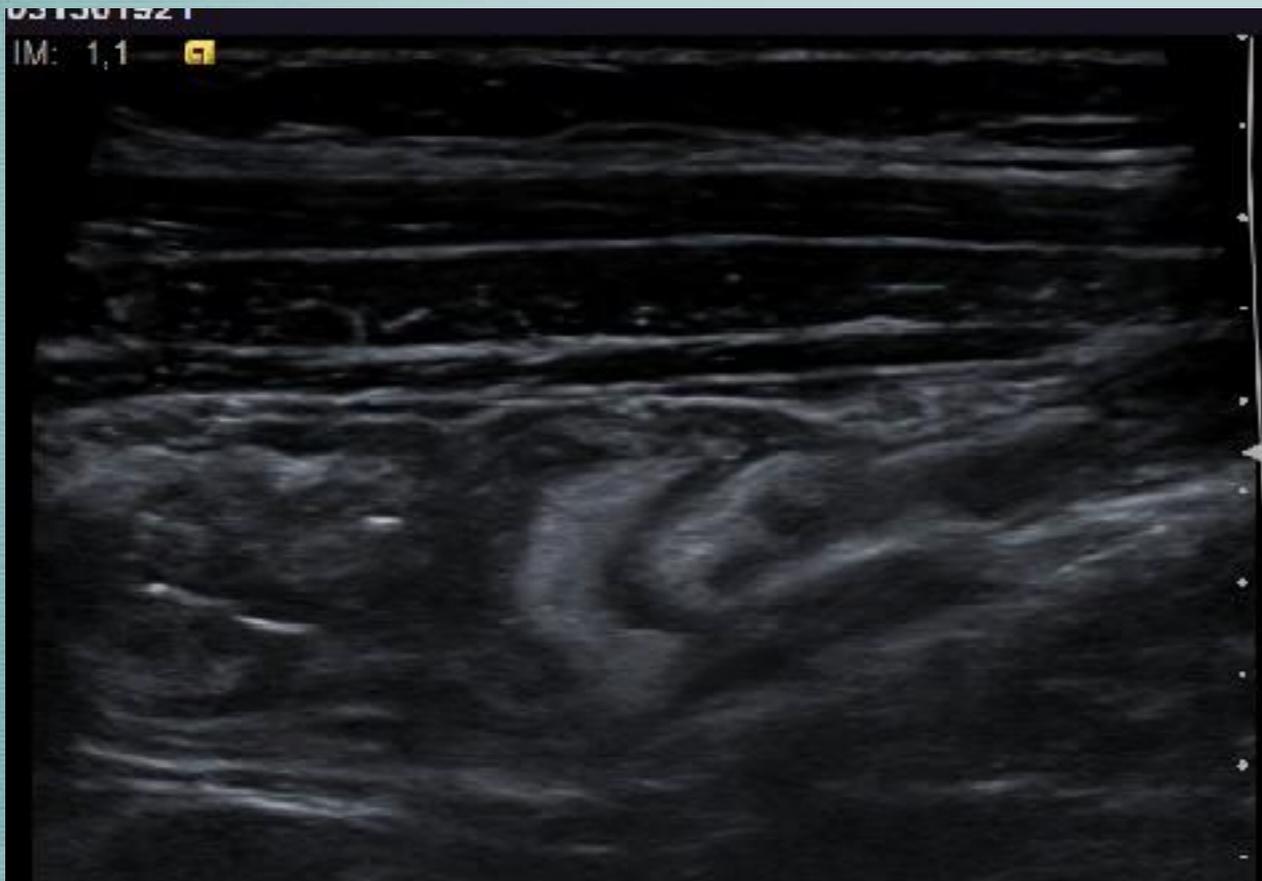
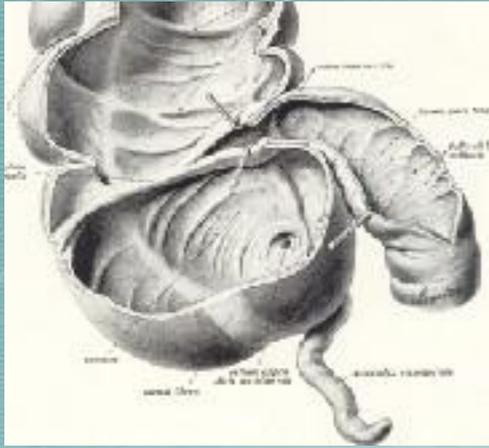
Polype adénomateux juvénile

CARREFOUR ILEO CAECAL



CARREFOUR ILEO CAECAL

Caecum /Valvule de Bauhin/ iléon

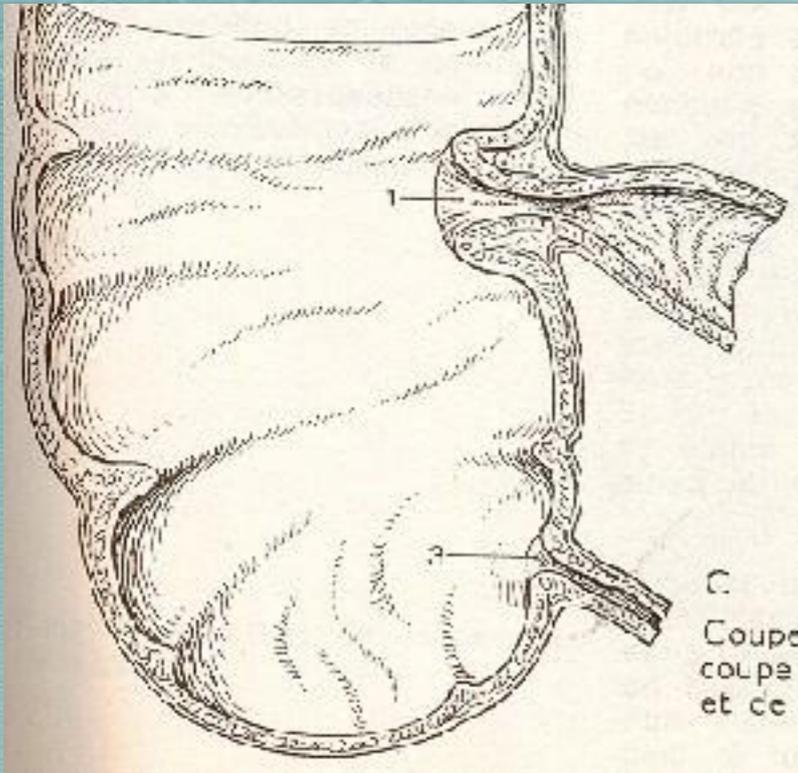


CARREFOUR ILEO CAECAL

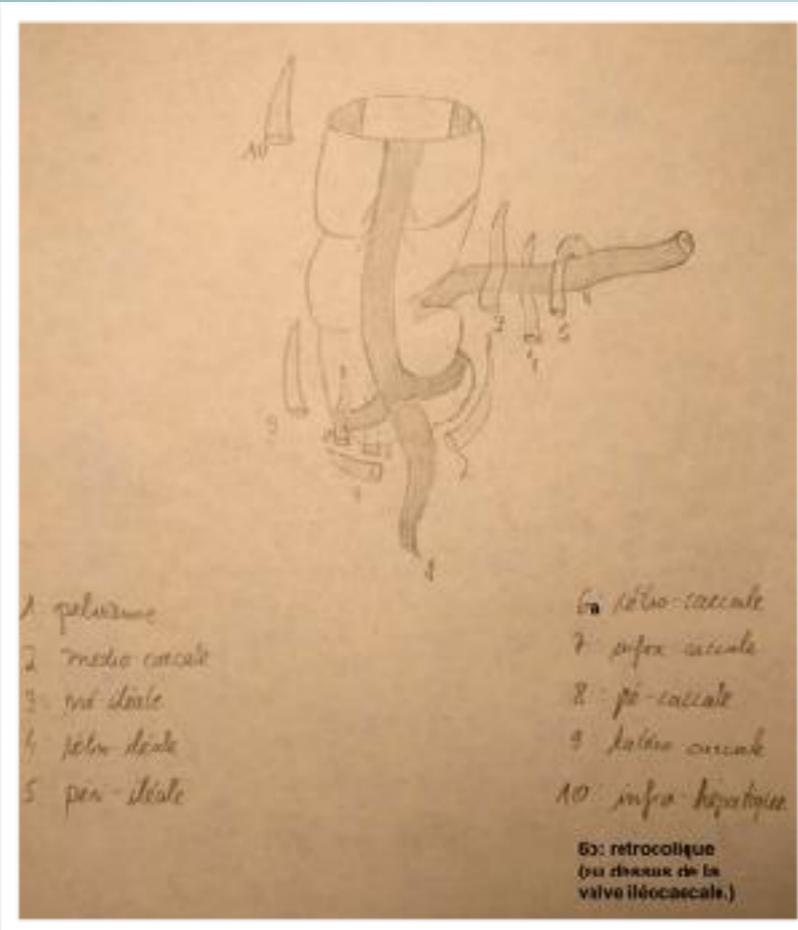
Valvule de Bauhin : museau de tanche ...



CARREFOUR ILEO CAECAL



Abouchement
iléon



Abouchement
appendice

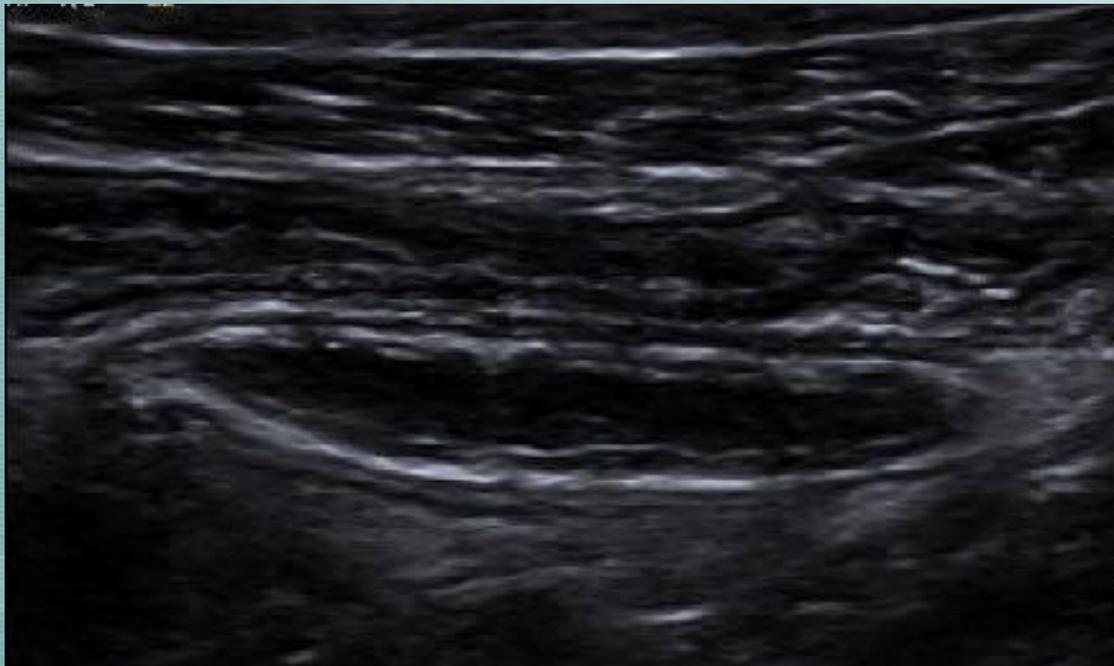
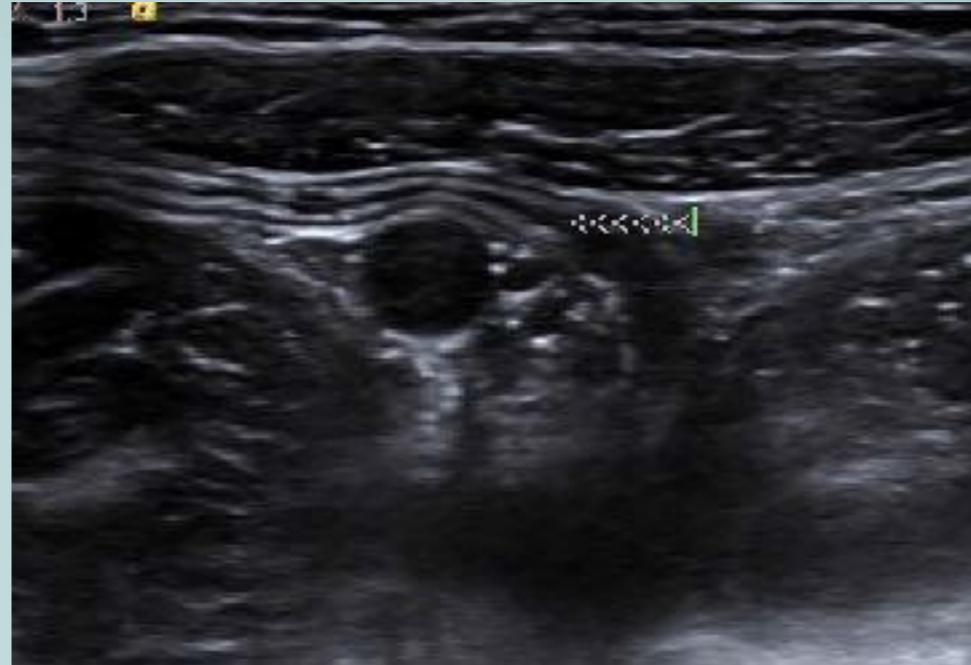
CARREFOUR ILEO CAECAL



APPENDICE ILEO CAECAL

appendice normal
borgne
diamètre < 6 mm
paroi fine

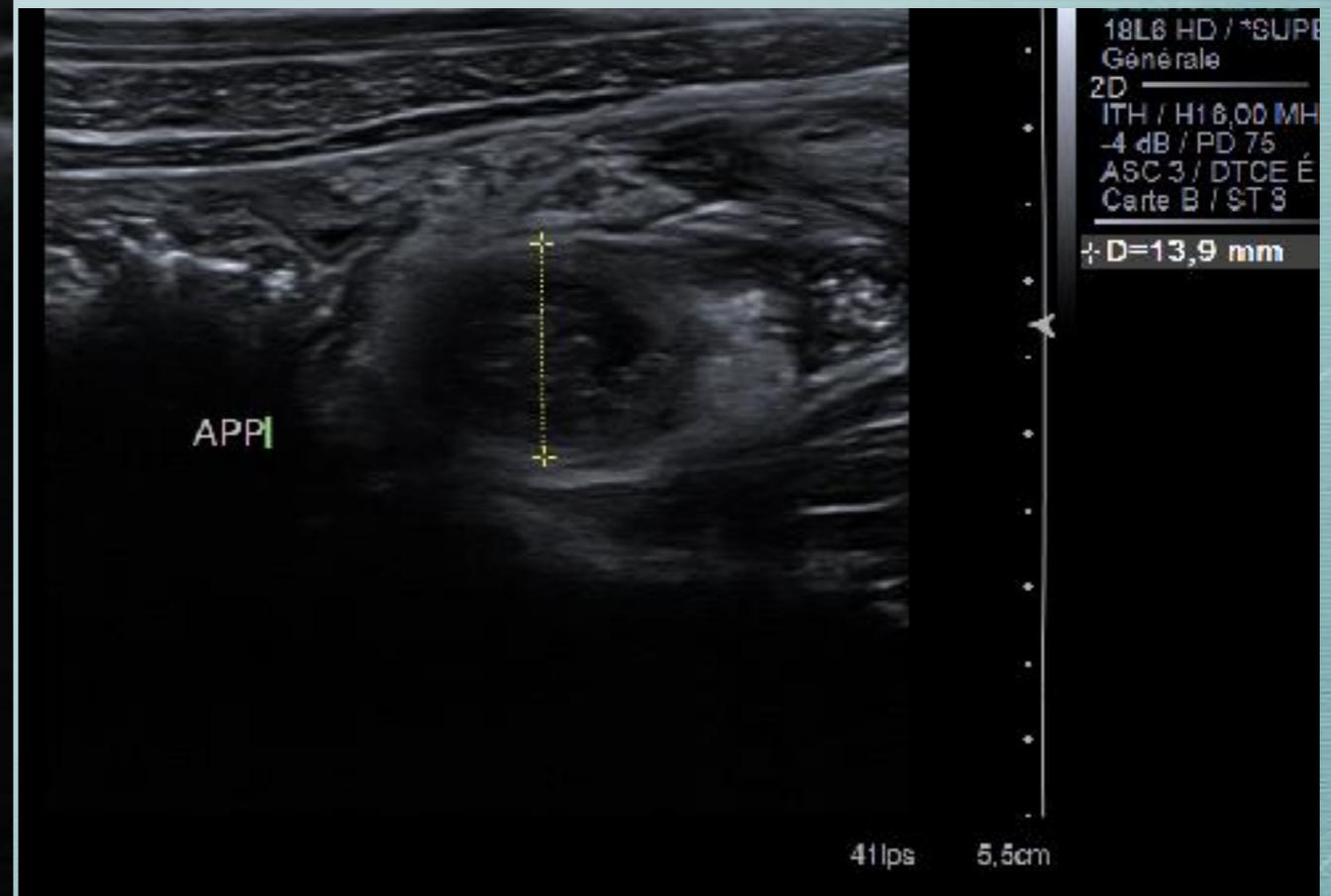
compressible
contenu parfois liquidien ,
stercolithe



Appendicite

épaississement pariétal
augmentation de calibre ≥ 6 mm
incompressible
infiltration de la graisse

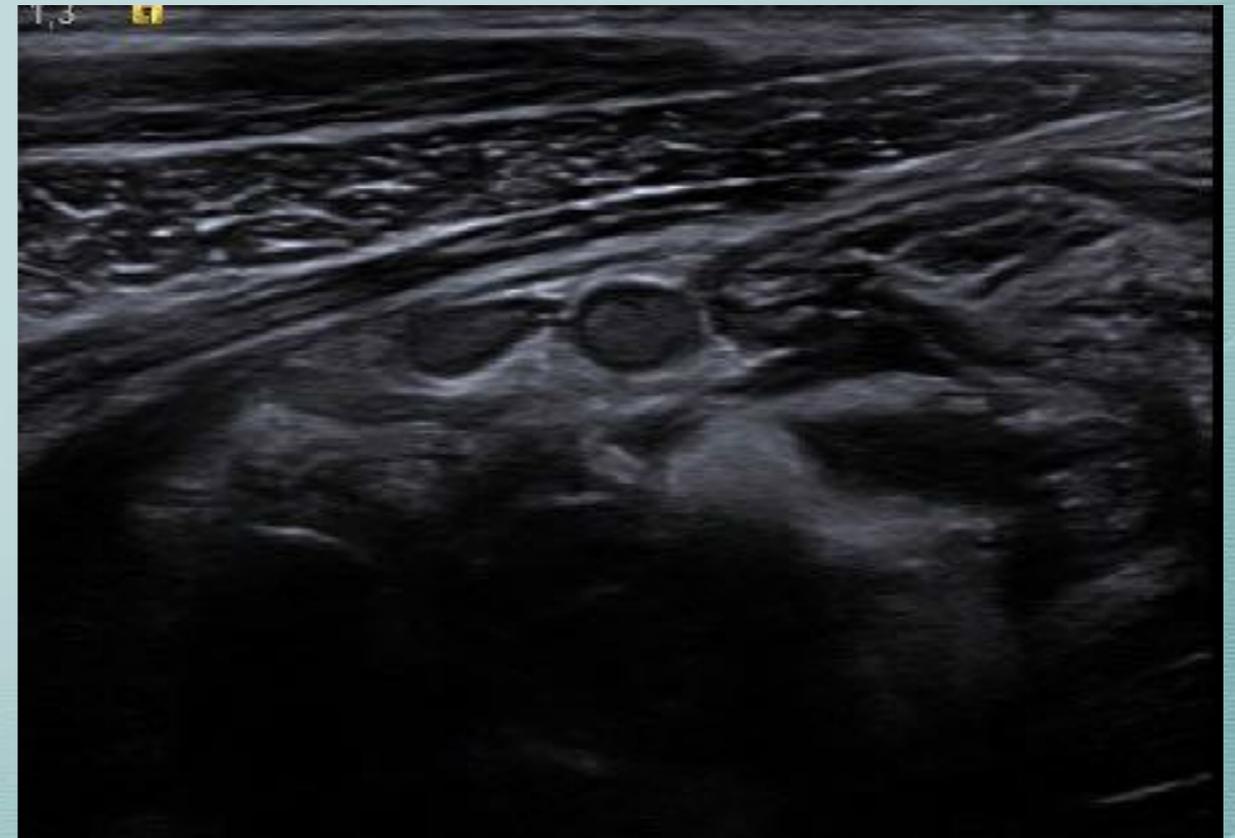
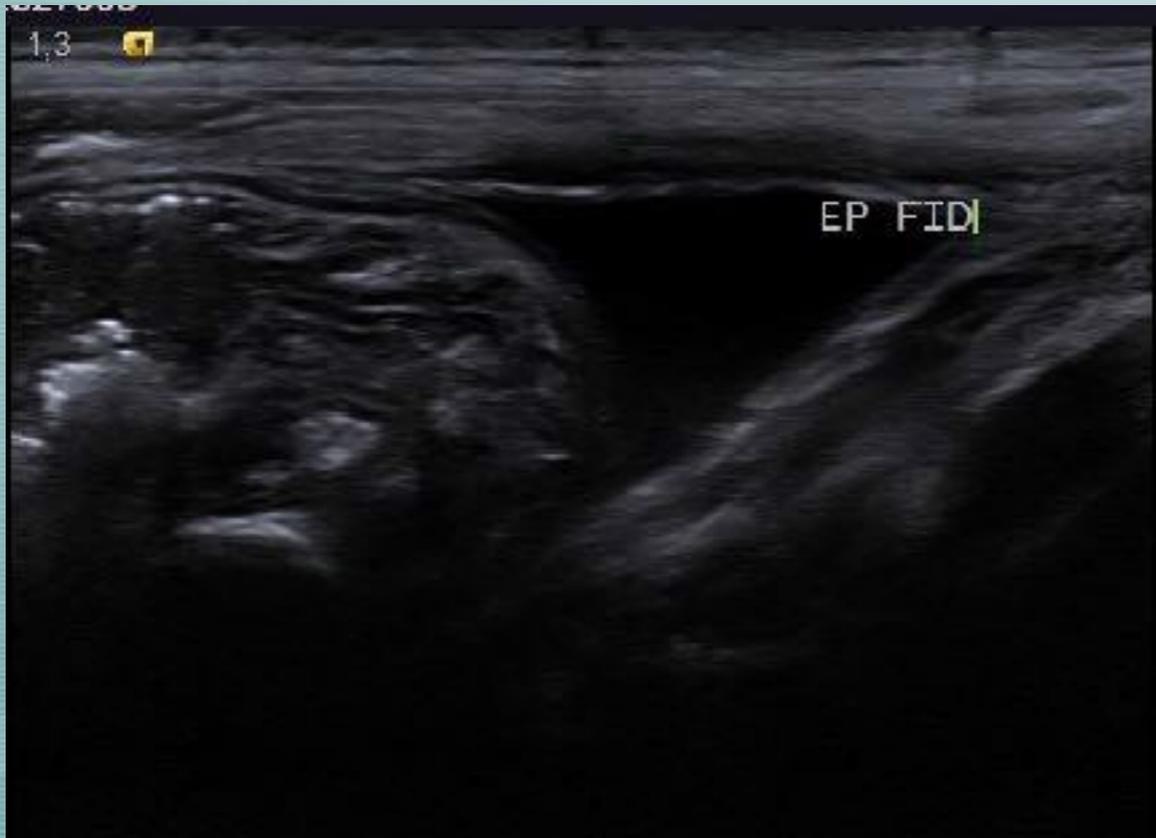
épanchement
adénopathies satellites



Appendicite

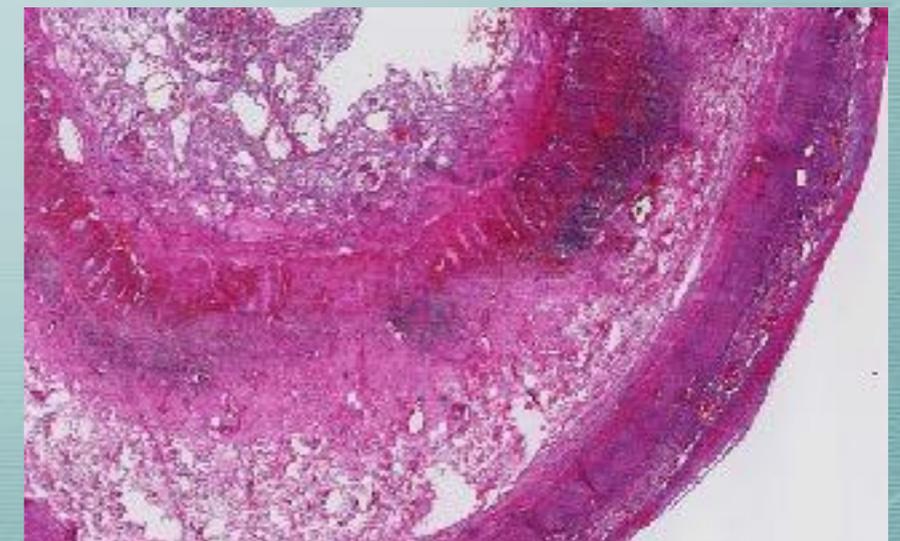
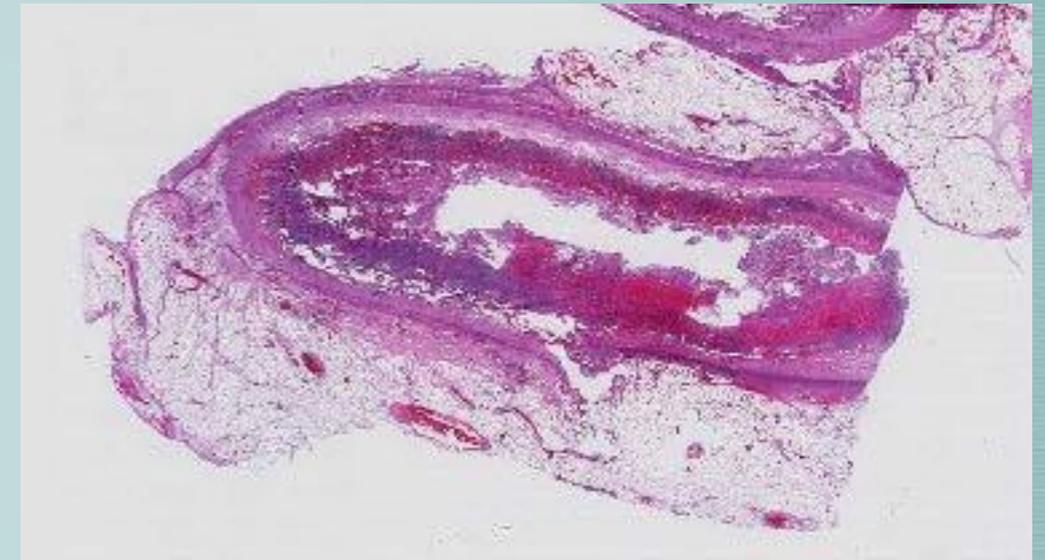
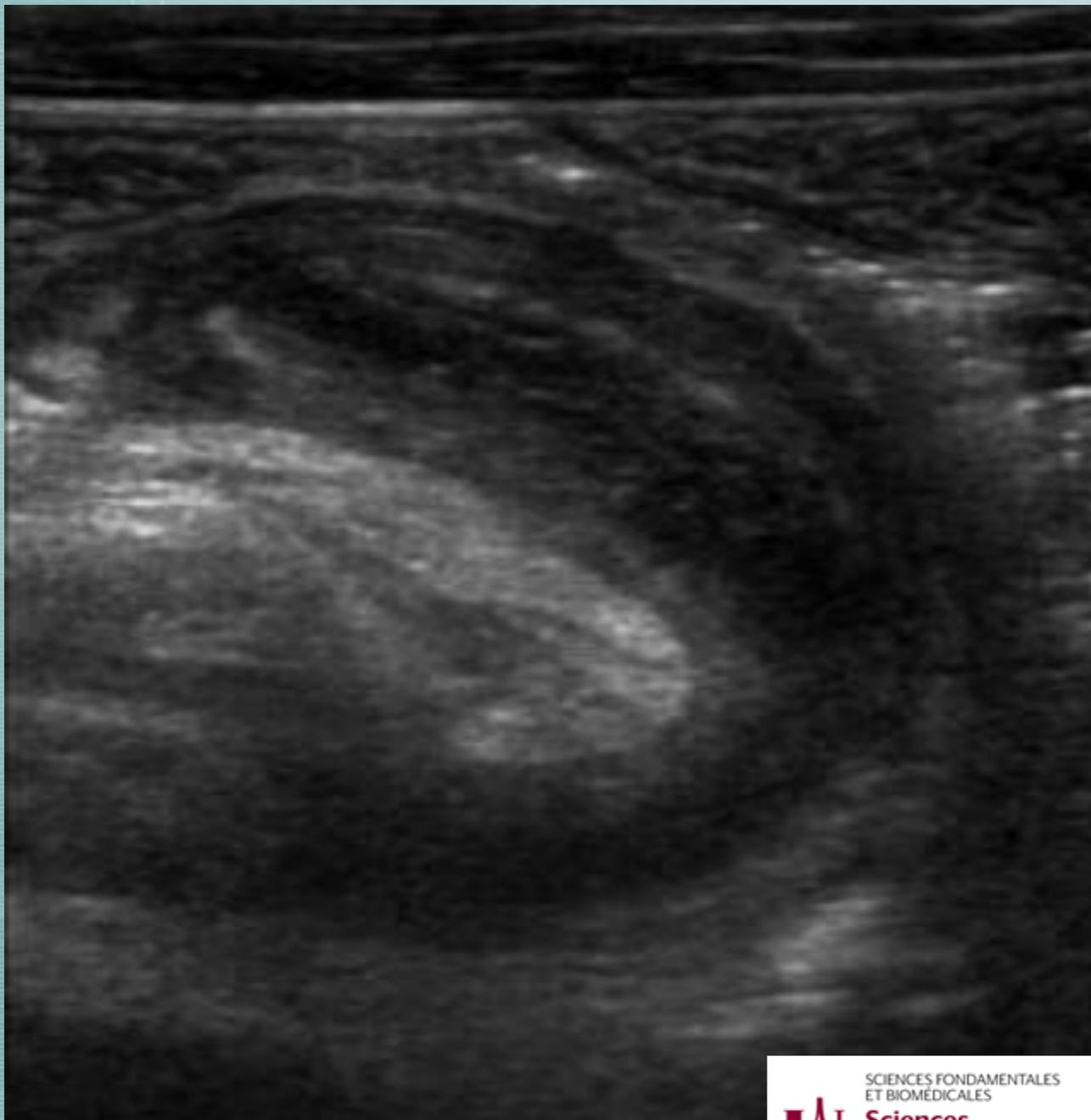
épaississement pariétal
augmentation de calibre $\geq 6\text{mm}$
incompressible
infiltration de la graisse

épanchement
adénopathies satellites

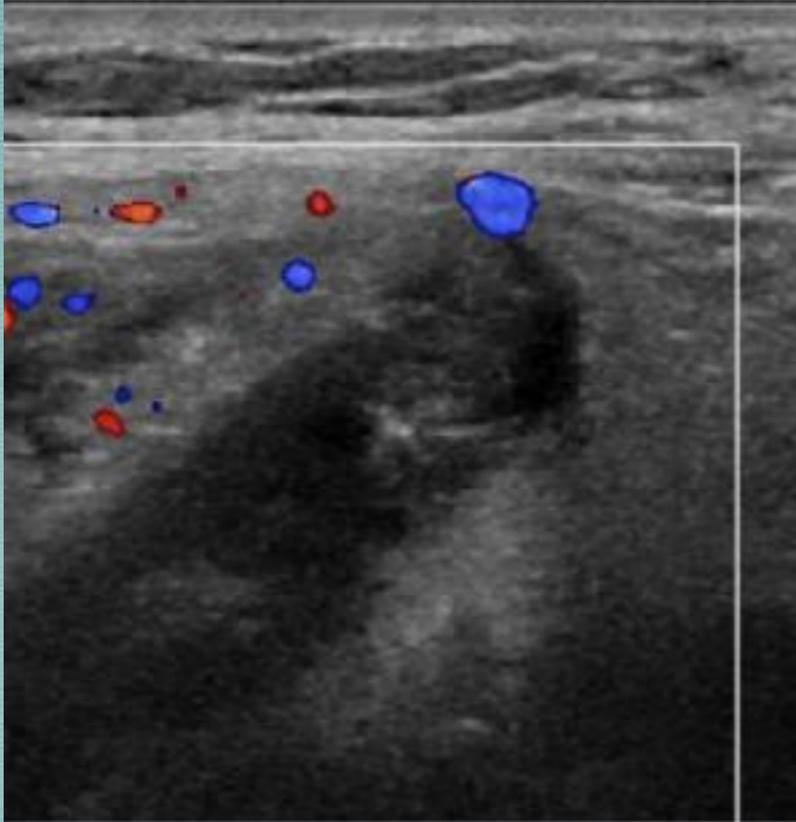


Appendicite aiguë

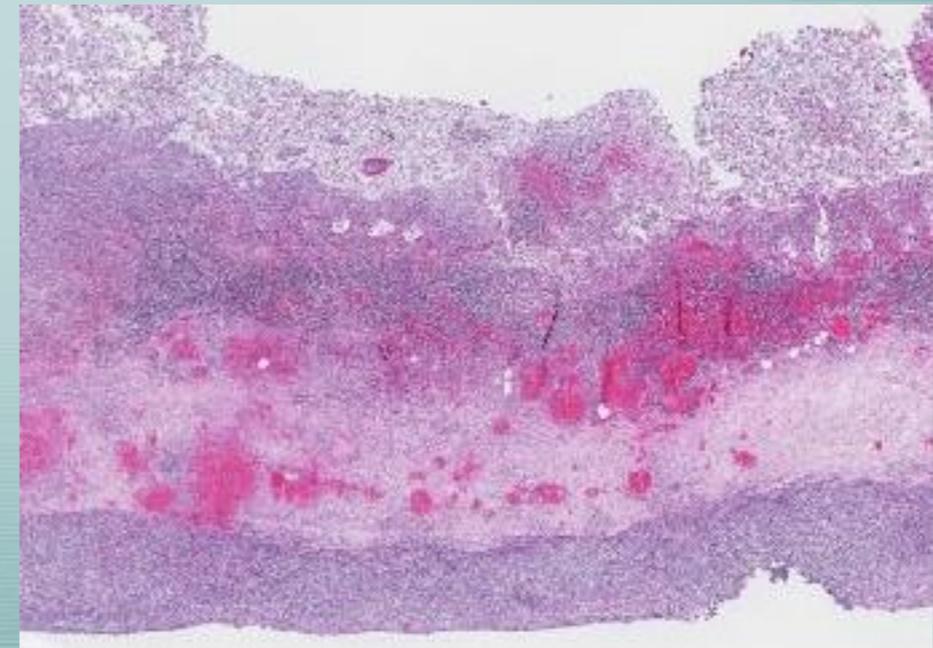
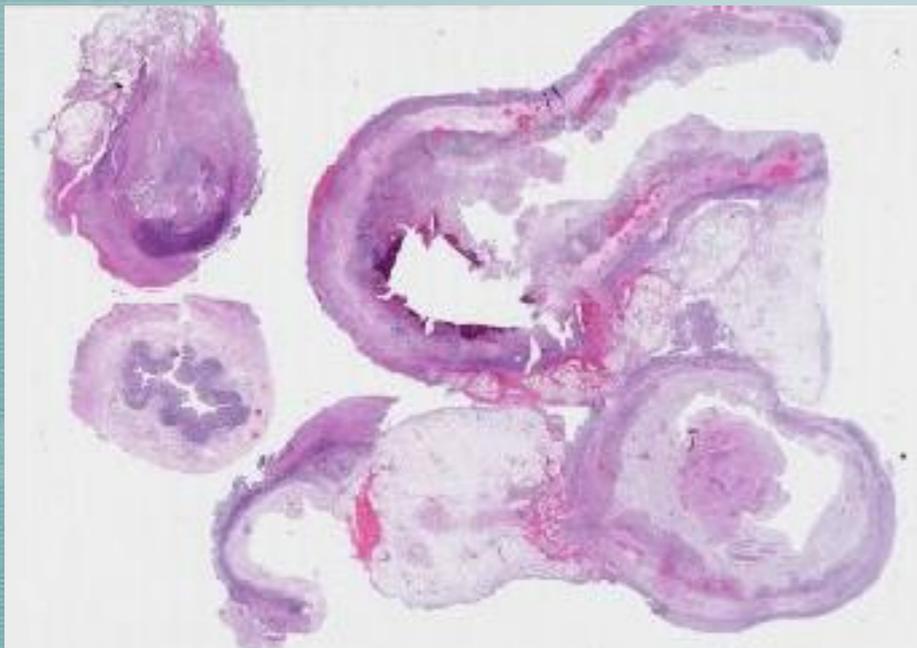
correspondance entre l'aspect échographique et l'histologie.



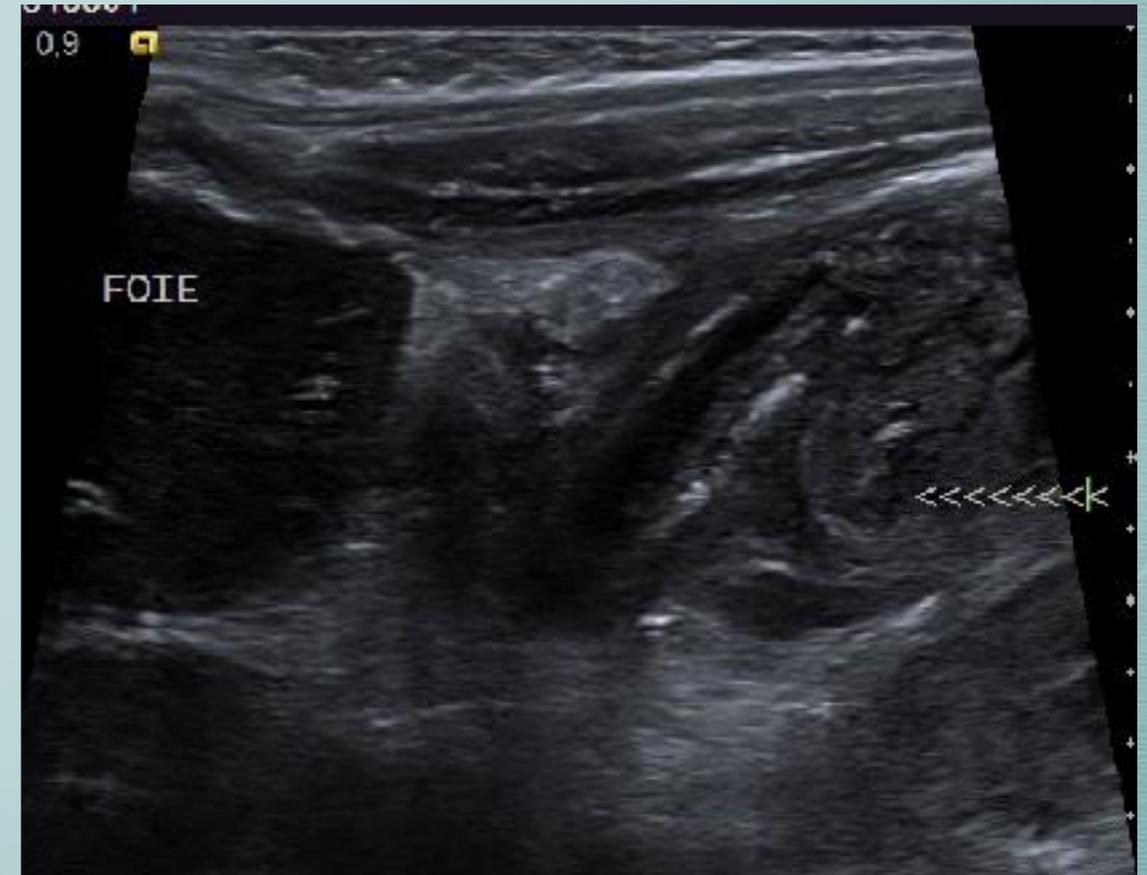
appendicite nécrotique



Perte des strates ,
aspect nécrotique



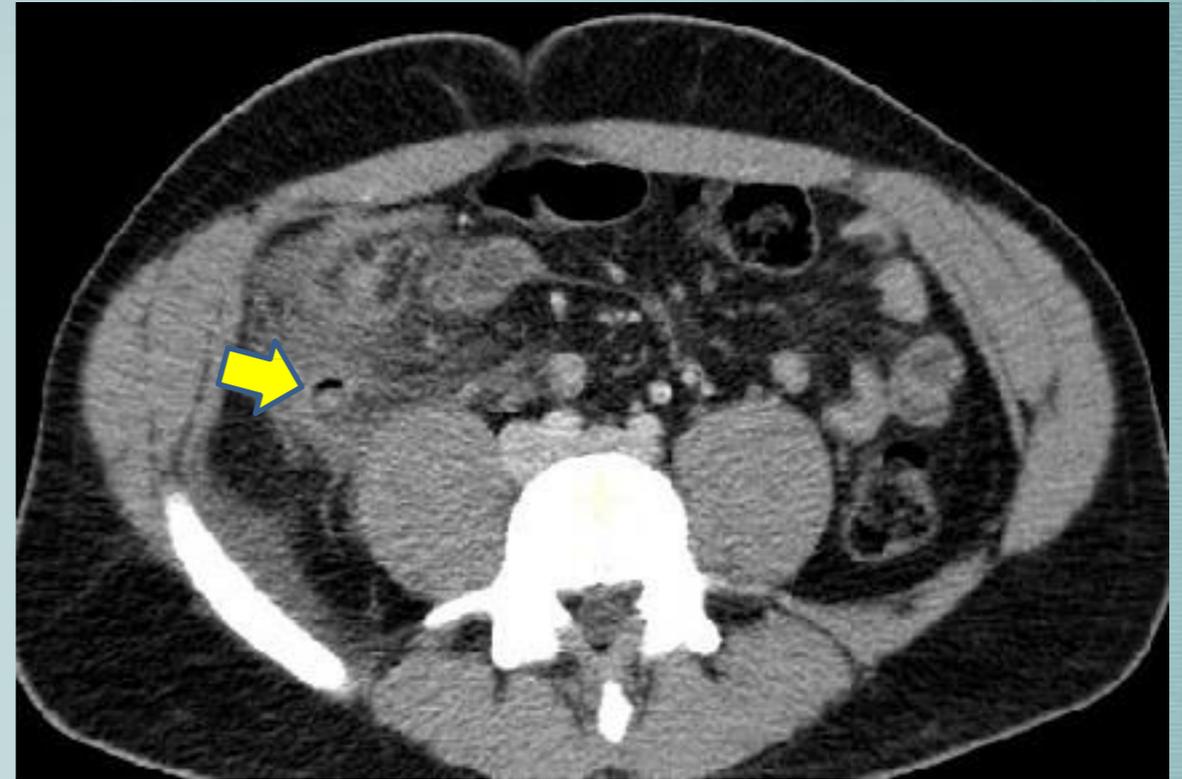
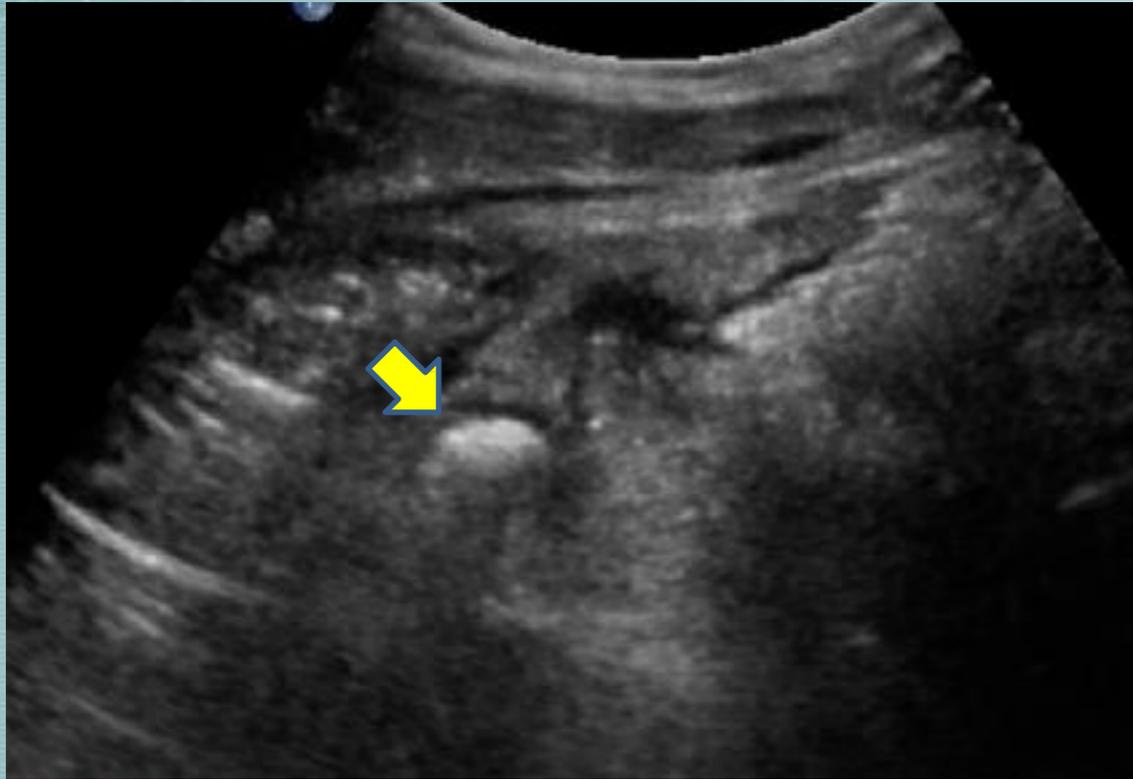
appendicite rétro caecale



Appendicite ou Adénolymphites ?



appendicite



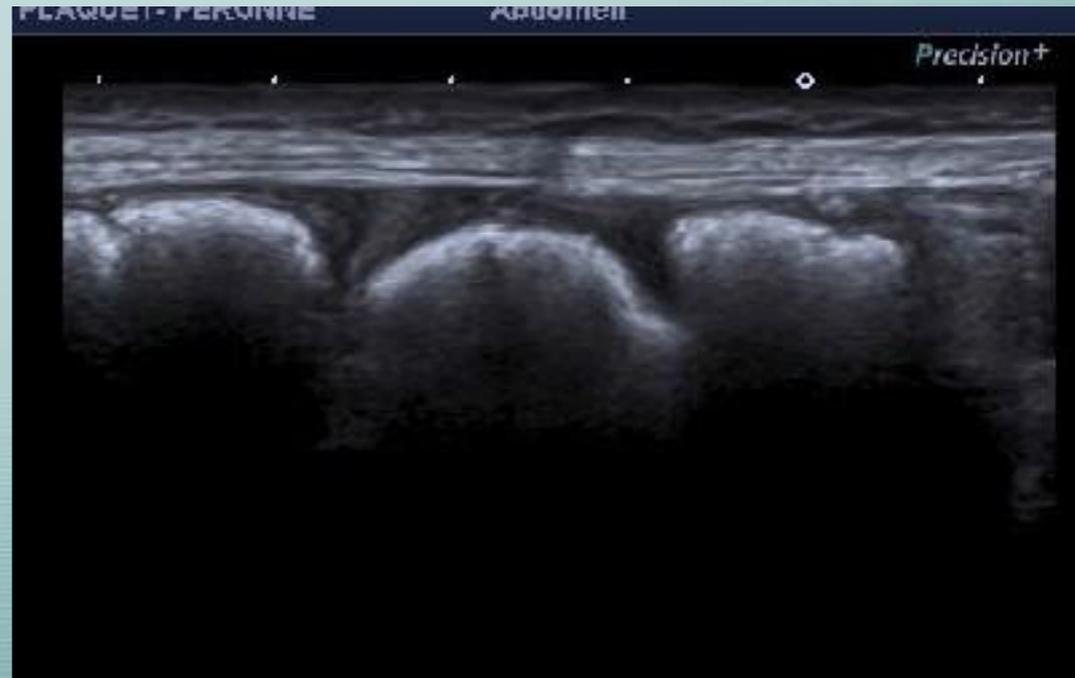
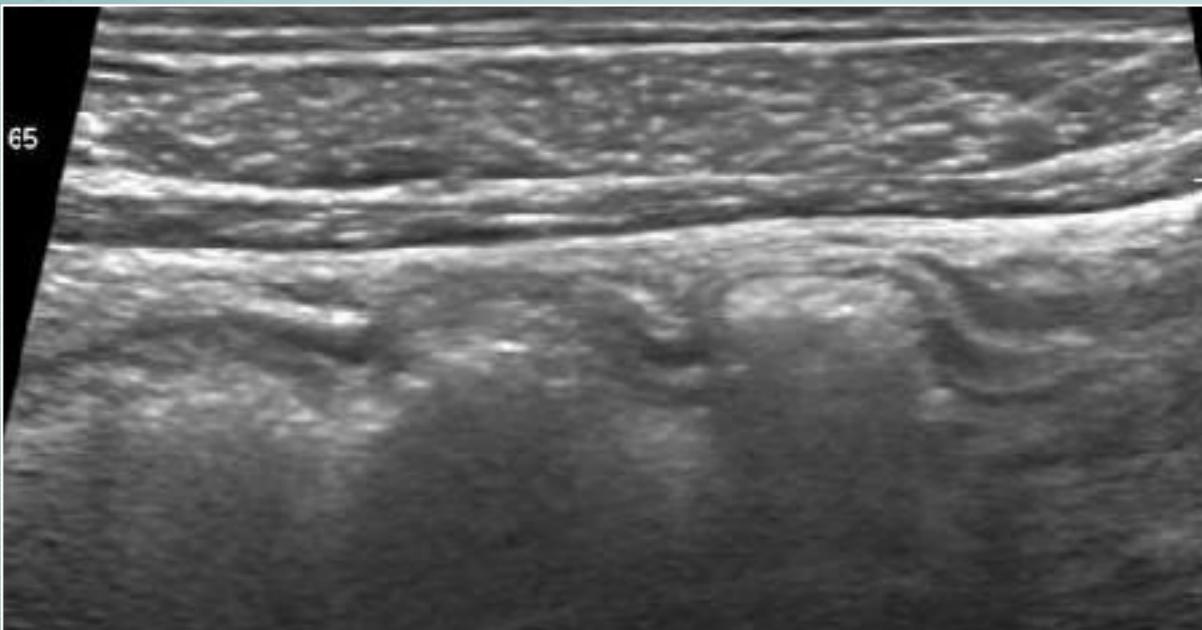
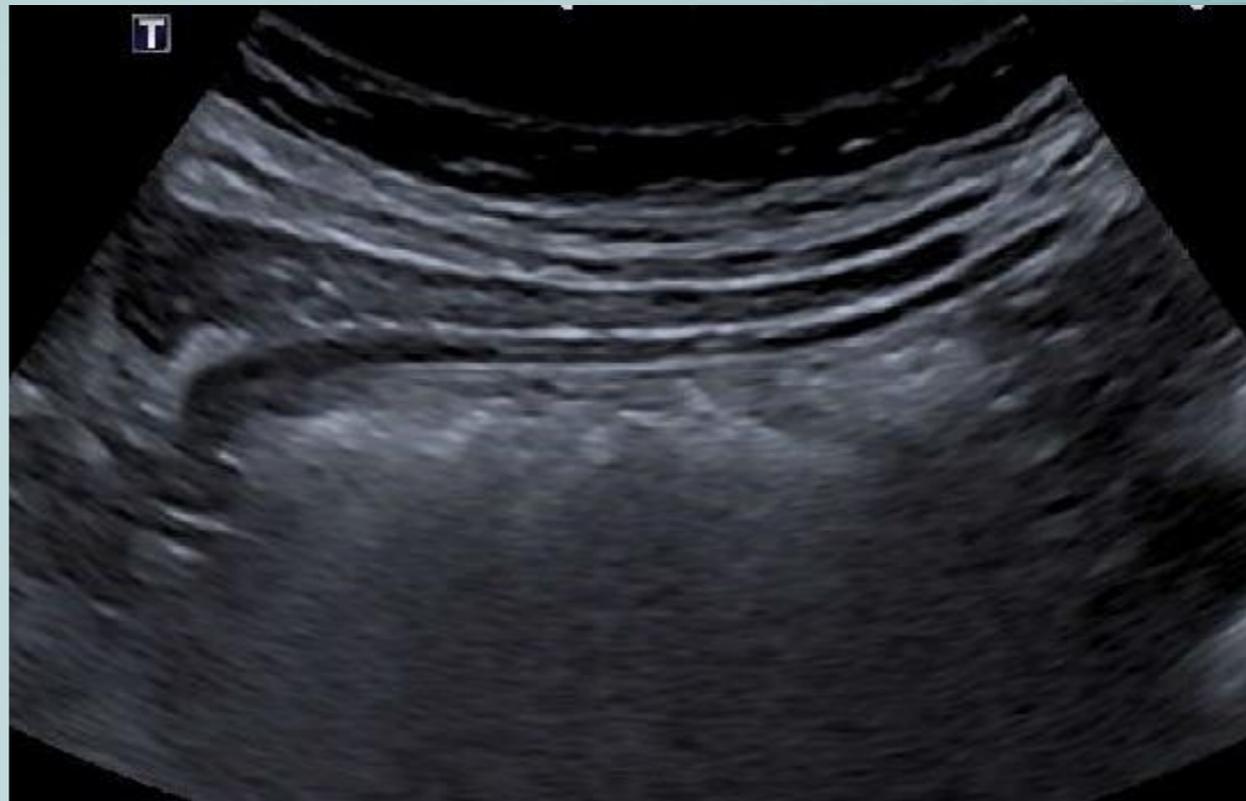
Appendicite difficile en US : on ne voit pas l'appendice avec certitude (peut-être en regard de la flèche) mais on identifie clairement la graisse péridigestive infiltrée.
Au CT, on retrouve un segment appendiculaire (flèche) et une importante infiltration de la graisse péricaecale .

Colon

Epaisseur < 5mm

Stratification

Haustrations



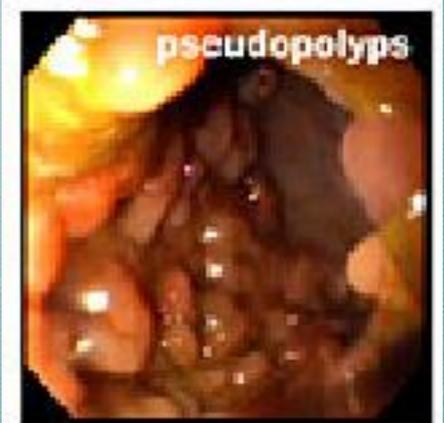
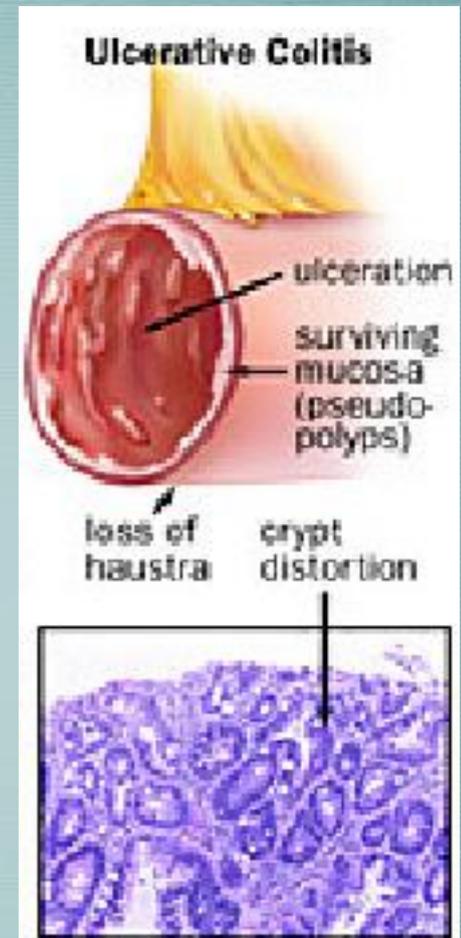
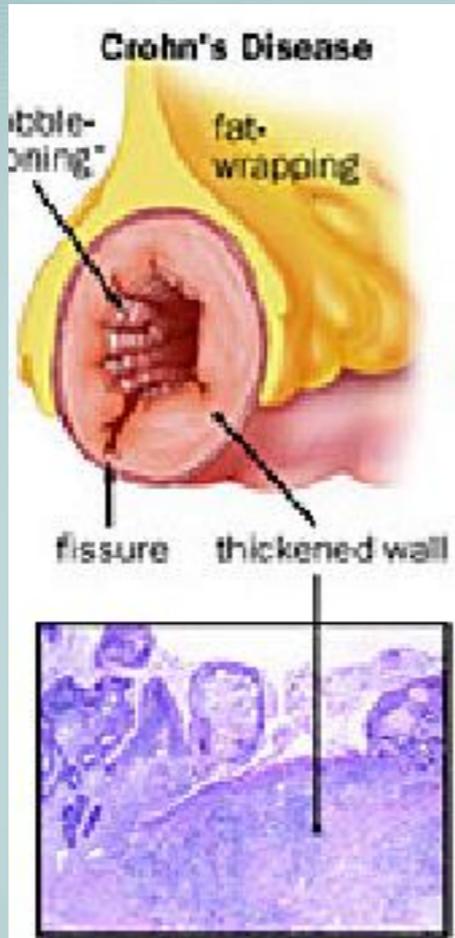
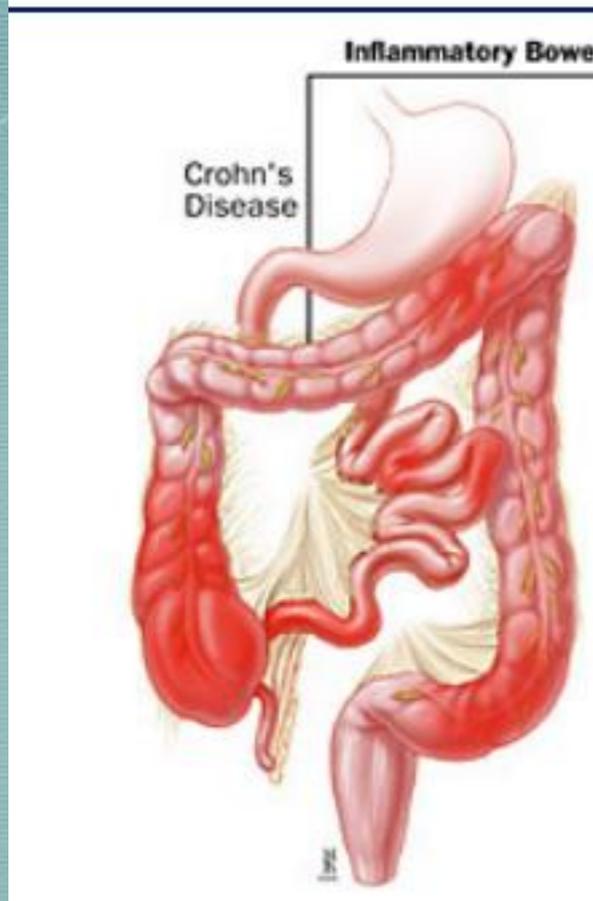
Pathologie du colon et échographie

COLITES	topographie préférentielle	couches atteintes	épaississement	stratification	Doppler couleur	signes associés
CROHN	iléon/colon droit discontinue	Muqueuse , sous muqueuse , transmuable	> 10 / 13 mm	dédifférenciation au stade chronique	++	GG , fistules , abcès
RCH	colon G /rectum continue , rétrograde	Muqueuse + + , SS Muqueuse Superficielle	< 9 mm	conservée	++	
Pseudo Membraneuse	Pancolite + Gauche	toutes	11 mm en accordéon	conservée	-	ascite
INFECTIEUSE (yersinia, salmonelle , campylobacter	pancolite + droite et iléo coecale	toutes	> 7/ 9 mm	conservée	+	GG
ISCHEMIQUE	colon G	Sous muqueuse	9 mm	Diff ou dédifférenciée	-	sténose art
NÉOPLASIQUE	N'importe où	Toutes	> 12 mm asymétrique ++	dédifférenciée	+/-	+/_ GG Ascite

Crohn

MICI

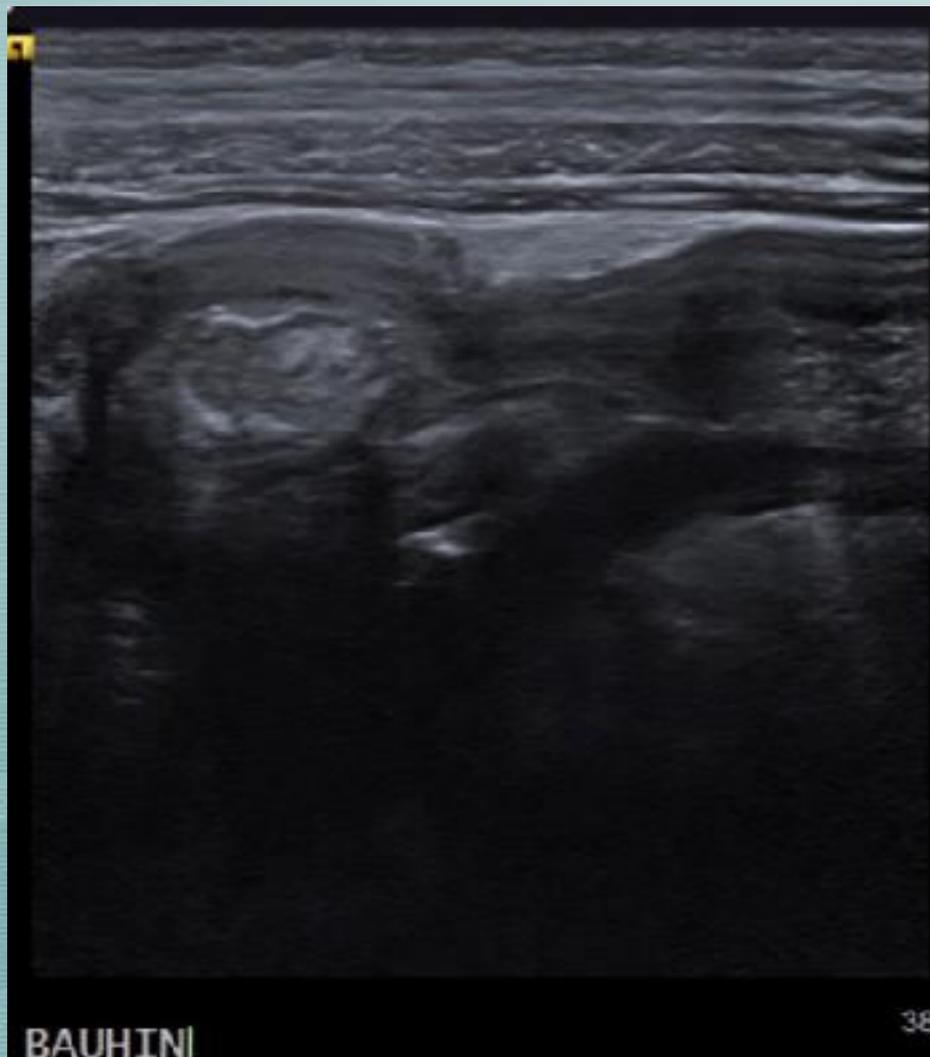
RCUH



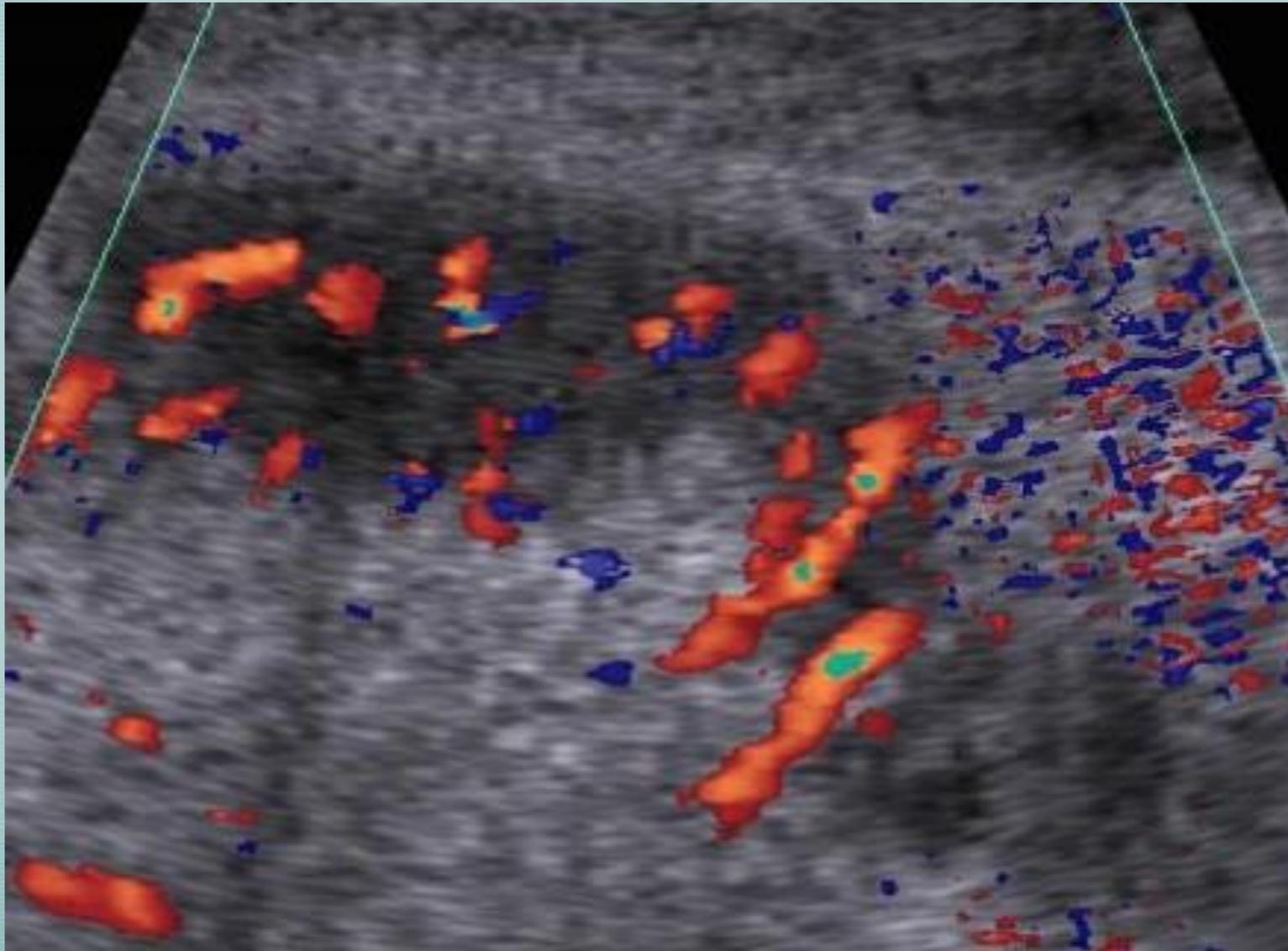
https://www.hopkinsmedicine.org/gastroenterology_hepatology/_pdfs/small_large_intestine/crohns_disease.pdf

CROHN

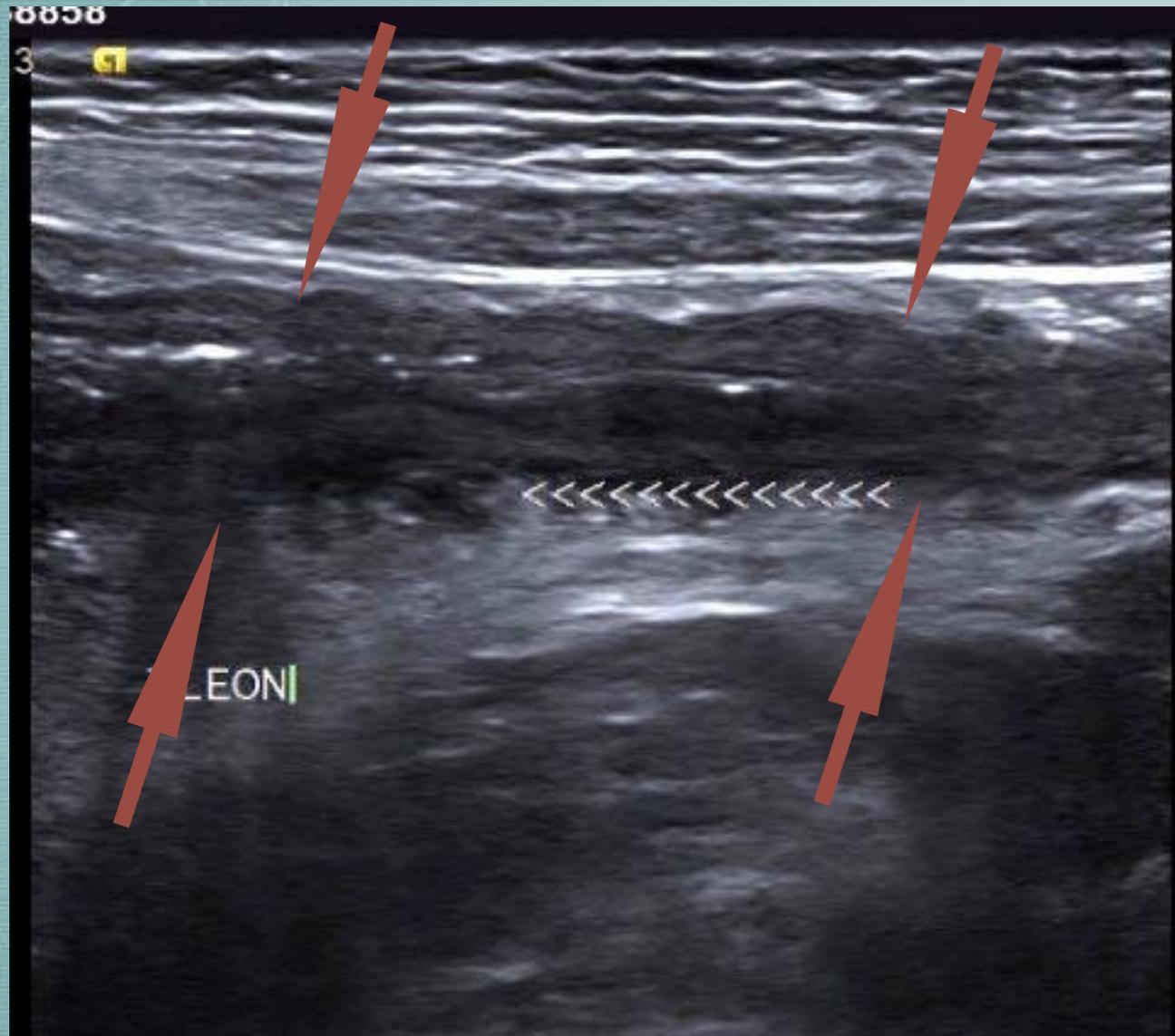
Topographie préférentielle	Couches Atteintes	Épaississement	Stratification	Doppler couleur	Signes associés
Iléon / colon Multifocale	Muqueuse ++ Sous muqueuse	10/13 mm	Conservée stade aigue dédifférencié	++	GG fistules abcès



CROHN

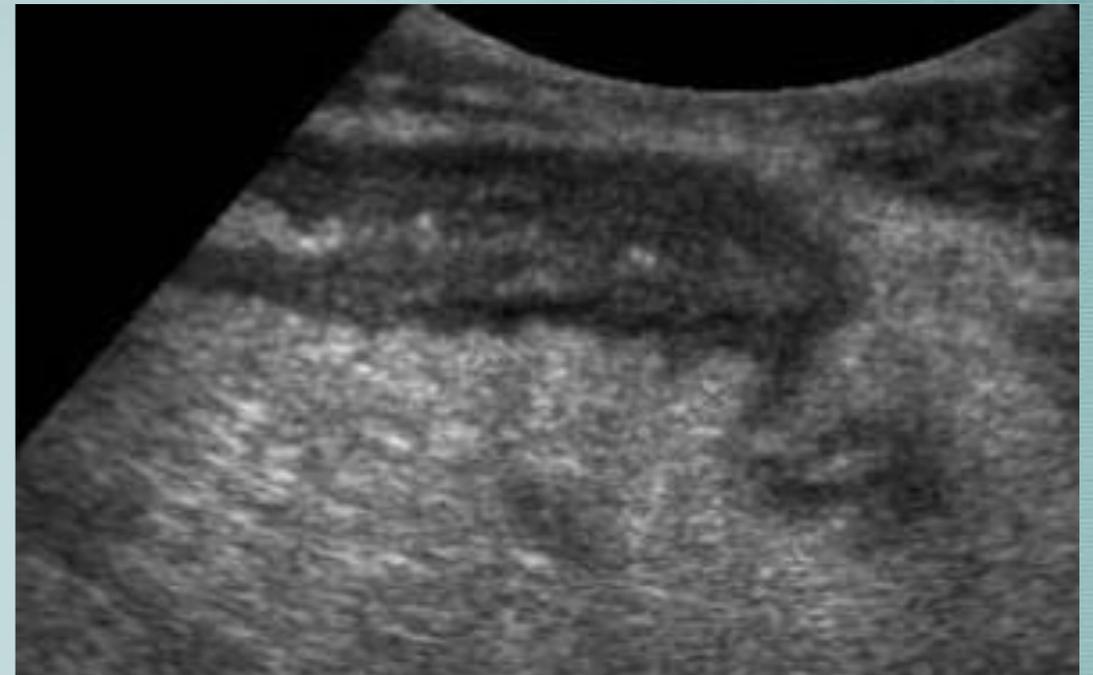
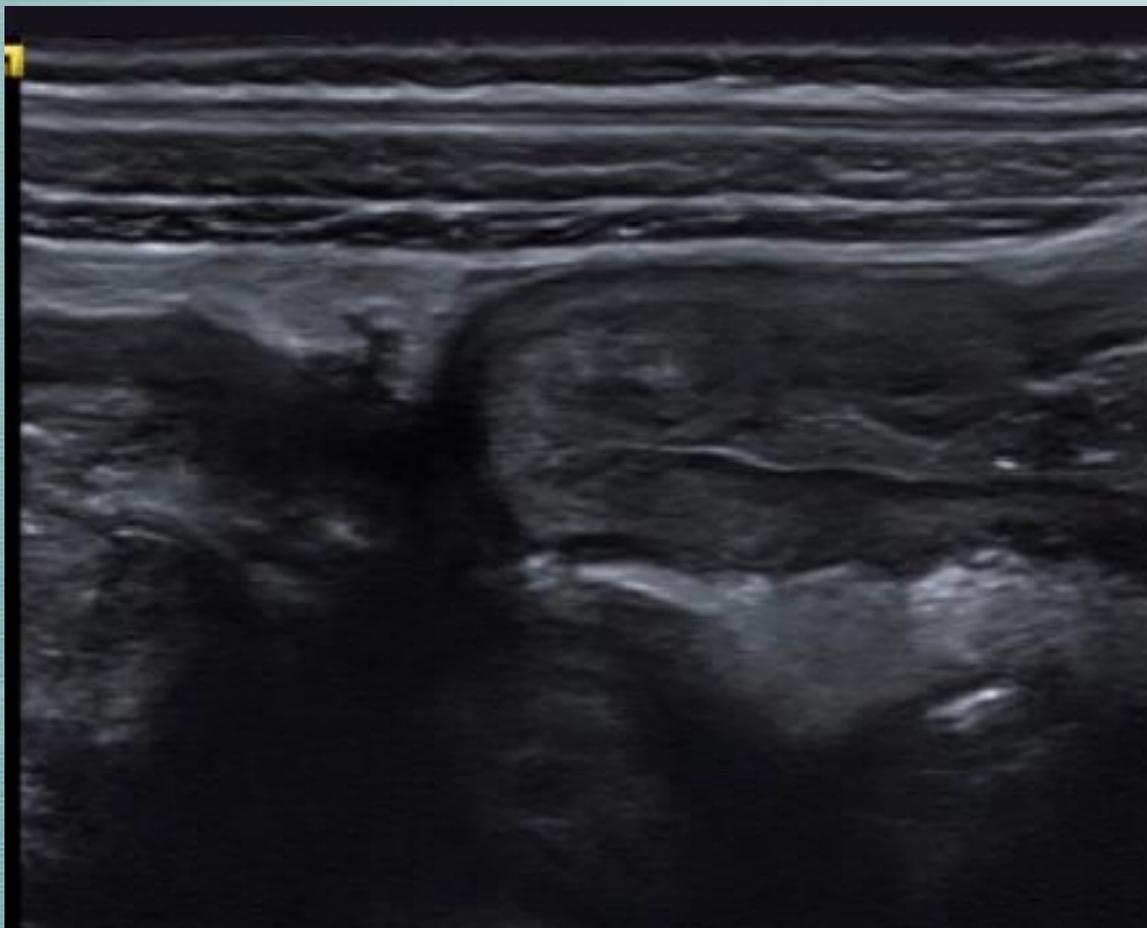


CROHN



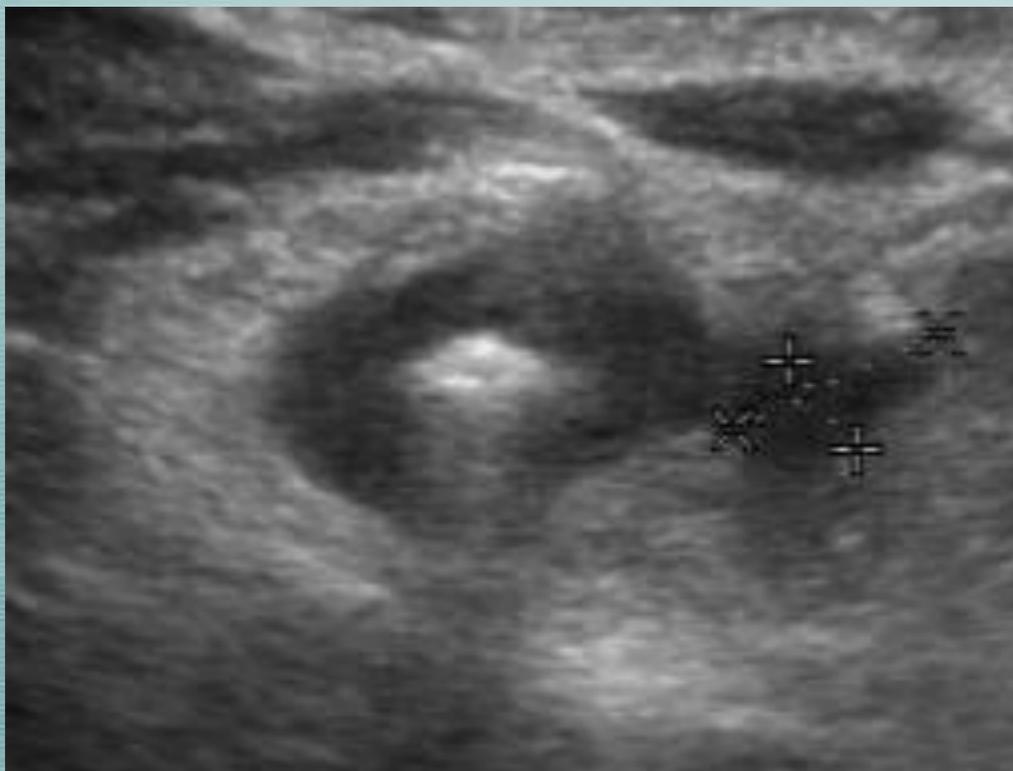
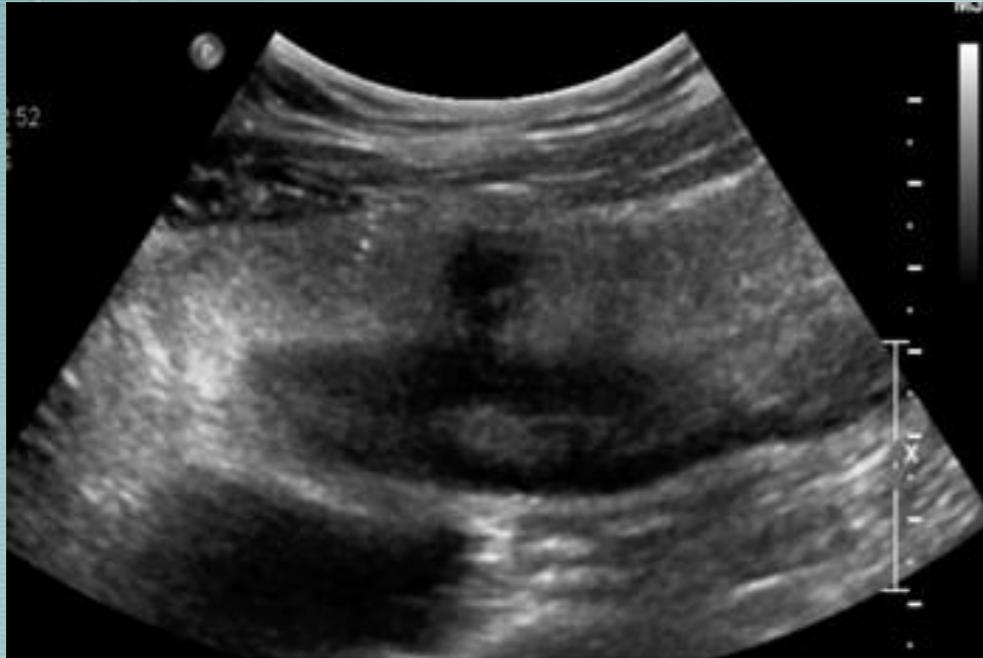
CROHN

Complications :
Fistules
Occlusion
Perforation



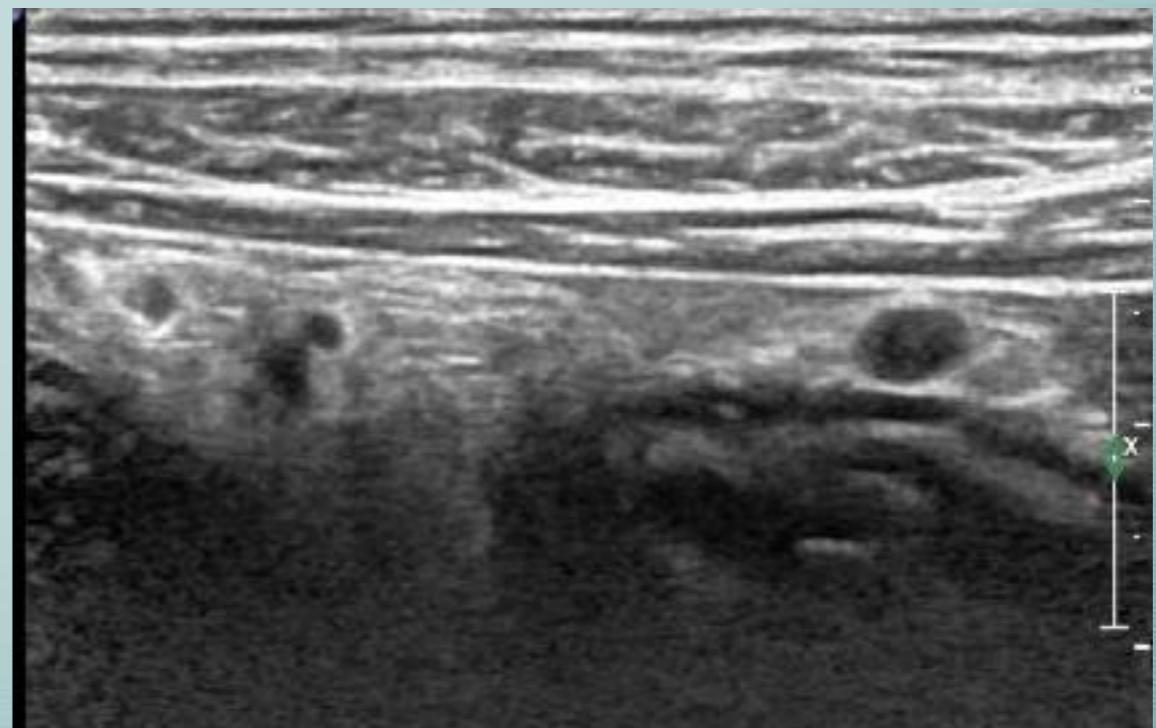
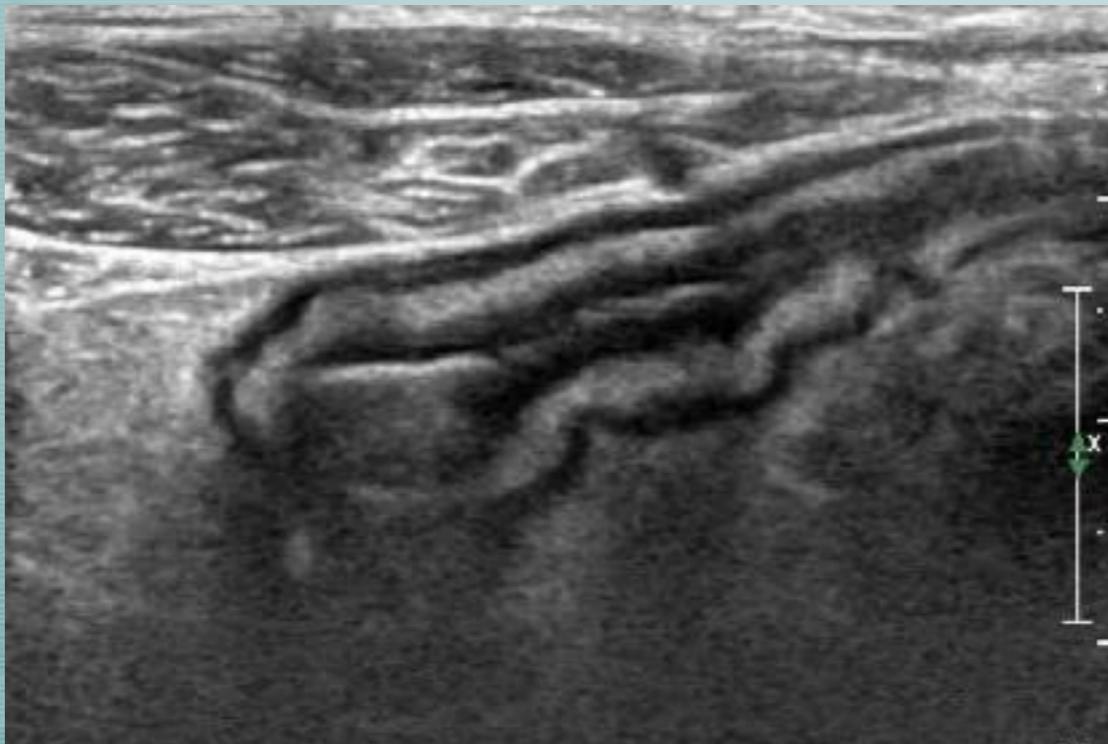
CROHN

Complications :
abcès
Occlusion
Perforation

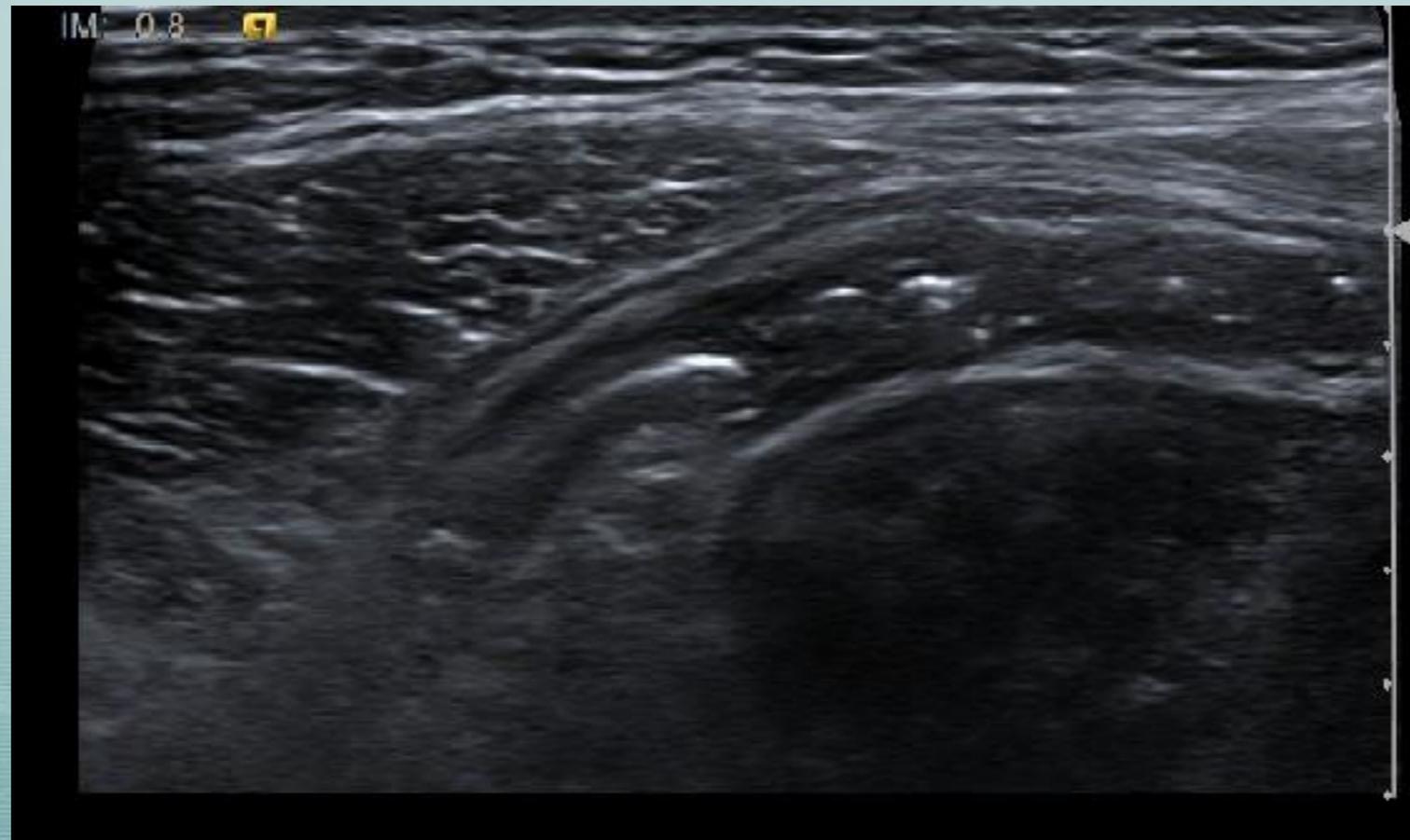
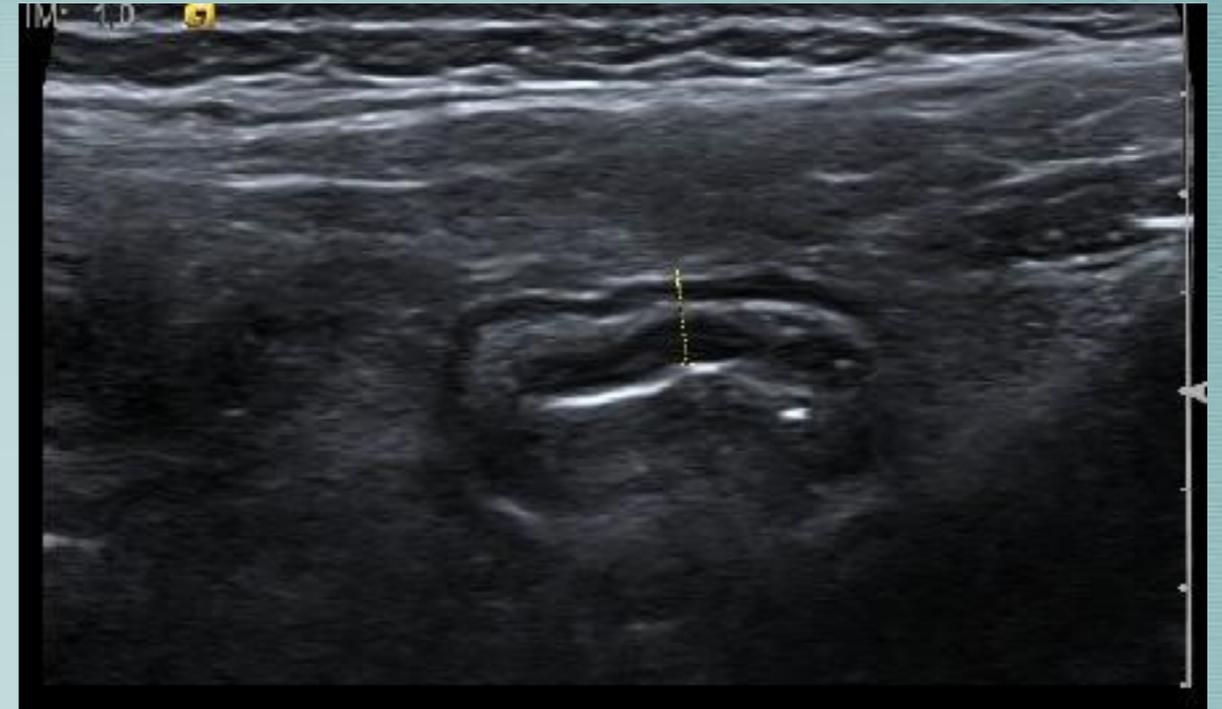
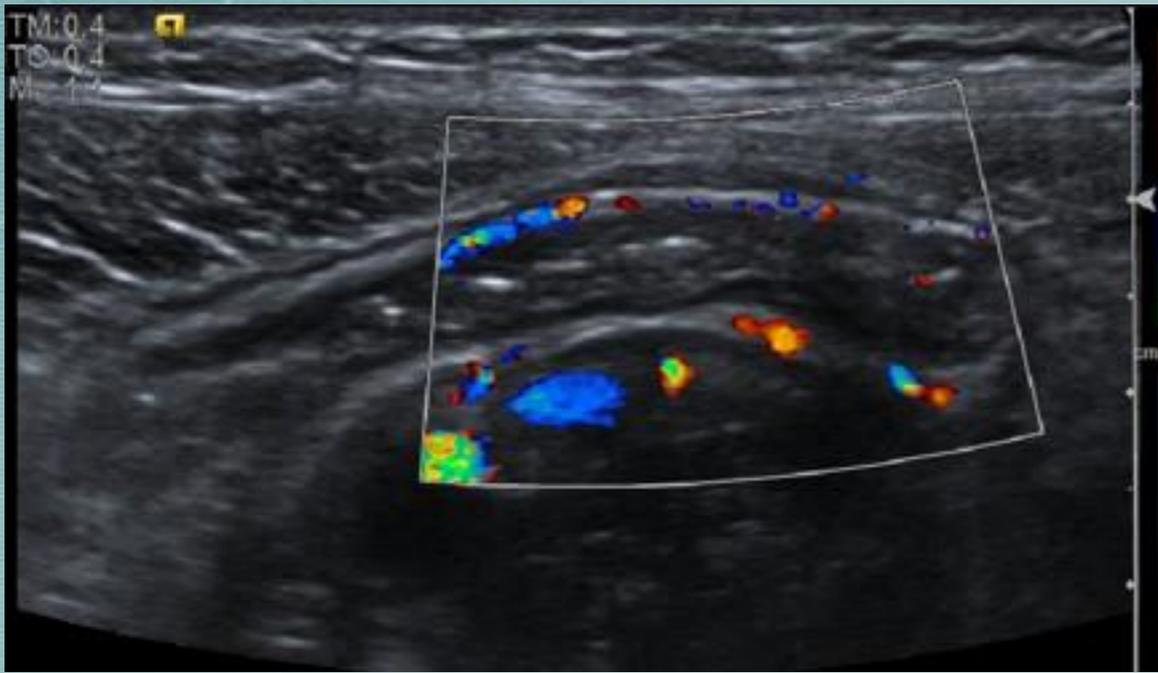


RCUH

Topographie préférentielle	Couches Atteintes	Épaississement	Stratification	Doppler couleur	Signes associés
colon/rectum	Muqueuse ++ Sous muqueuse	< 9 mm	Conservée	++	+/- GG



RCUH

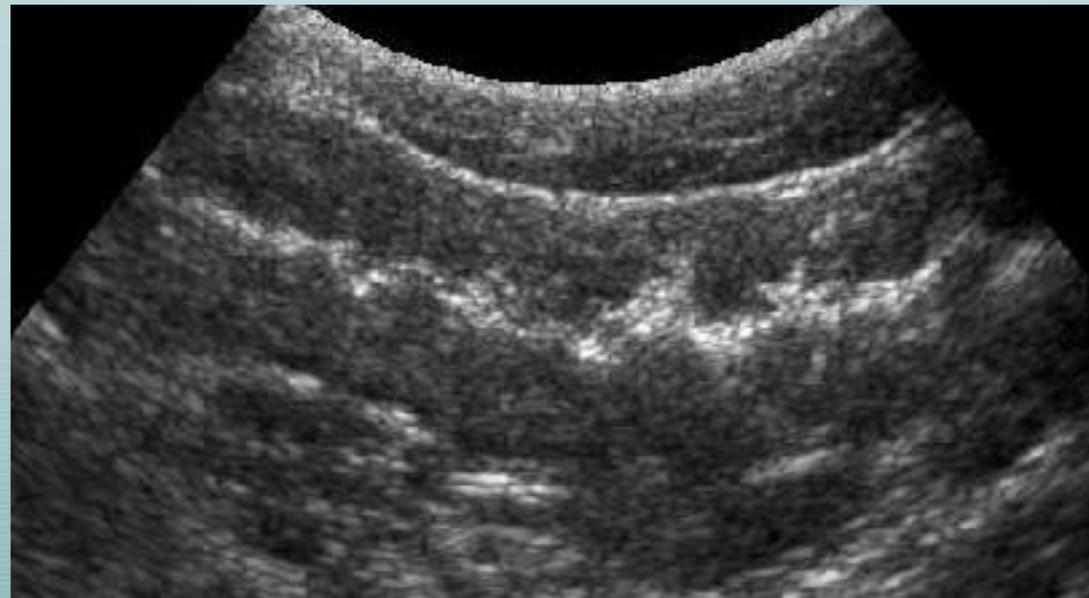


MICI et US

CROHN	RCUH
Diagnostic / topographie / extension	Diagnostic / topographie / extension
<ul style="list-style-type: none">• Complications: fistules, abcès	Pas de complication extra pariétale
<ul style="list-style-type: none">• Activité : réponse thérapeutique / Pronostic	

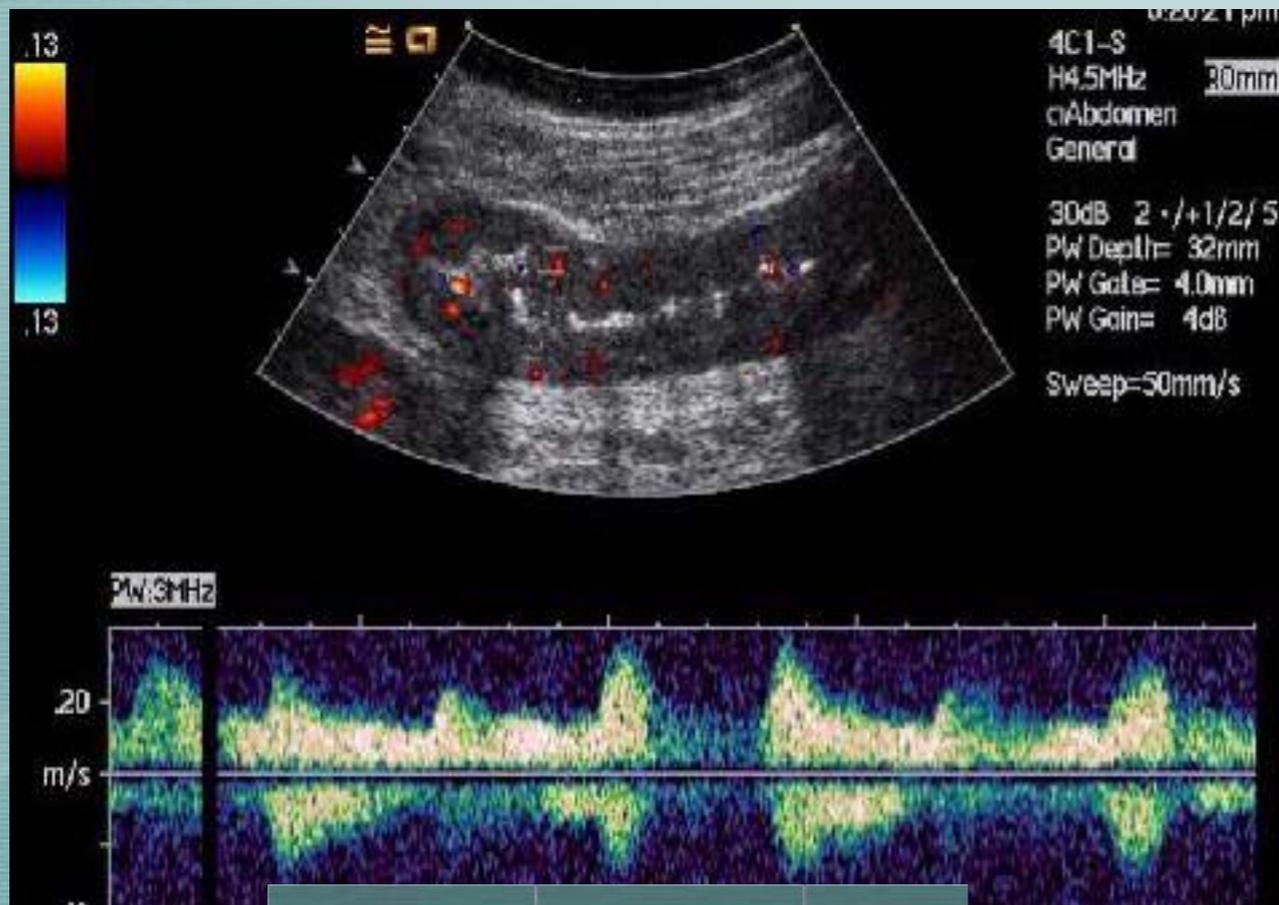
ENTEROCOLITE INFECTIEUSE

Topographie préférentielle	Couches Atteintes	Épaississement	Stratification	Doppler couleur	Signes associés
Pancolite + droite	Toutes	> 7/9 mm	Conservée	+	GG

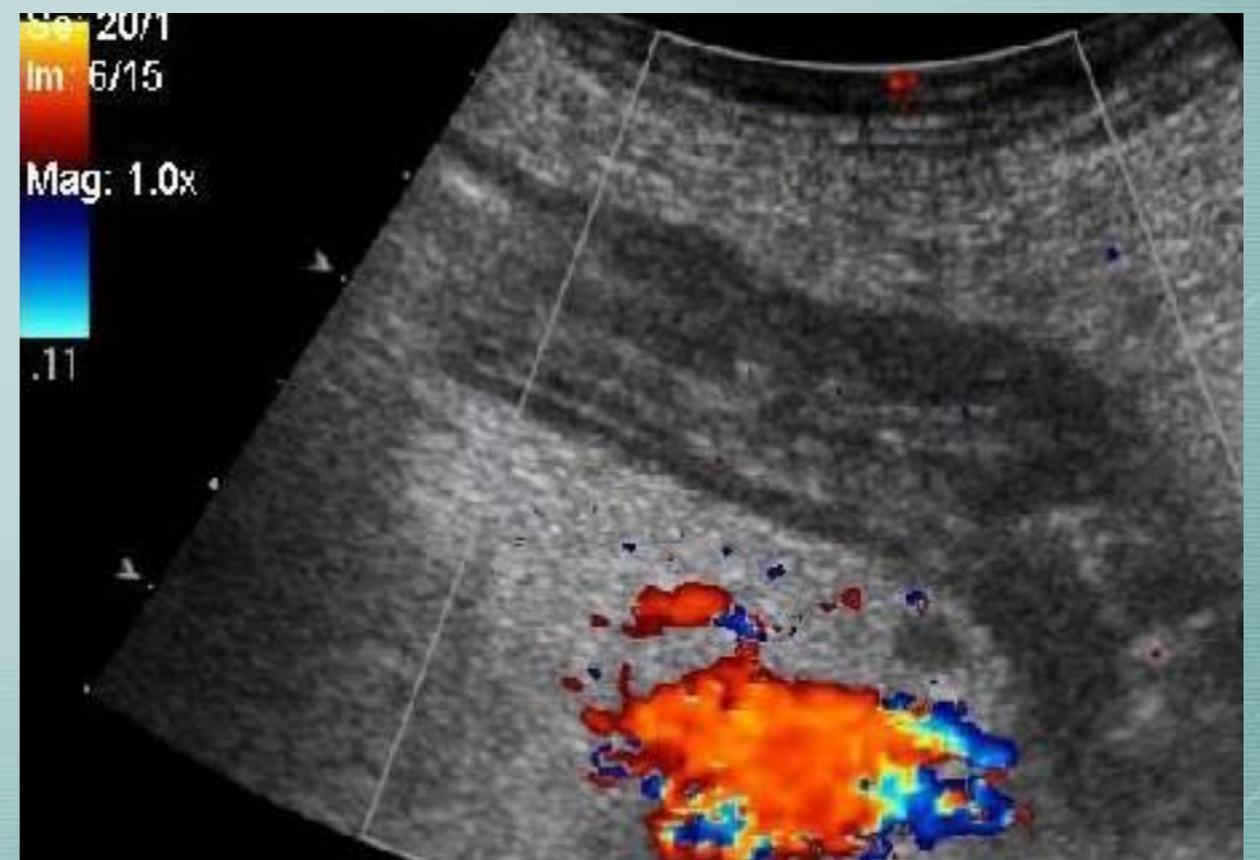


COLITE ISCHEMIQUE

Topographie préférentielle	Couches Atteintes	Épaississement	Stratification	Doppler couleur	Signes associés
Colon G	Sous muqueuse	> 9 mm	Variable différenciée/dédifférencié	+/-	Sténose artérielle



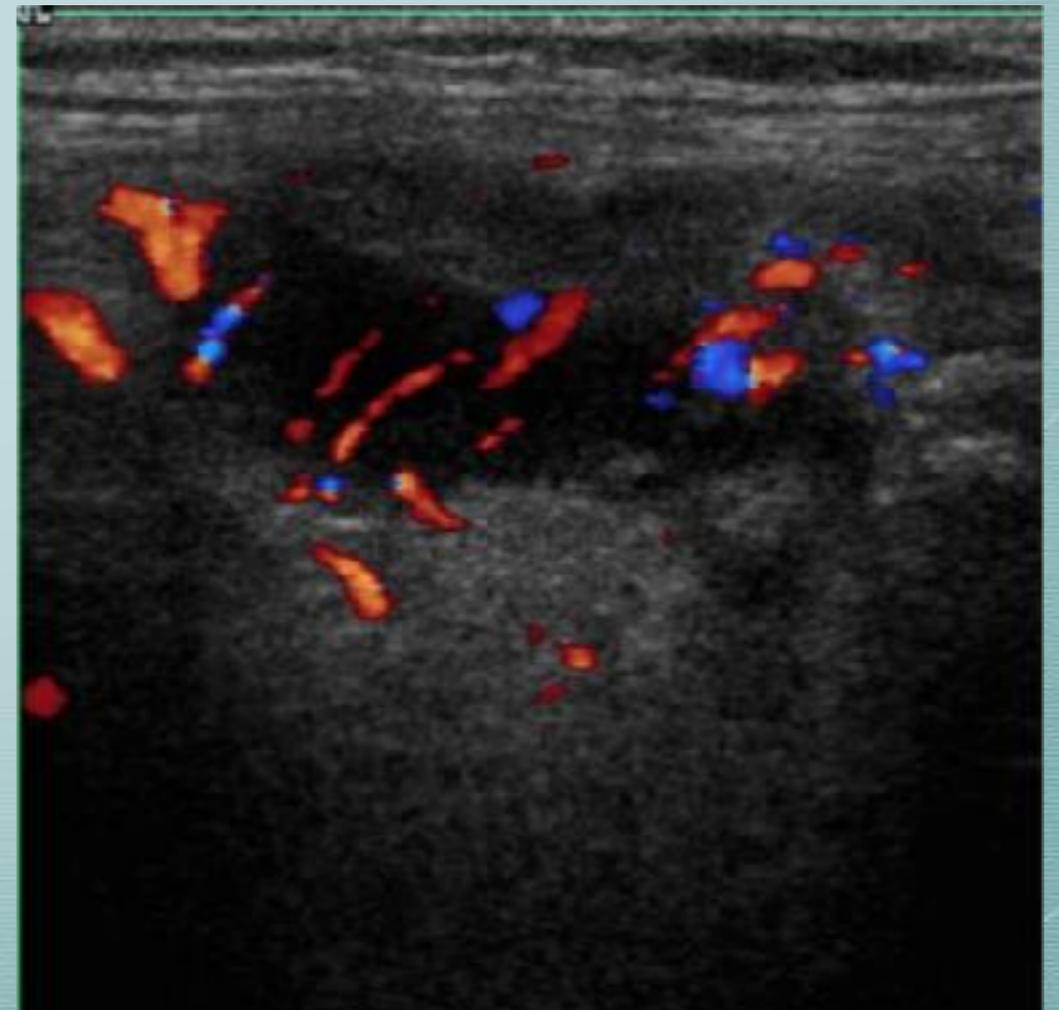
Bon pronostic



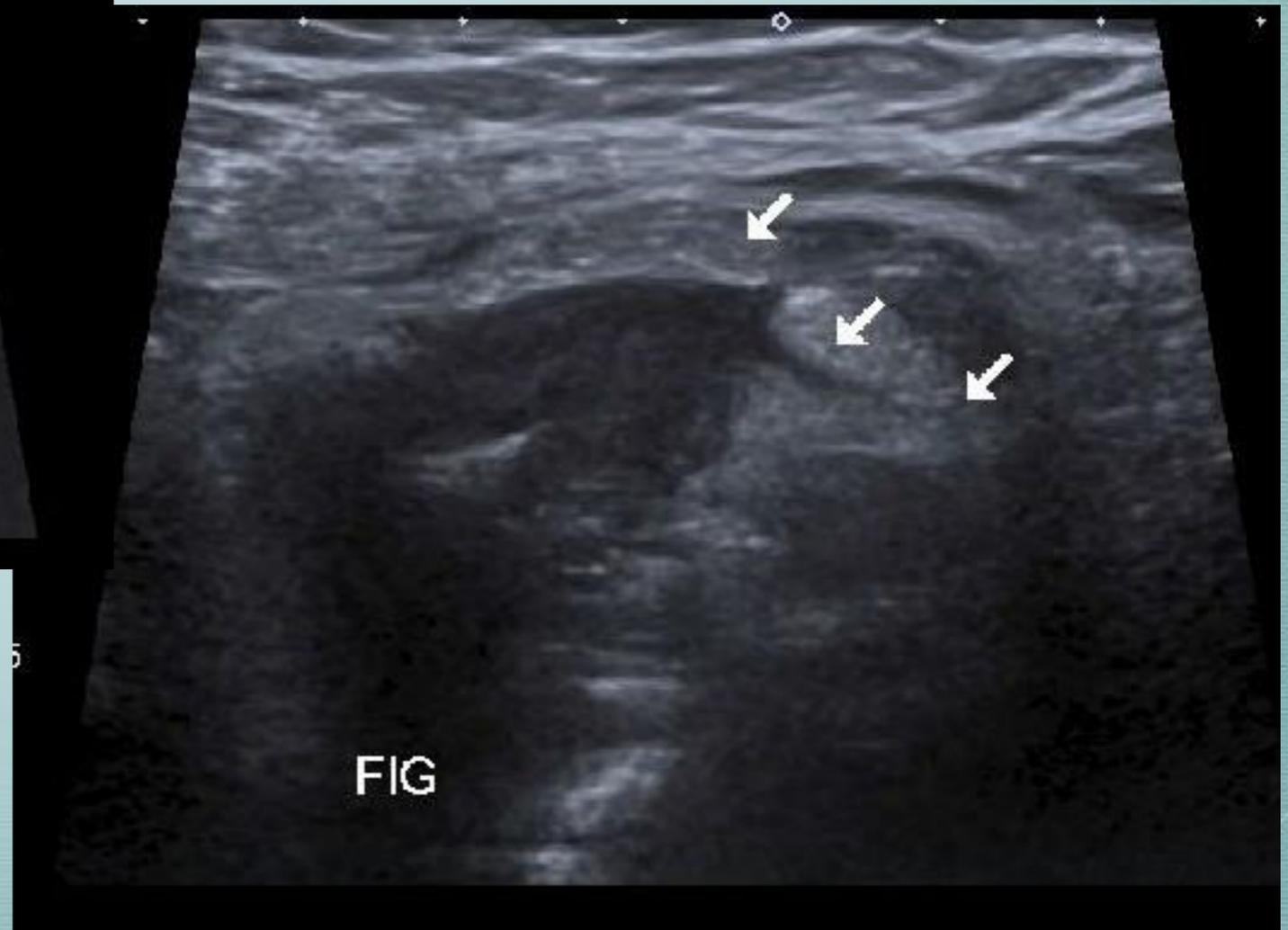
Mauvais pronostic

CANCER

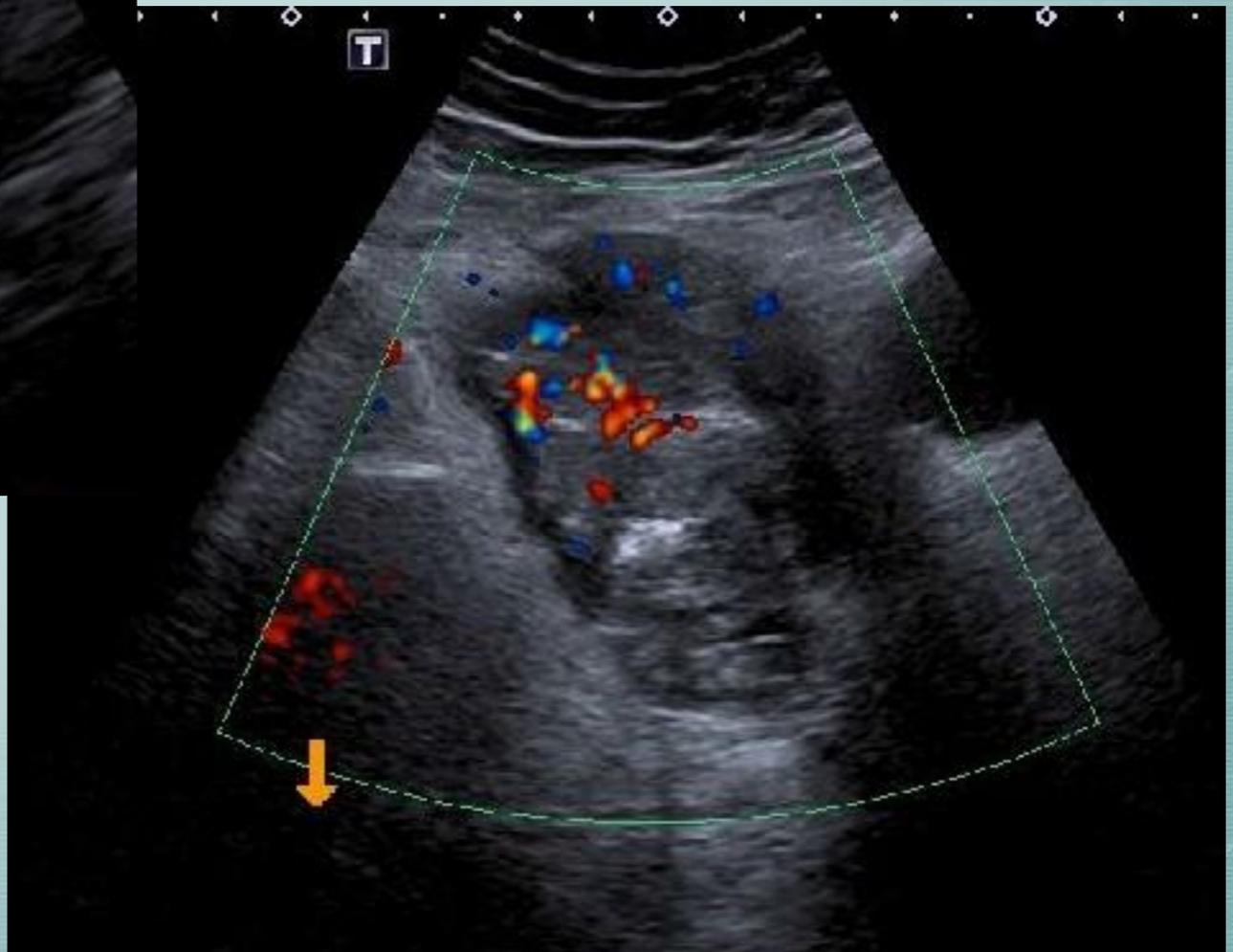
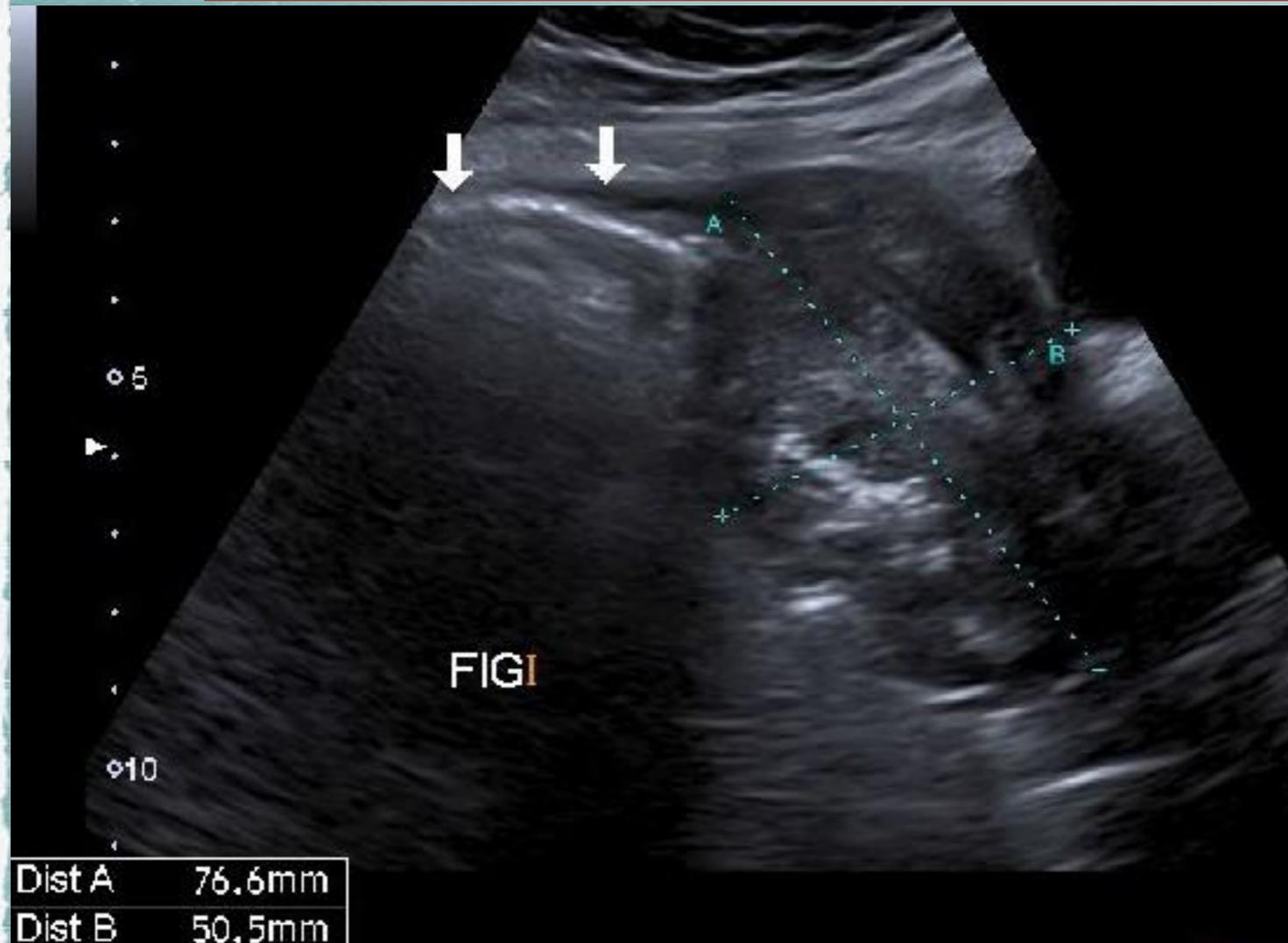
Topographie préférentielle	Couches Atteintes	Épaississement	Stratification	Doppler couleur	Signes associés
Partout Segmentaire <10 cm de long	Toutes	> 12 mm Asymétrique ++	dédifférenciée	+/- Anarchique	+/- GG



CANCER

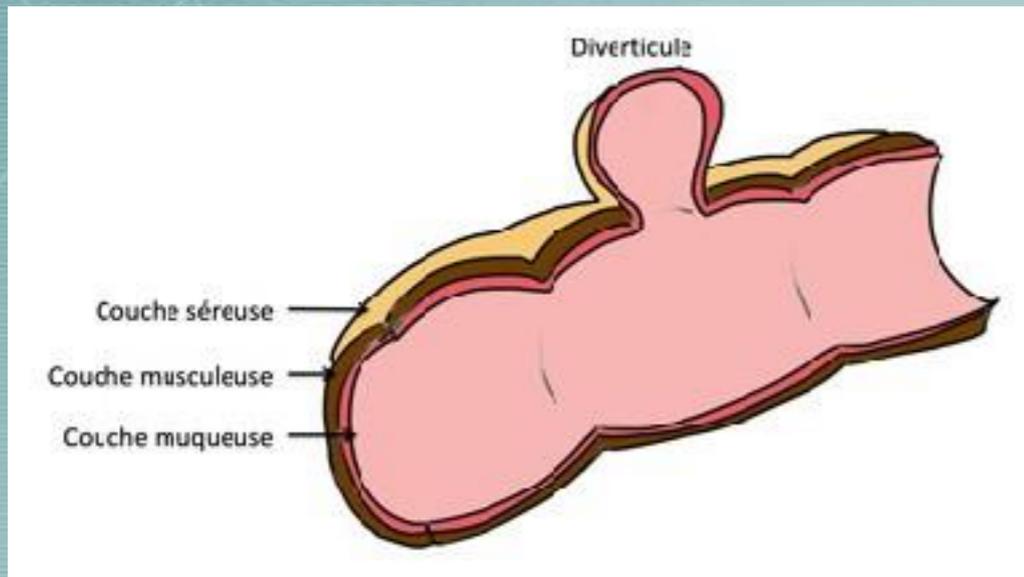


CANCER



Colon G / sigmoïde

maladie diverticulaire



sujets âgés, monde occidental,

régime pauvre en fibres
résidus insuffisants

contraction prolongée

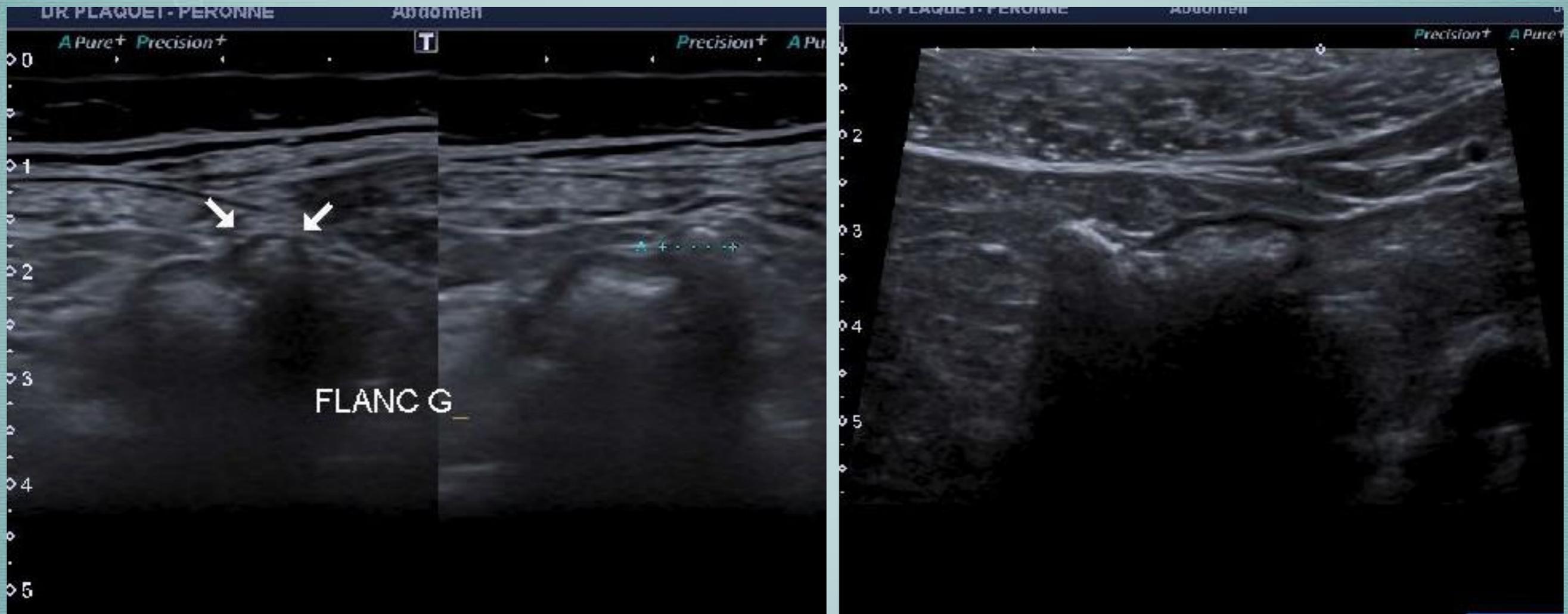
augmentation de la pression
endoluminale, déhiscence
musculaire

herniation muqueuse / ss muqueuse
sous la séreuse

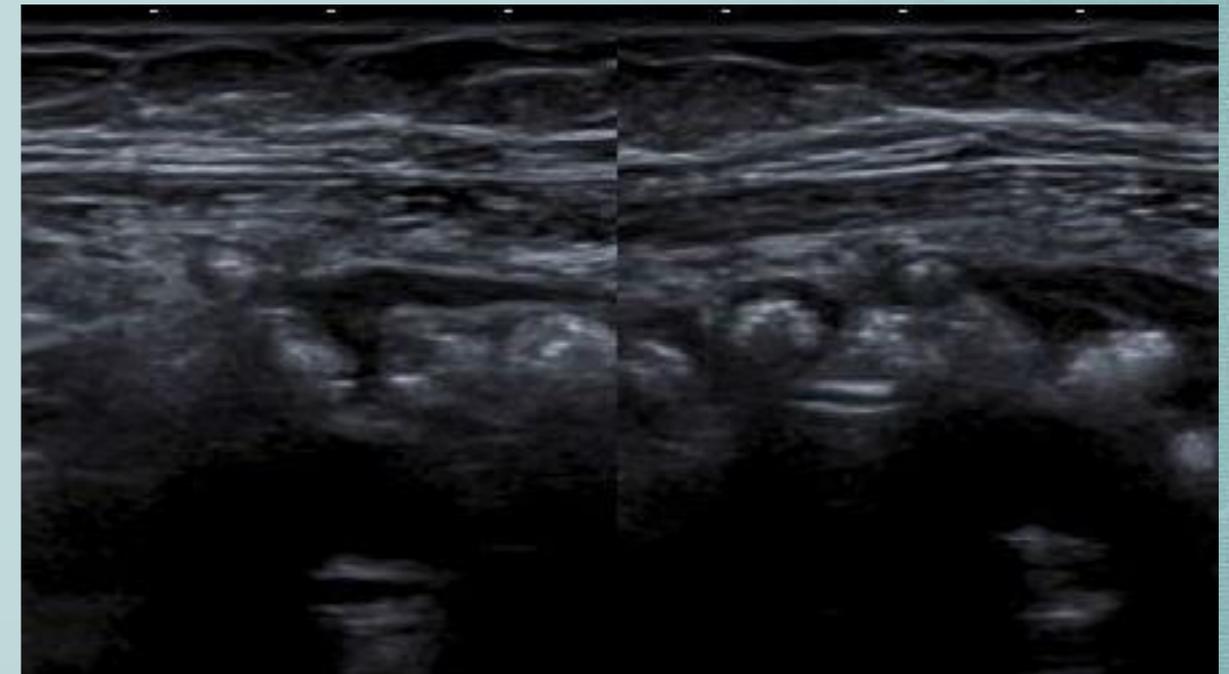
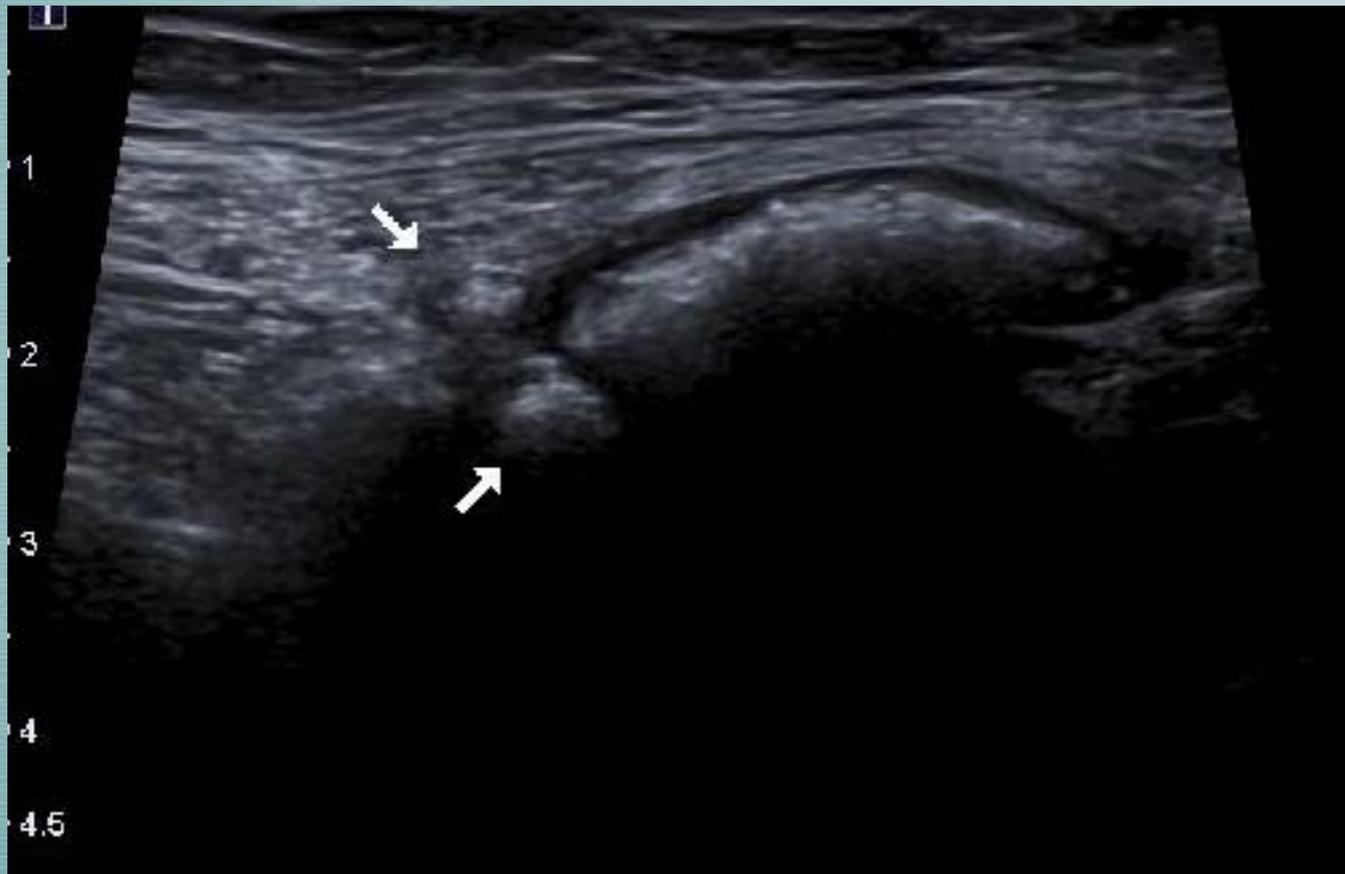


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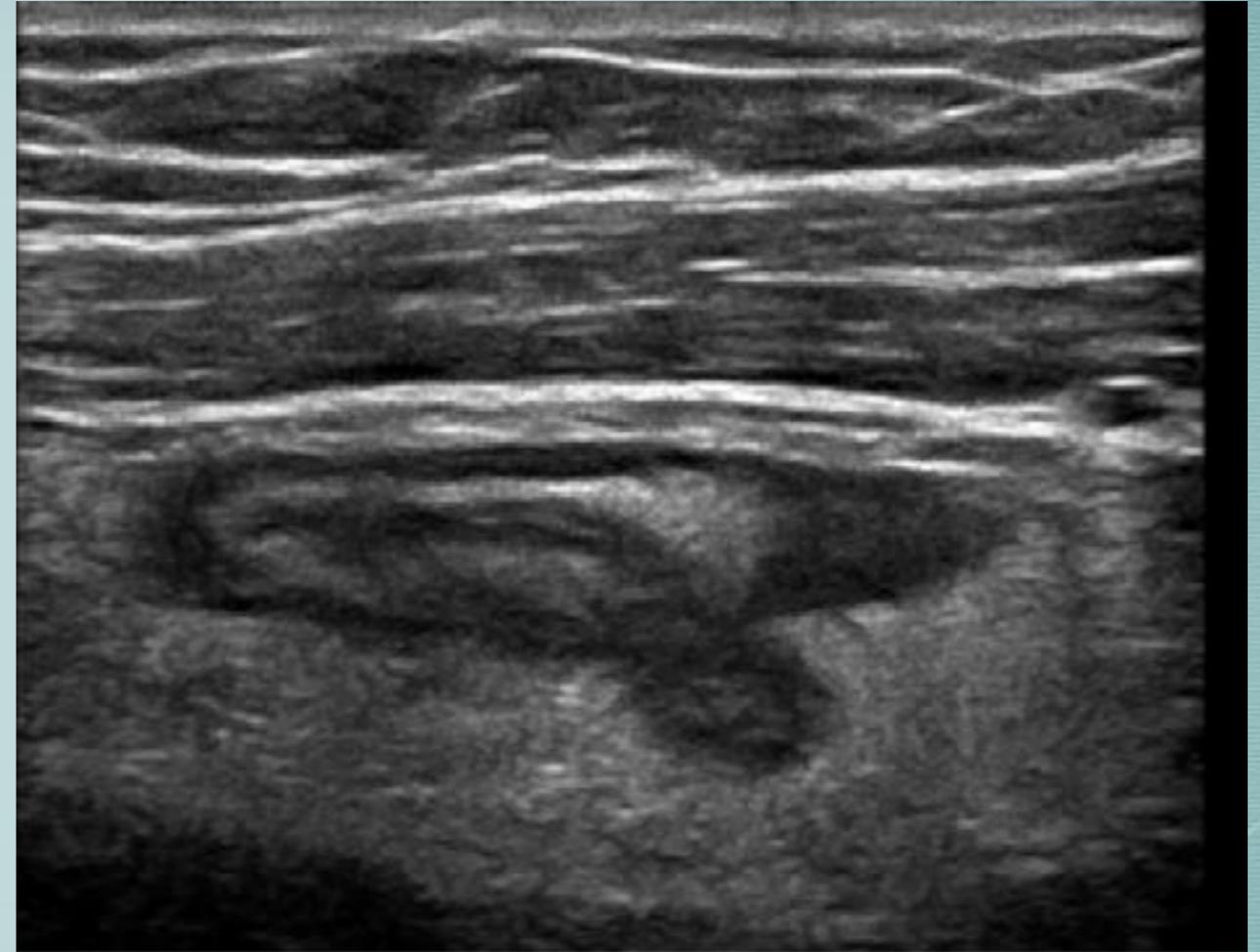
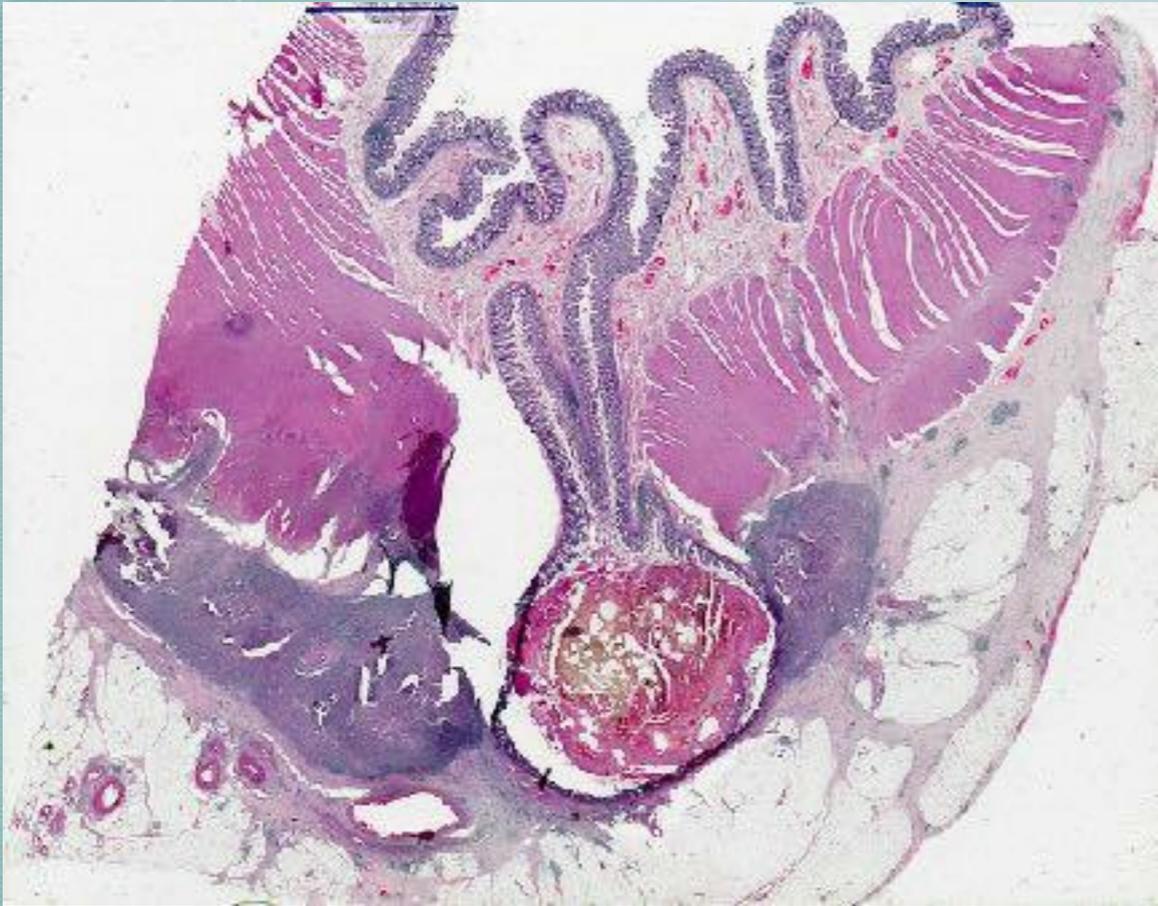
Colon G / sigmoïde DIVERTICULOSE



Colon G / sigmoïde DIVERTICULOSE

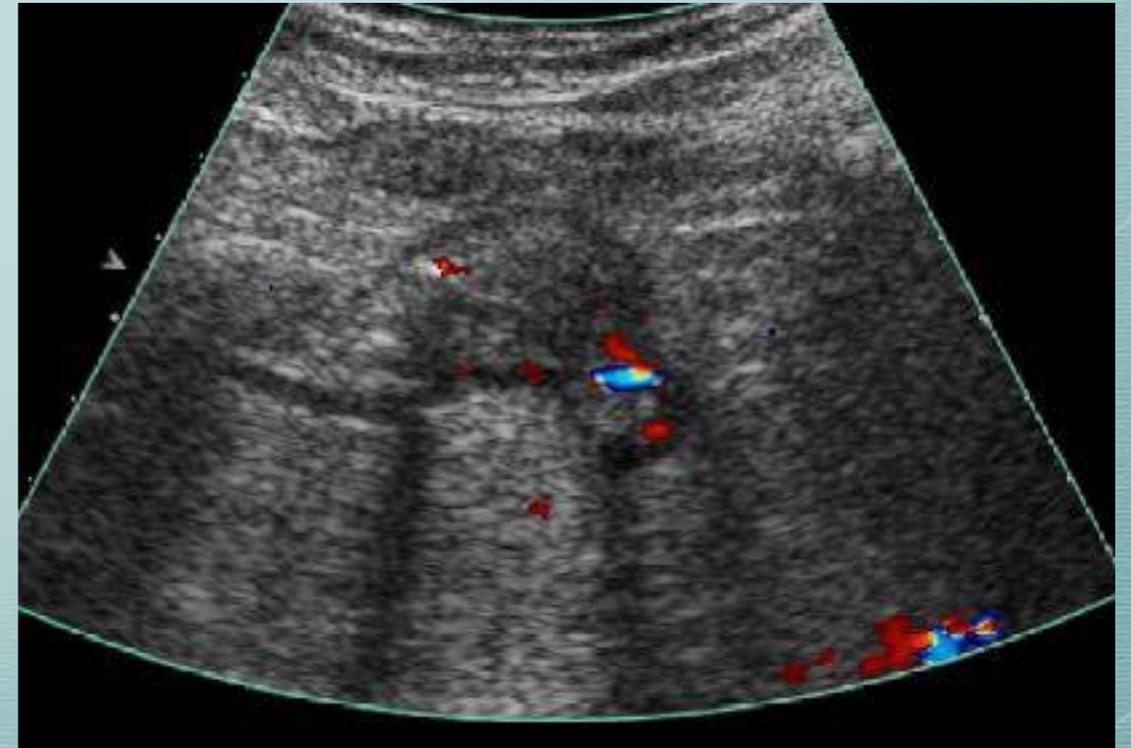
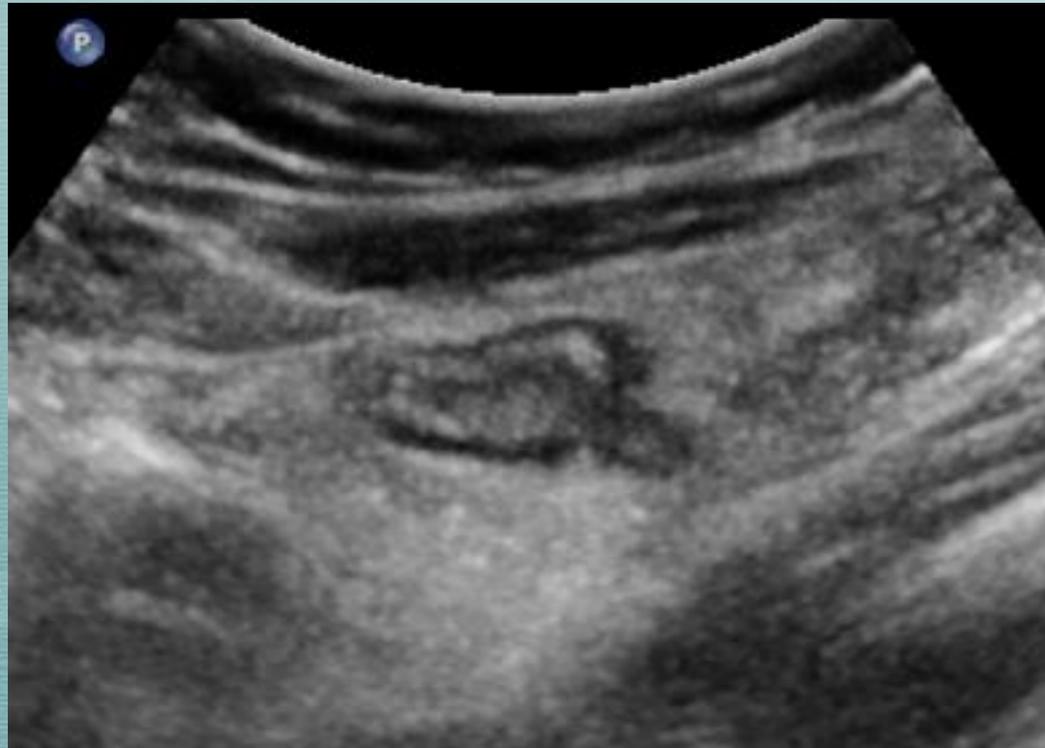
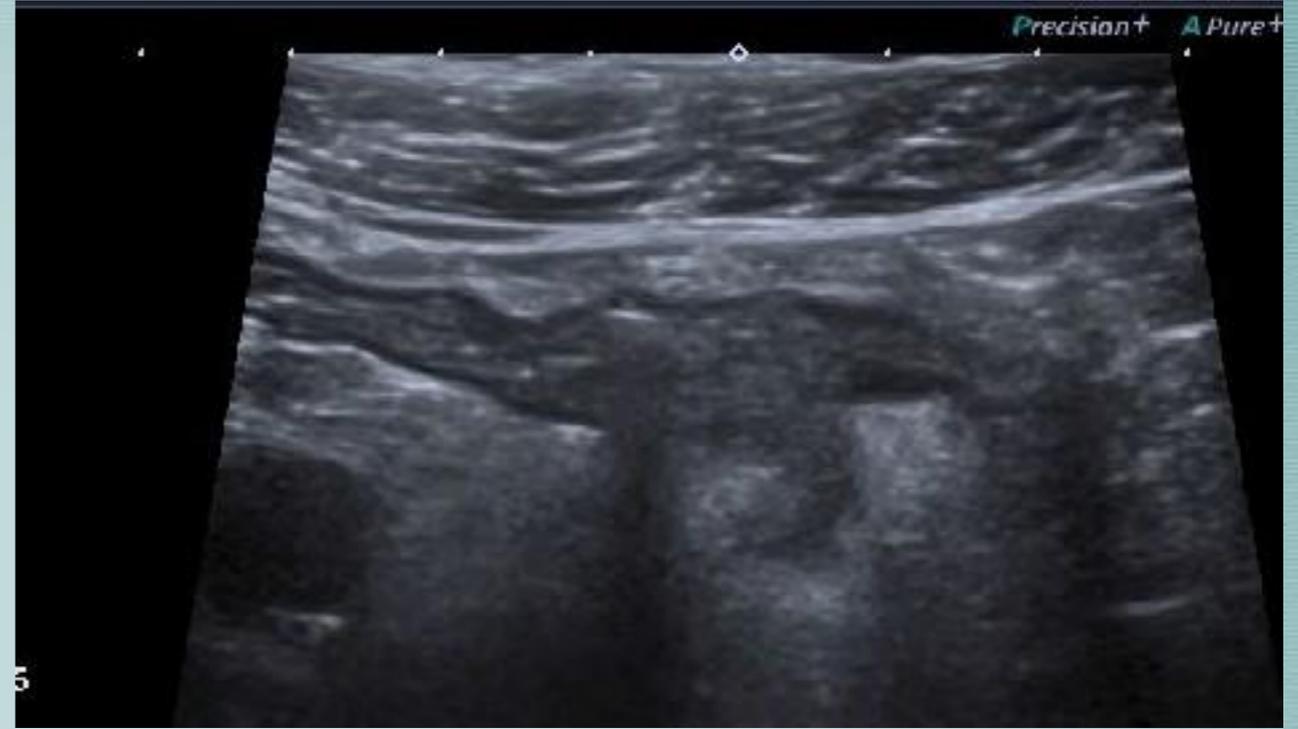
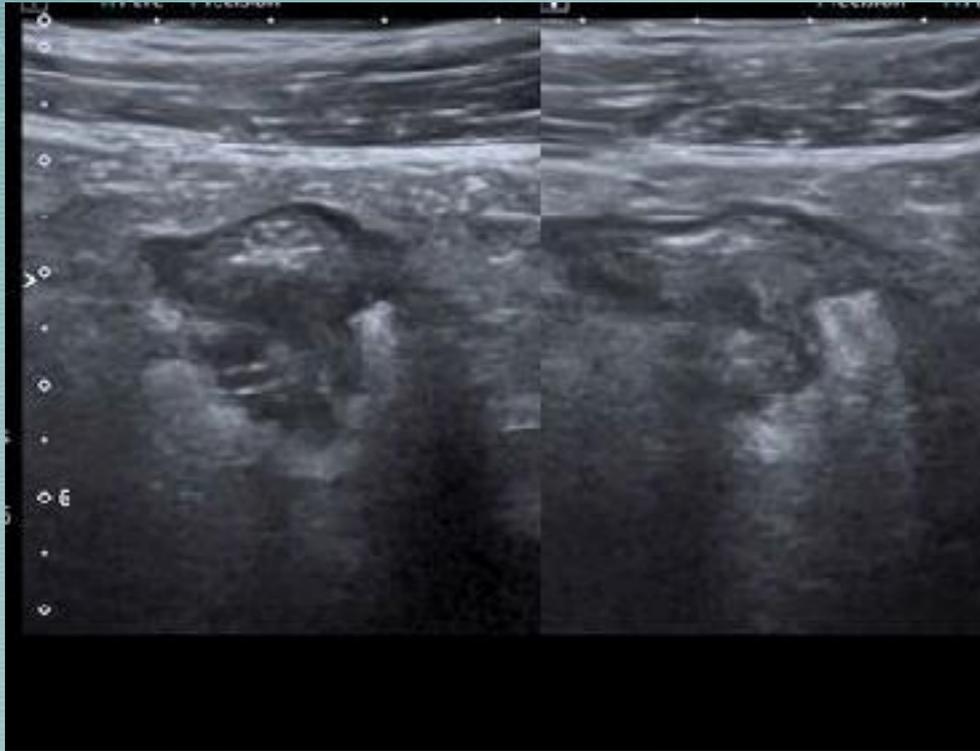


Complications: DIVERTICULITE

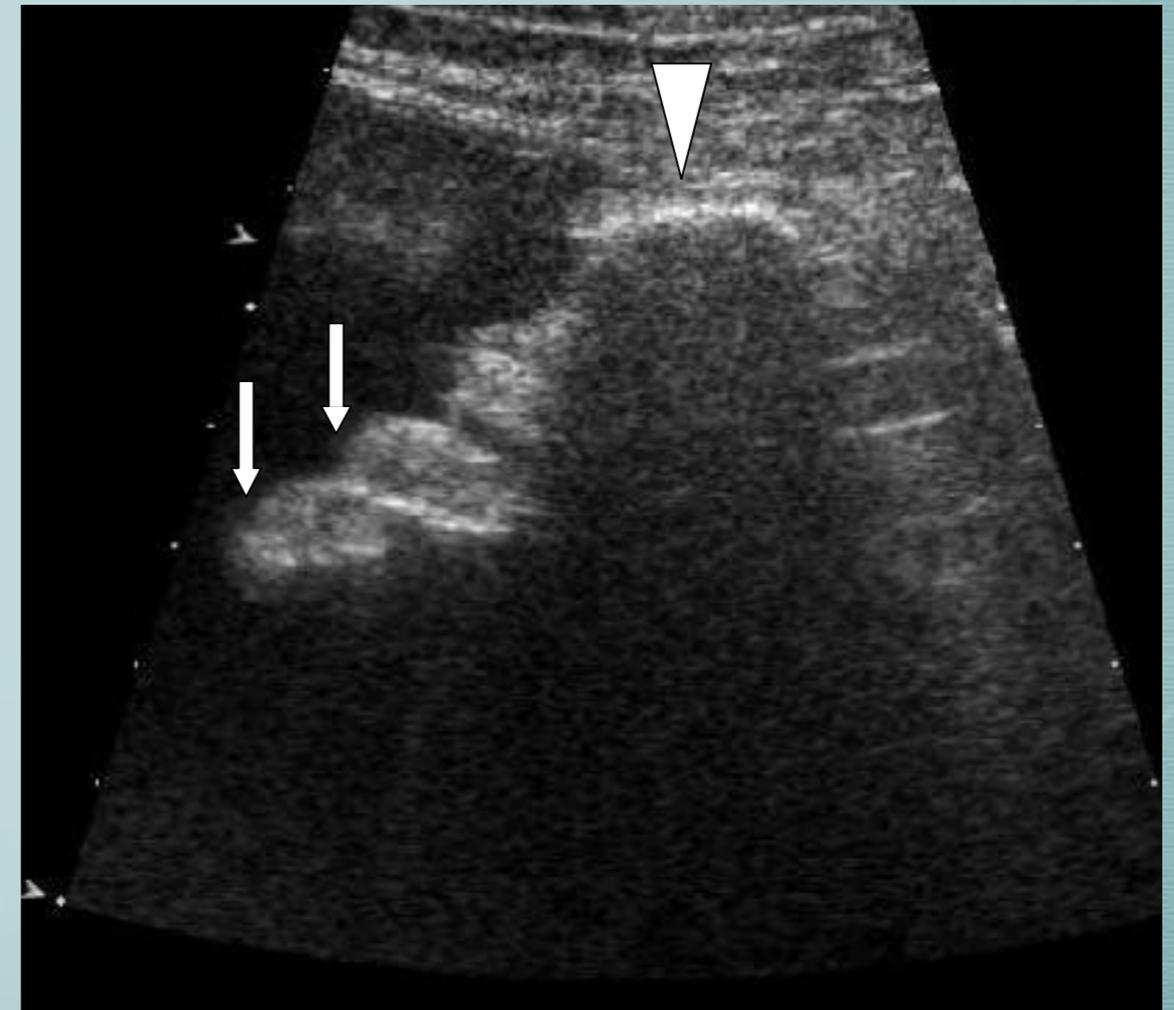
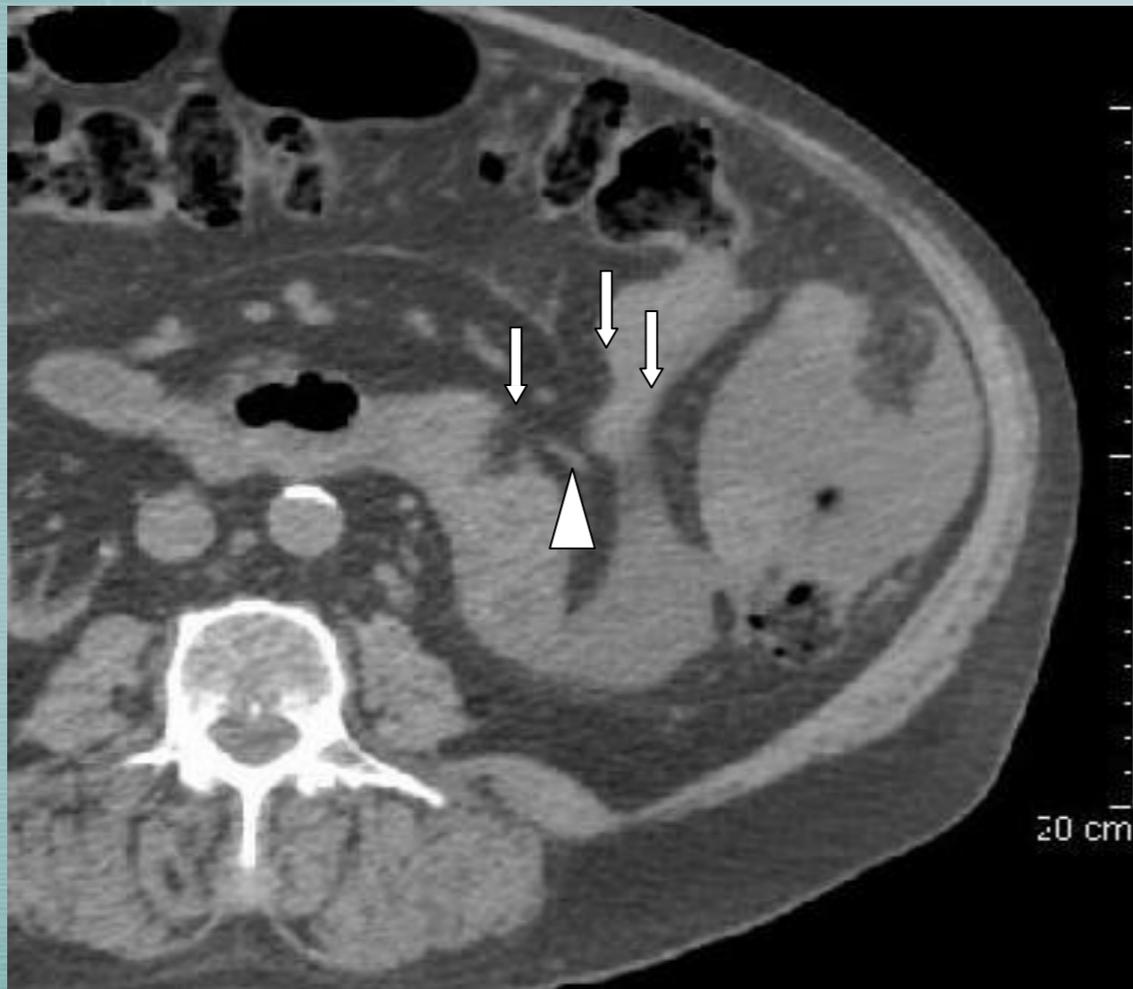


Paroi épaissie
Infiltration de la graisse de voisinage
Abscès

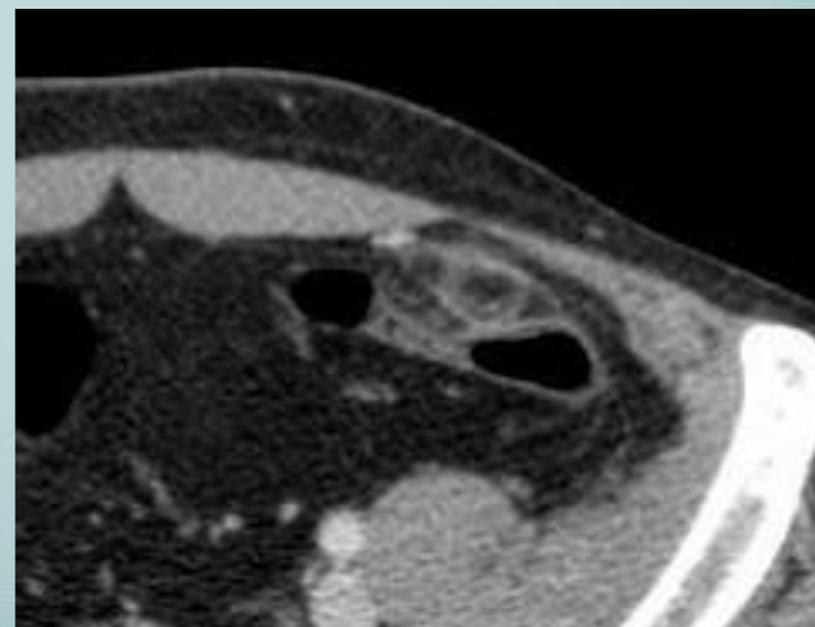
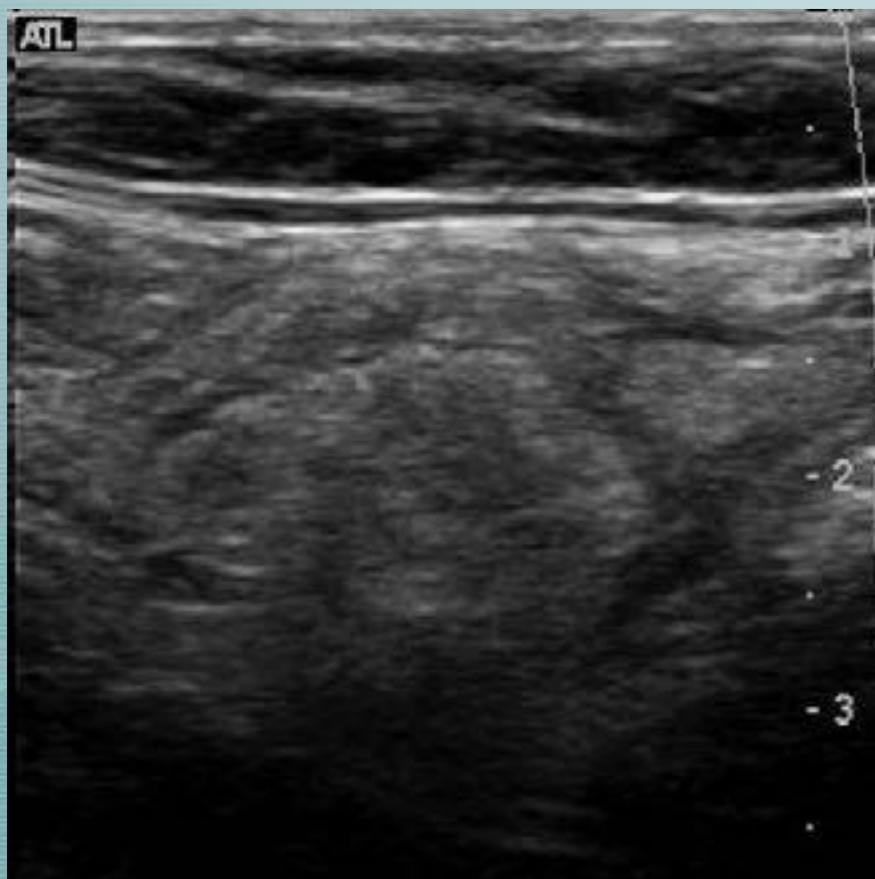
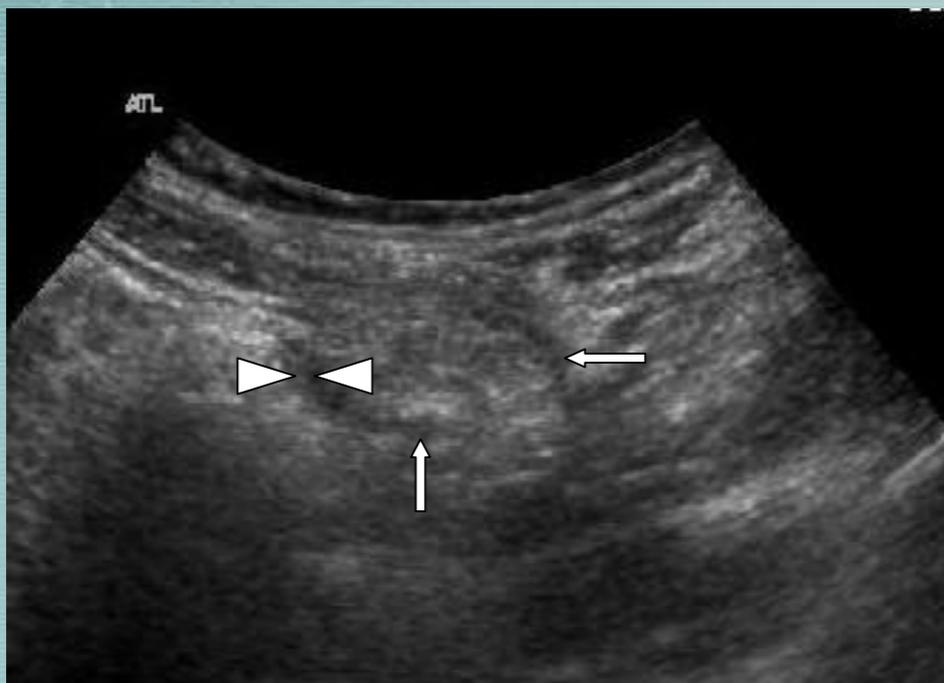
DIVERTICULITE



APPENDAGITE



APPENDAGITE



Examen ciblé après examen
global standard

changement de sondes et de fréquences
, réglages +++,
balayage méthodique

Connaissance topographique

Patience ...

on ne trouve que ce que l'on cherche
et que ce que l'on connaît

Merci de votre attention

