

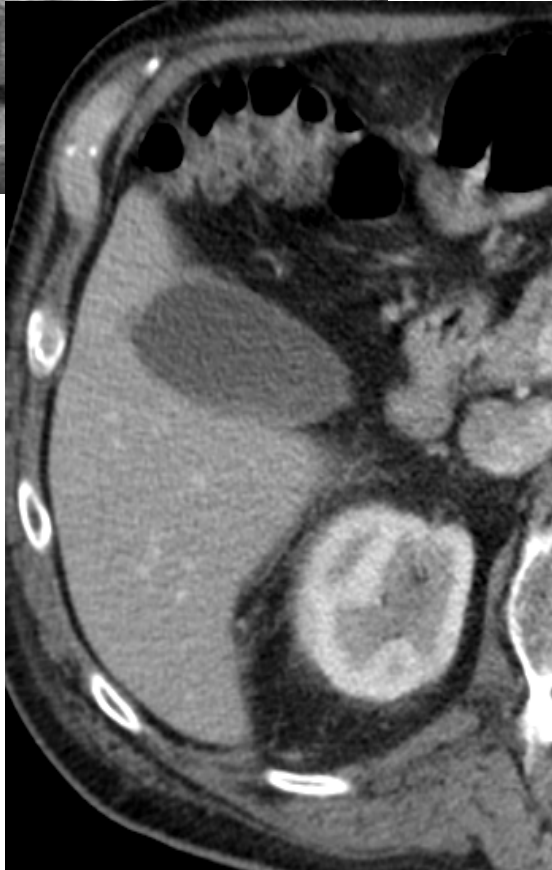
Vésicule
Imagerie
Anatomo-pathologie

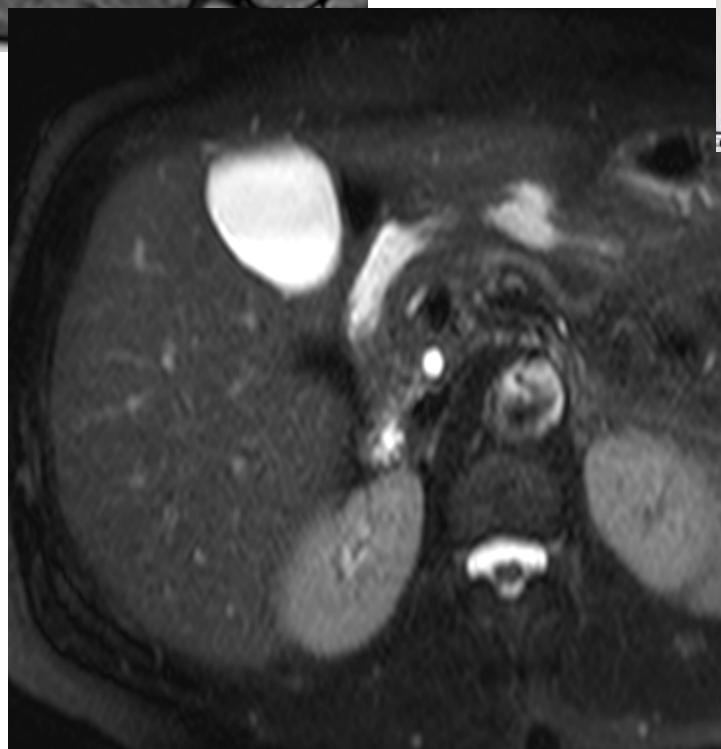
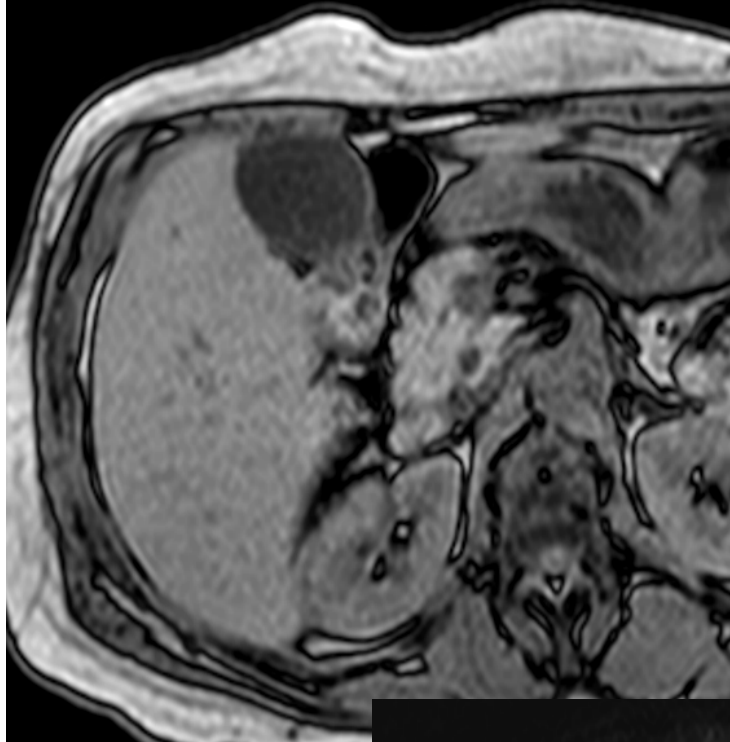
2018

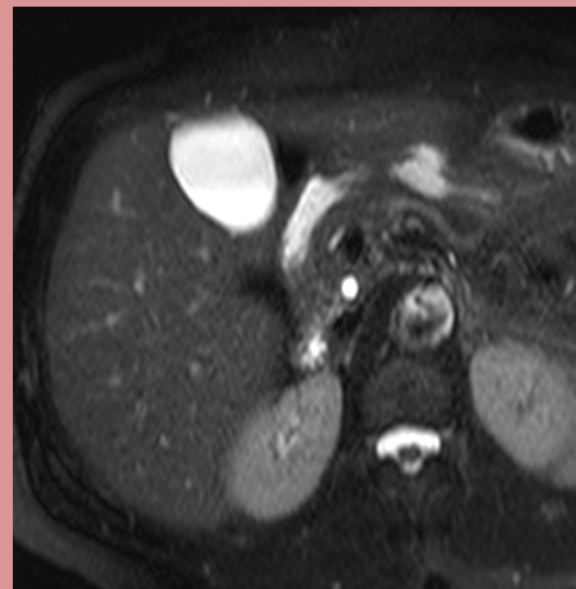
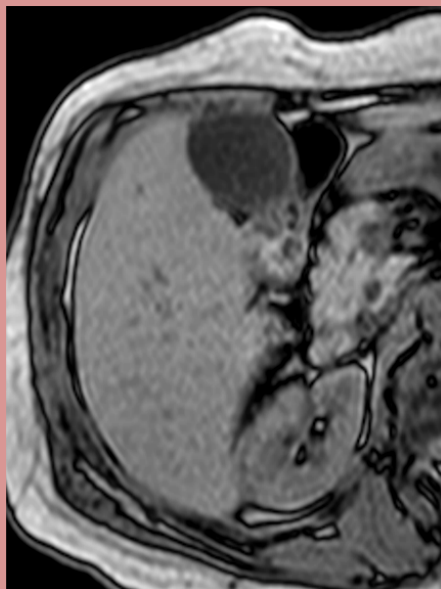
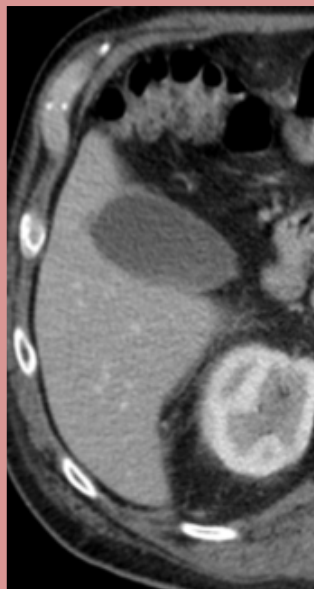
Voies biliaires

- Techniques
- Vésicule biliaire
 - Lithiase
 - Inflammation
 - Tumeurs et pseudo-tumeurs
- Voies biliaires
 - Lithiase
 - Anomalies congénitales
 - Inflammation
 - Tumeurs









Vésicule biliaire : lithiase

- US
- CT
- IRM



La lithiase vésiculaire



Lithias

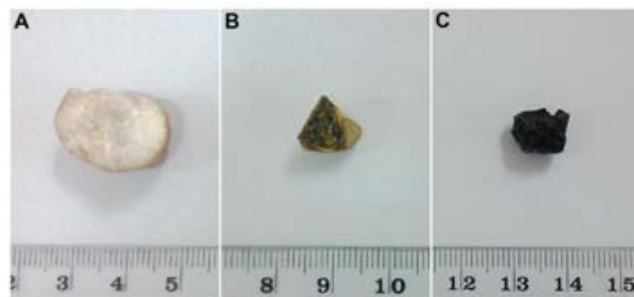


Fig 1. Cross sectional appearance of each type of gallstone. A—Pure cholesterol stone showing radially arranged cholesterol crystals from center to periphery. B—Mixed cholesterol stone showing cholesterol and pigment layers arranged alternatively in crescentic pattern. C—Pigment stone showing homogeneously distributed pigment material.

doi:10.1371/journal.pone.0121537.g001

Table 1

Classification of gallstones retrieved from 36 gallstone patients according to the FTIR spectral results.

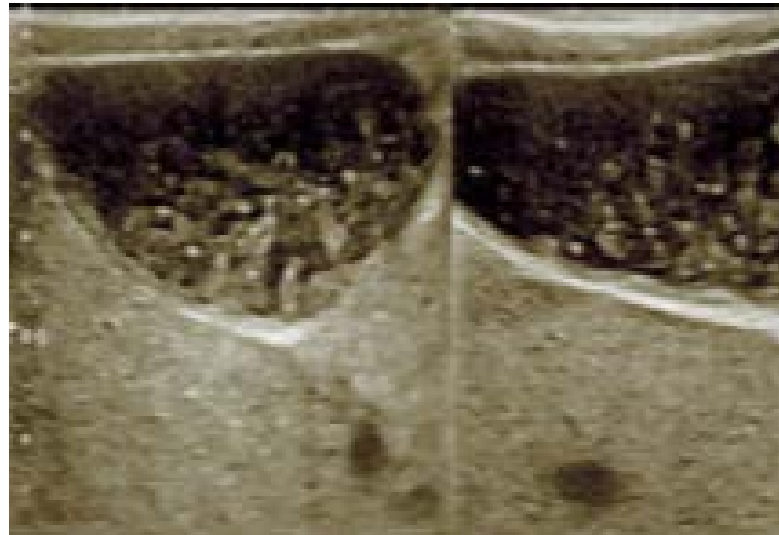
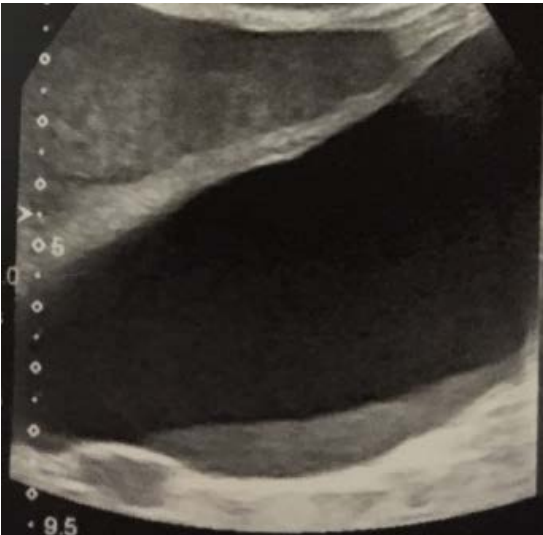
Gallstone type	Male No.	Female No.	Color	Total No.	Occurrence (%)	Age (years)
A Calcium bilirubinate gallstone	8	3	Black	11	30.6	44–85
B Cholesterol gallstone	4	3	Brown, Deep yellow, Green	7	19.4	29–63
C Mixed gallstone					47.2	
C ₁ Calcium bilirubinate–cholesterol	0	6	Brown, Black	6		35–73
C ₂ Calcium bilirubinate–calcium stearate	3	3	Black	6		68–88
C ₃ Calcium bilirubinate–calcium hydroxyapatite	2	0	Black sand	2		50–61
C ₄ Cholesterol–calcium carbonate	0	1	Brown sand	1		65
C ₅ Calcium bilirubinate–calcium stearate–calcium hydroxyapatite	0	1	Black	1		69
C ₆ Calcium bilirubinate–calcium stearate–calcium carbonate	1	0	Black	1		52
D Acute gallbladder sludge	0	1	Black (soft mass)	1	2.8	30
	18	18		36	100	

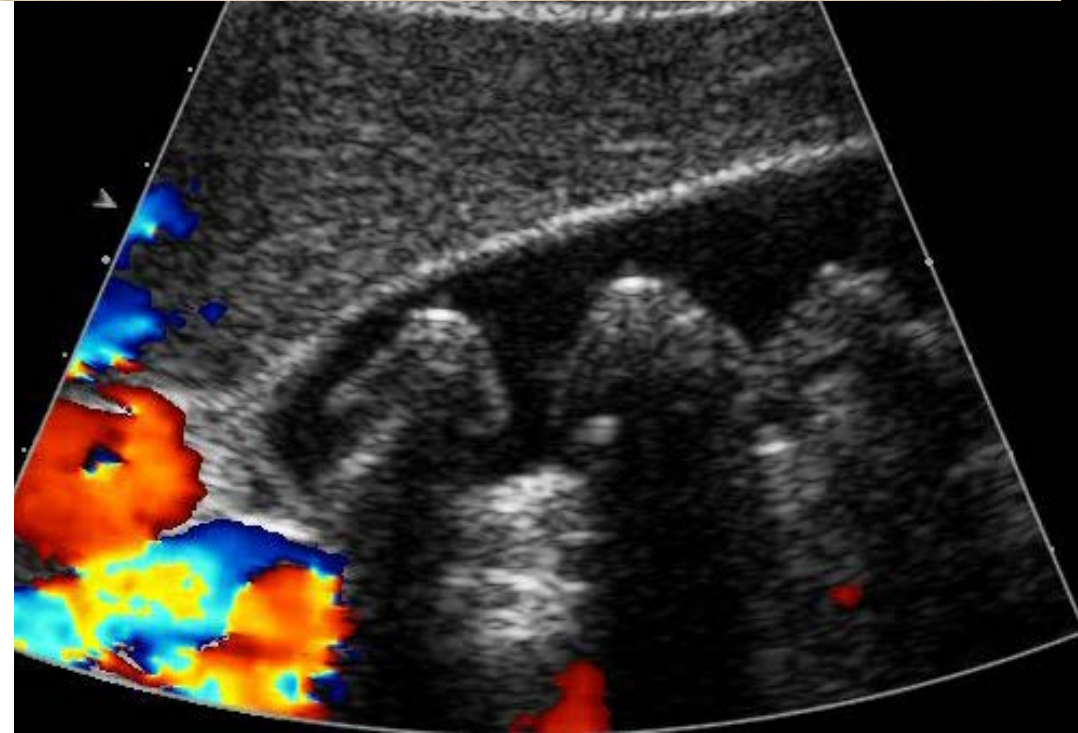
Table 1. Chemical composition of gallstones as revealed by FTIR.

Type of GS	Chemical composition	Frequency <i>n</i> (%)
Pure cholesterol	Cholesterol	10 (09)
Mixed cholesterol	Cholesterol, calcium bilirubinate, calcium carbonate, calcium phosphate	38 (37)
Pigment	Calcium bilirubinate	23 (23)
	Calcium bilirubinate, calcium carbonate, calcium phosphate	25 (25)
	Calcium bilirubinate and calcium palmitate	06 (06)

La lithiase vésiculaire

Sludge
Microlithiase
Lithiase

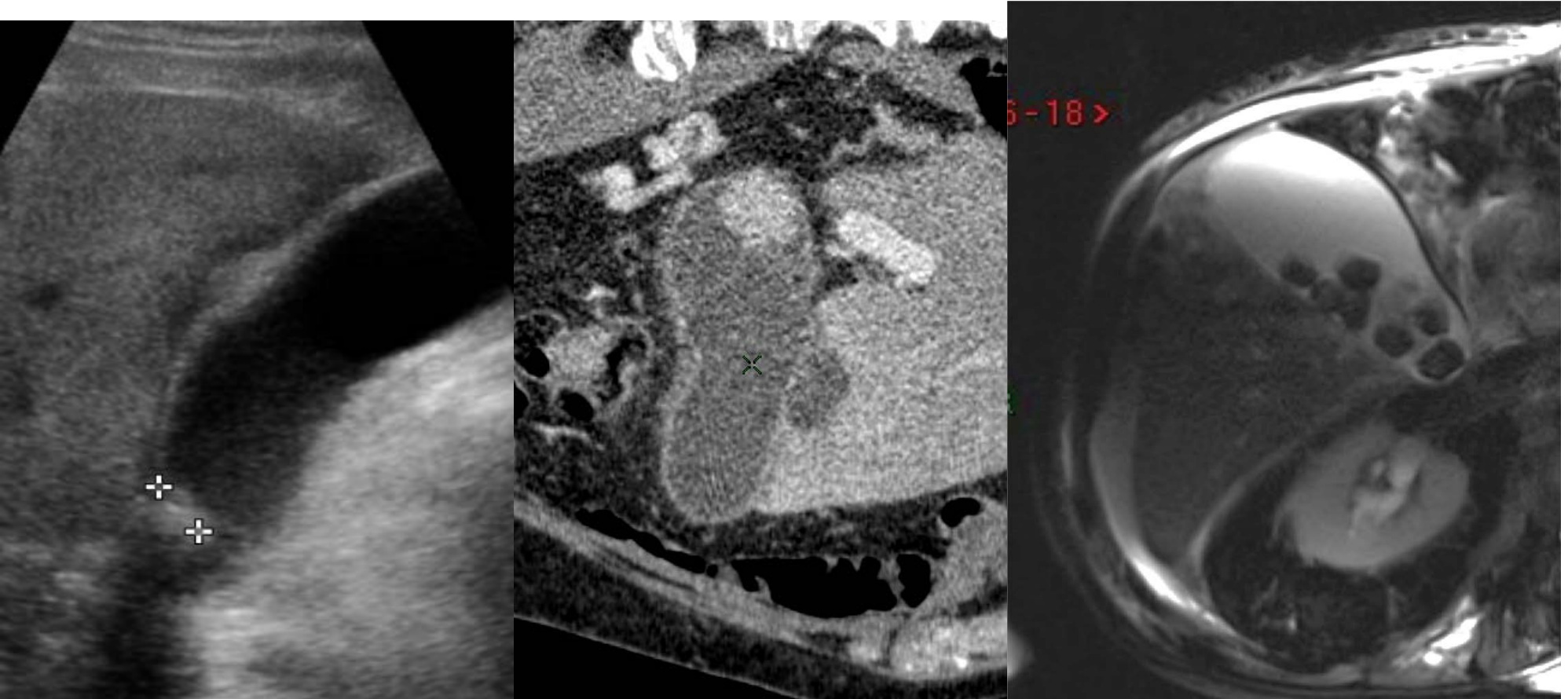




US

TDM

IRM



Vésicule biliaire : cholécystite

- US
- CT
- IRM

CHOLECYSTITE



Pathological Classification

Y Kimura, J Hepatobiliary Pancr Sc 2013

Acute non complicated ch

- Edematous form

Complicated form ch

- Necrosing
- Suppurative
- Emphysematous

Chronic

- Chronic
- Xanthogranulomatous f

Clinico-Radiological Classification

E Smith, AJR 2009

- Acute non complicated ch
- Acute complicated ch
 - Gangrenous => Perforation
 - emphysematous
 - Suppurative cholecystitis
 - Hemorrhagic
- Acalculous
- Chronic

Prevalence = 5 %

A Systematic Review and Meta-Analysis of Diagnostic Performance of Imaging in Acute Cholecystitis¹

Jordy J. S. Kiewiet, MD
Marjolein M. N. Leeuwenburgh, MD
Shandra Bipat, PhD
Patrick M. M. Bossuyt, PhD
Jaap Stoker, MD, PhD
Marja A. Boermeester, MD, PhD

Purpose: To update previously summarized estimates of diagnostic accuracy for acute cholecystitis and to obtain summary estimates for more recently introduced modalities.

Materials and Methods: A systematic search was performed in MEDLINE, EMBASE, Cochrane Library, and CINAHL databases up to March 2011 to identify studies about evaluation of imaging

145 to 153 in 2013
at St-Luc University Hospital

900 beds
> 50.000 emergency visits/ year

US :

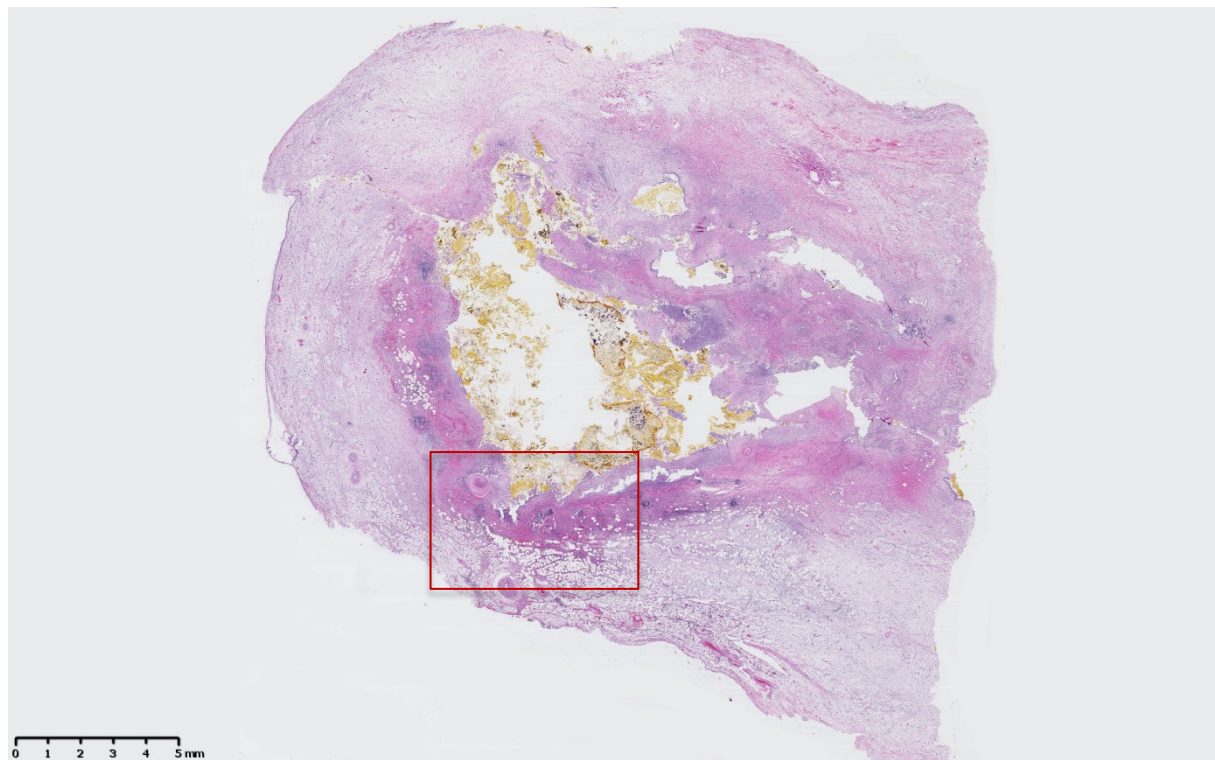
- Signe de Murphy
- Majoration du diamètre transverse > 4 cm
- Calcul ou de sludge
- Paroi de la vésicule > 5 mm
- Uquide périvésiculaire

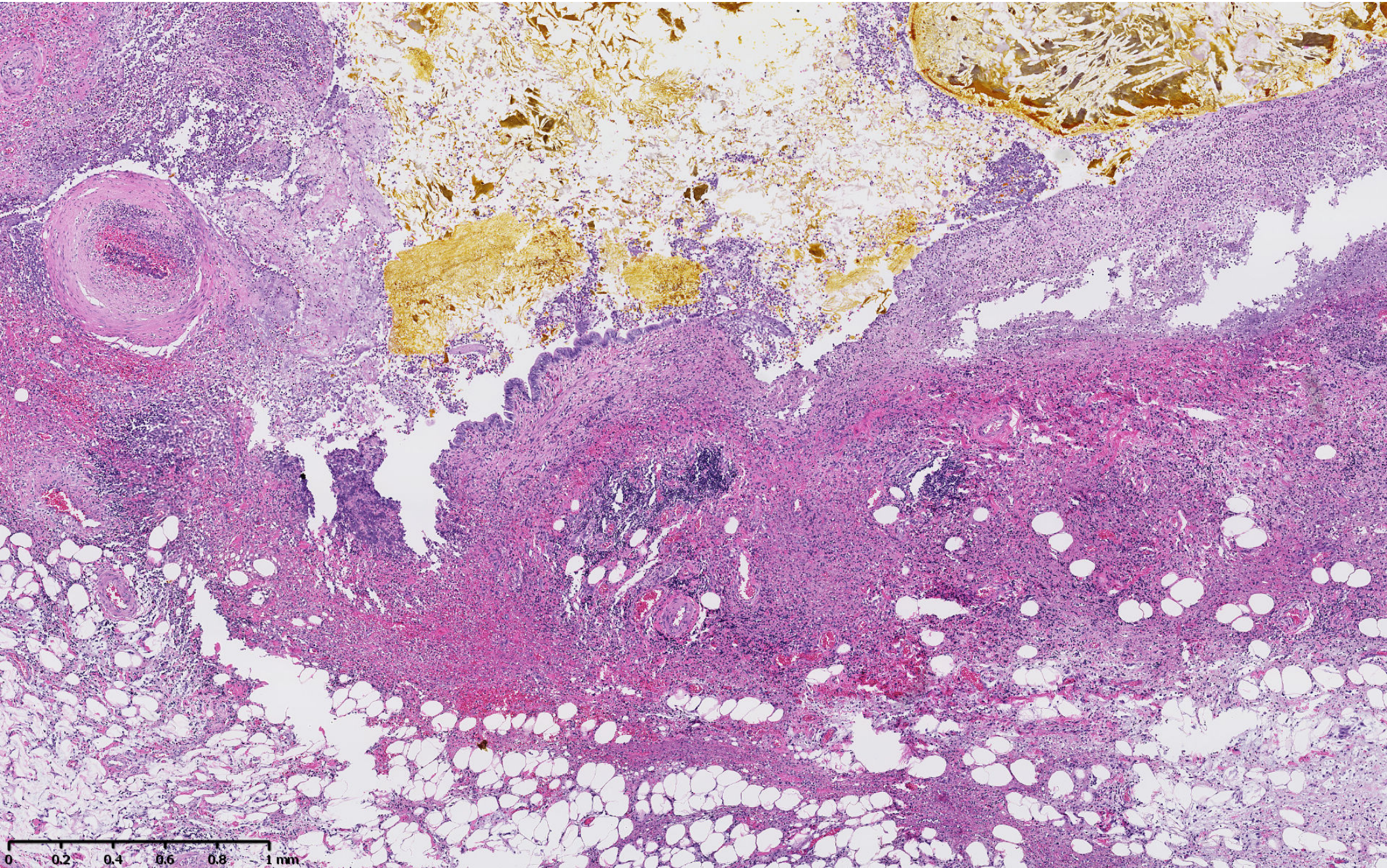


Cholécystite Aiguë



Cholécystite Aiguë





0 0.2 0.4 0.6 0.8 1 mm

Cholécystite Gangréneuse

- Incidence : 2 à 30 %
- 10 à 40 % de cholécystites classiques se compliquent
- âgés, hommes, Diabète

Cholécystite Gangréneuse

- hémorragie :

= > intraluminale

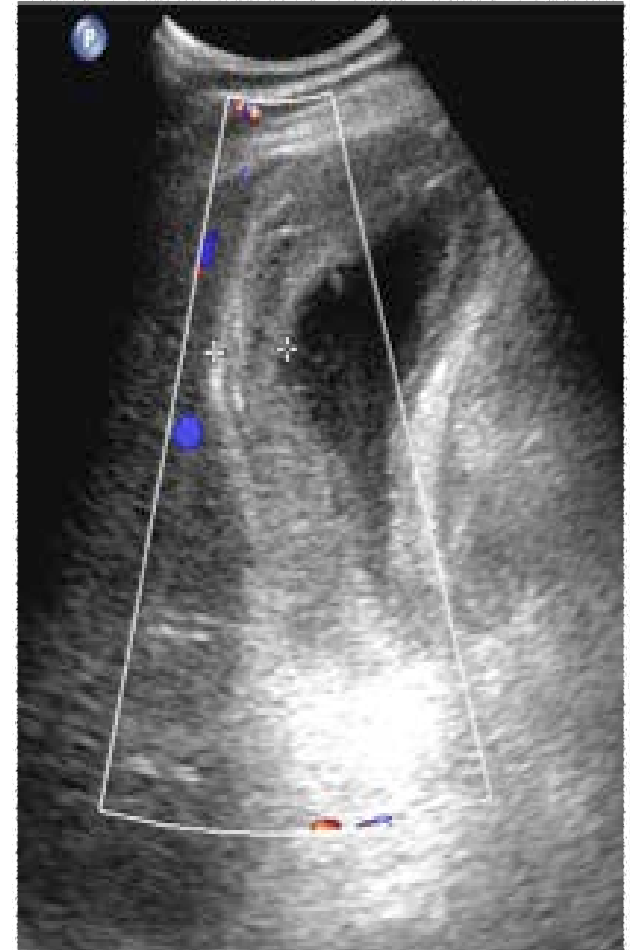
=> péritonéale

- perforation:

=> Dans le péritoine : péritonite biliaire aigue(10%)

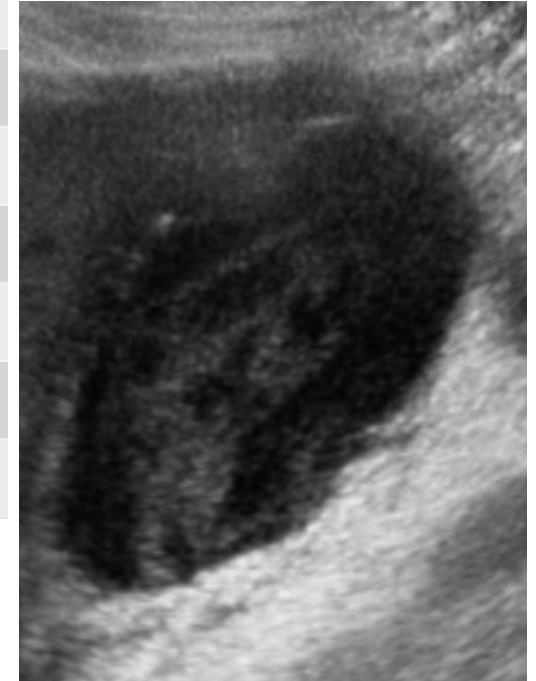
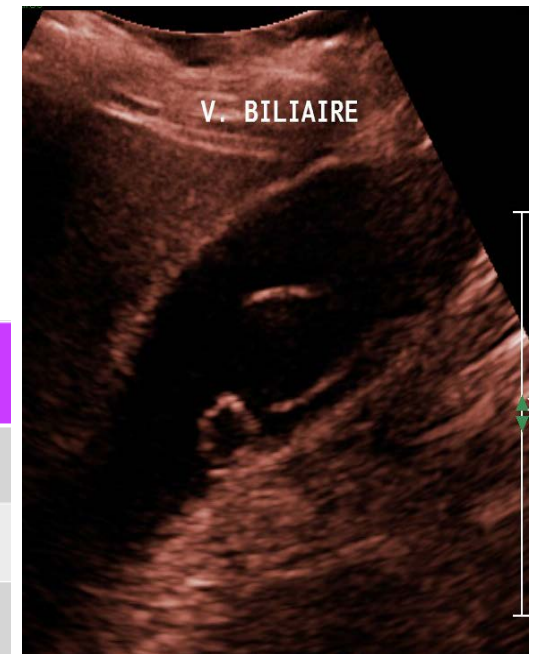
= > forme focale « couverte » : (subaiguë) abcès
périvésiculaire (60%)

= > fistule bilio-enterique : iléus biliaire (30%)



Apport de l'US

Imaging findings	Acute Cholecystitis	Gangrenous Cholecystitis
Intra mural Gas	(-)	+
Floating Membranes	(-)	+
Irregularities – wall defects	(-)	+
Perivesiculae Abscess	(-)	+
Striated thickening	+	+
Liver enhancement	+	+
Perivesicular Liquid	+	+
Gallbladder stones	+	+
Hydrops	+	++
Wall thickening	+	+



APPORT DU CT

	Imaging findings	Acute Cholecystitis	Gangrenous Cholecystitis
➡	Intra mural Gas	(-)	+
	Floating Membranes	(-)	+
➡	Irregularities – wall defects	(-)	+
➡	Perivesiculae Abscess	(-)	+
	Striated thickening	+	+
	Liver enhancement	+	+
	Perivesicular Liquid	+	+
	Gallbladder stones	+	+
	Hydrops	+	++
	Wall thickening	+	+



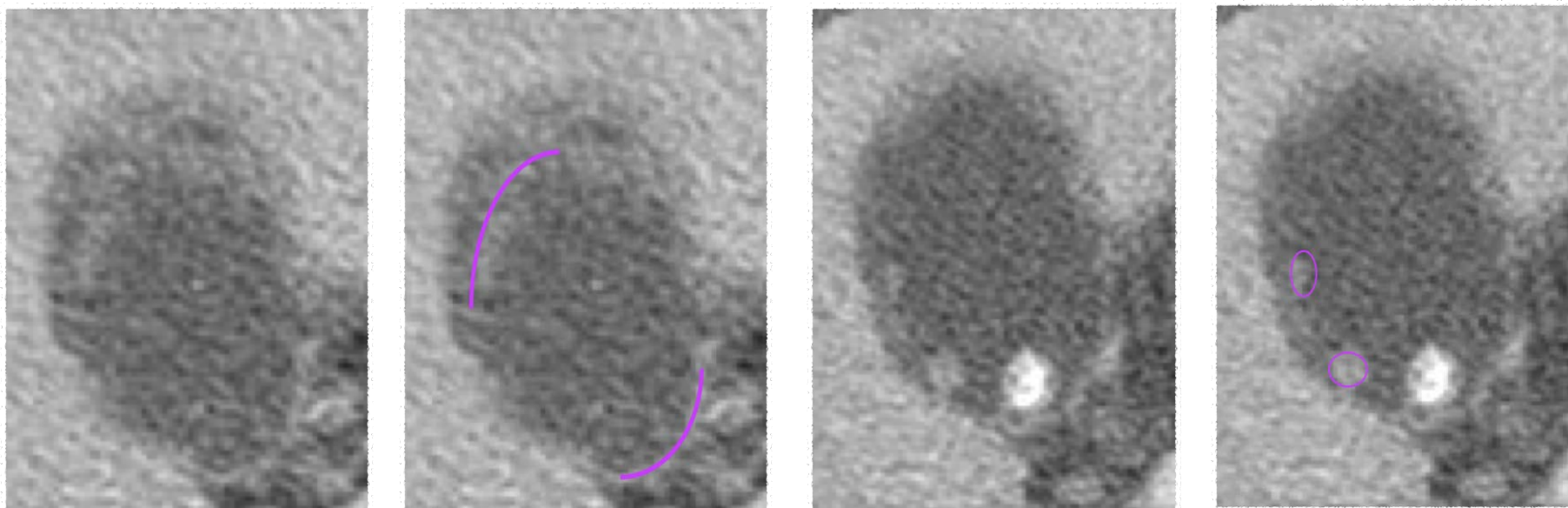
G.L. Bennet, CT Findings in Acute Gangrenous Cholecystitis,
 AJR February 2002 vol.178 no.2 275-281

Cholécystite simple



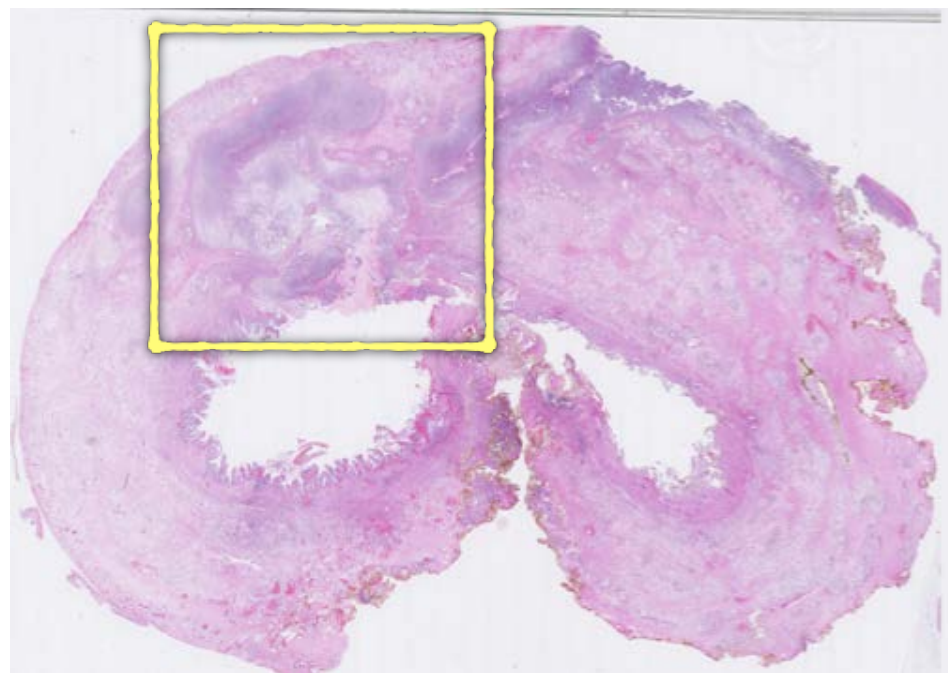
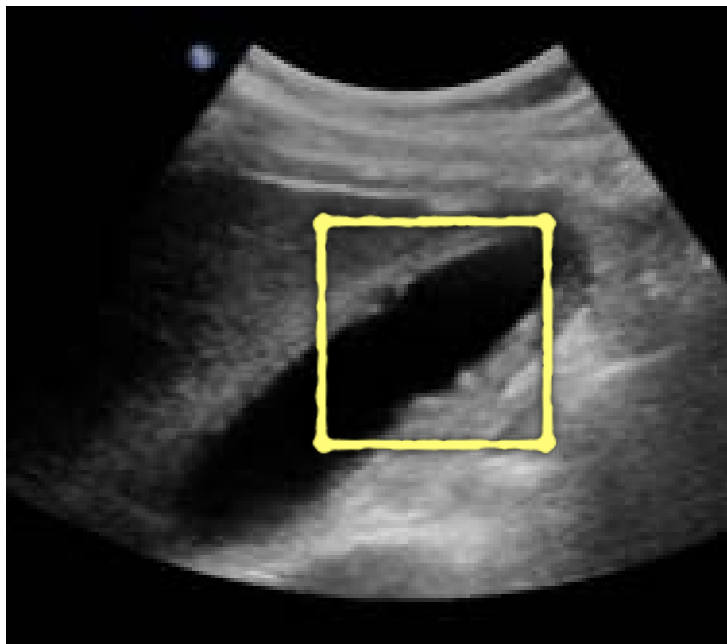
Cholécystite gangréneuse

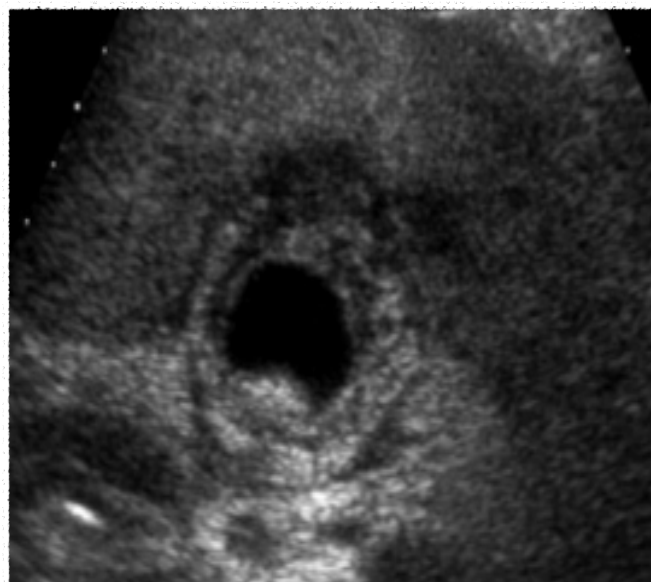
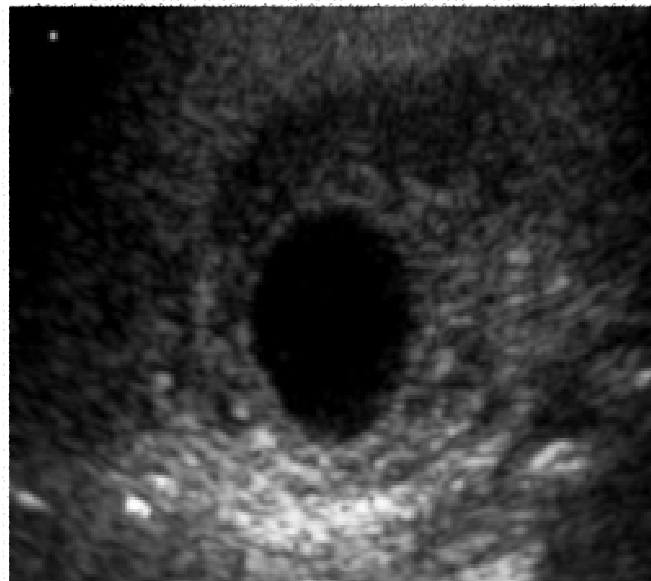
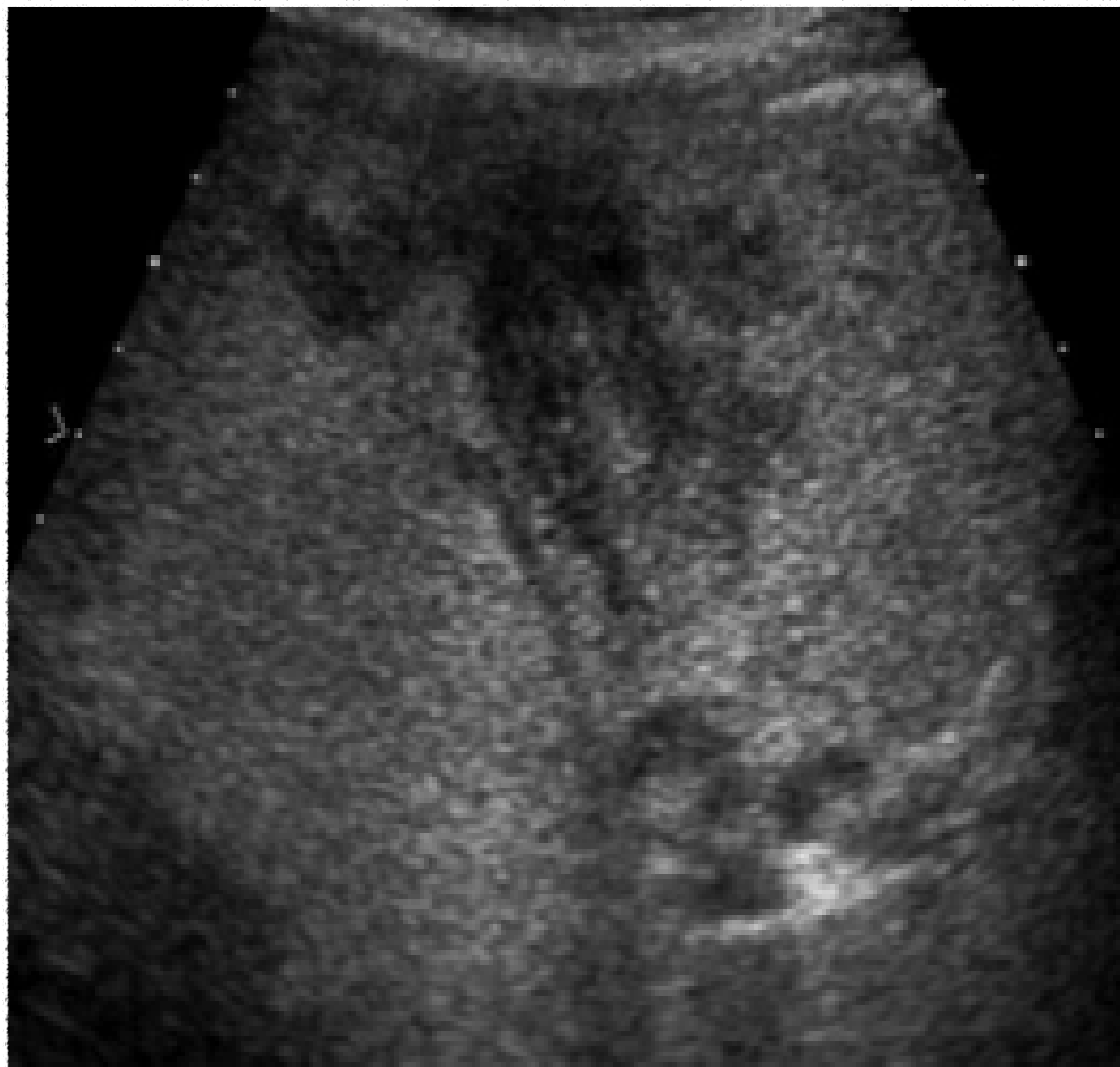




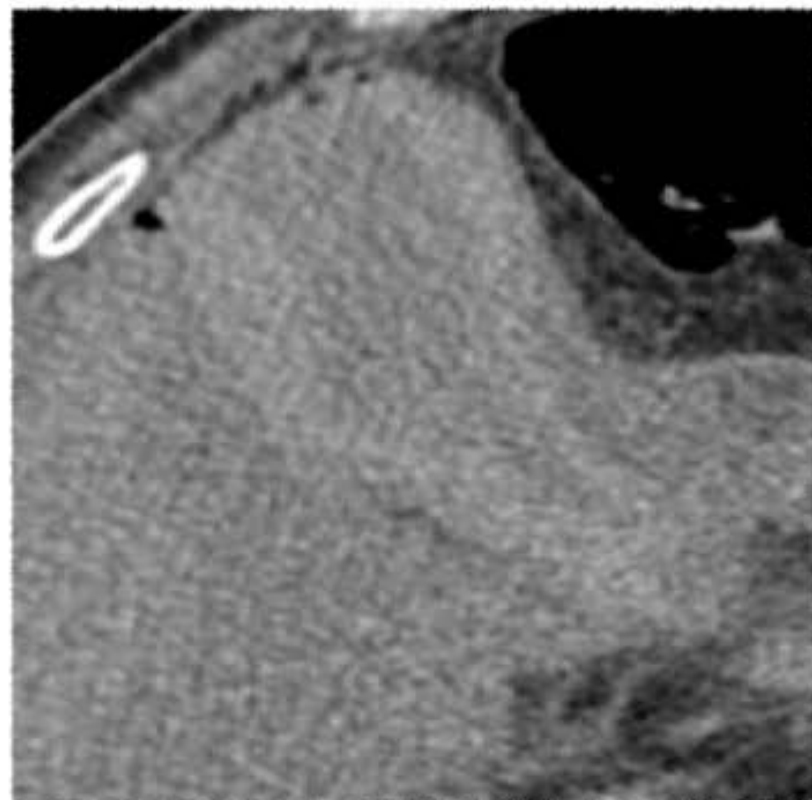
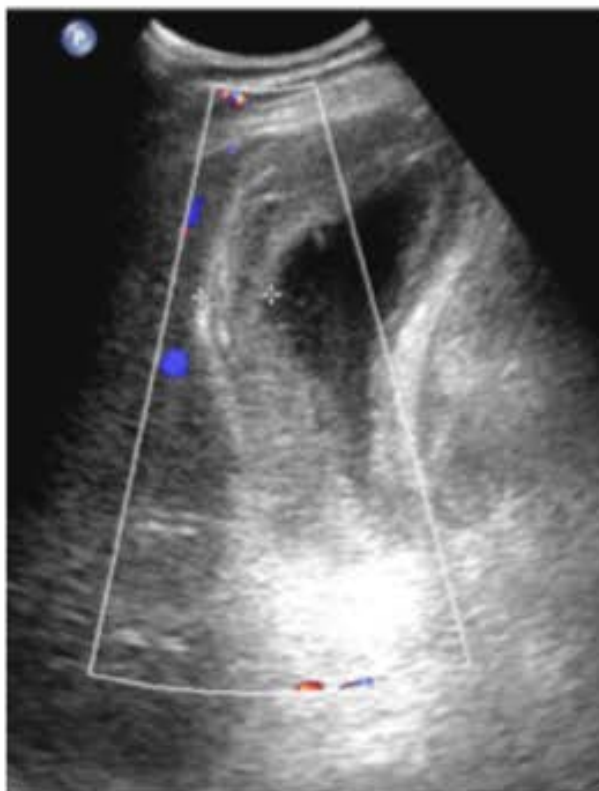
Imaging Findings	Sensitivity	Specificity
Intramural Gas	7,6%	100 %
Floating Membranes	9,8%	99,5 %
Irregularities- wall defects	28,3%	97,6 %
Peri-vesicular abscess	15,2%	96,6 %

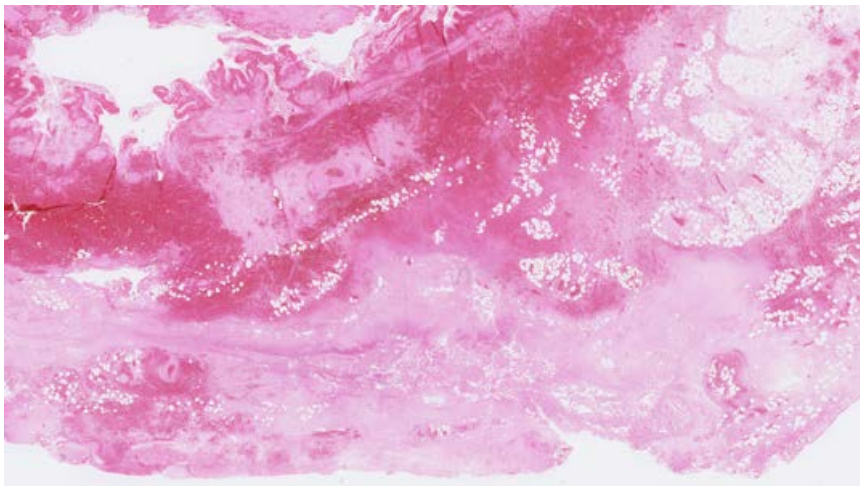
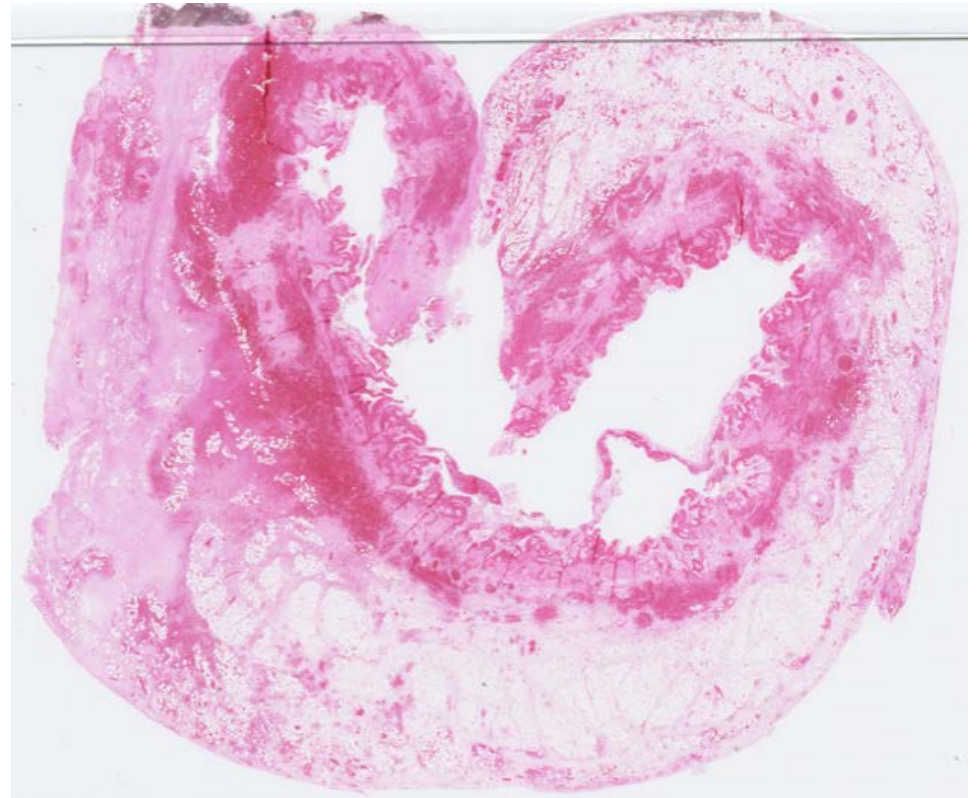
G.L. Bennet, CT Findings in Acute Gangrenous Cholecystitis,
 AJR February 2002 vol.178 no.2 275-281





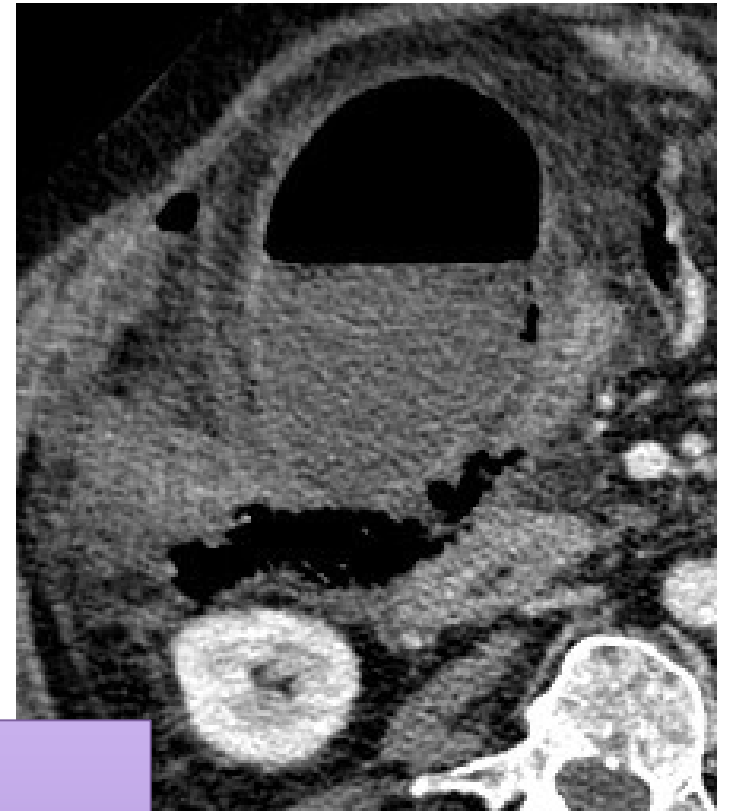
Cholécystite hémorragique : paroi épaissie en échographie, et de densité spontanément élevée en CT





Modifications hémorragiques sévères
avec destruction partielle de la paroi

Gangrenous Cholecystitis & CT



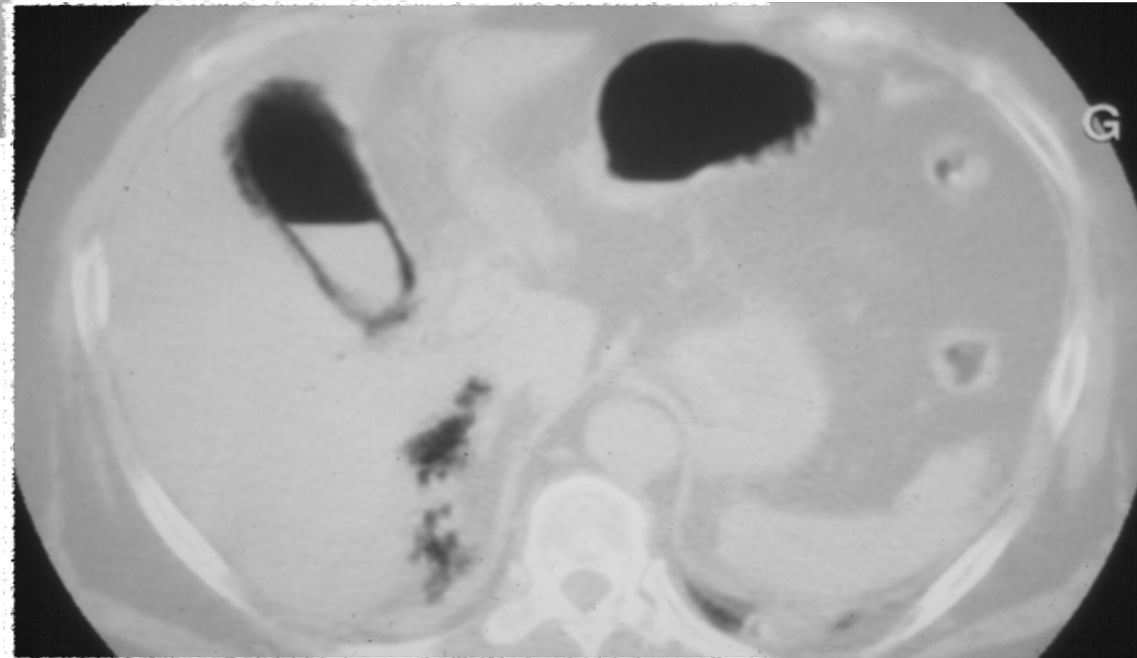
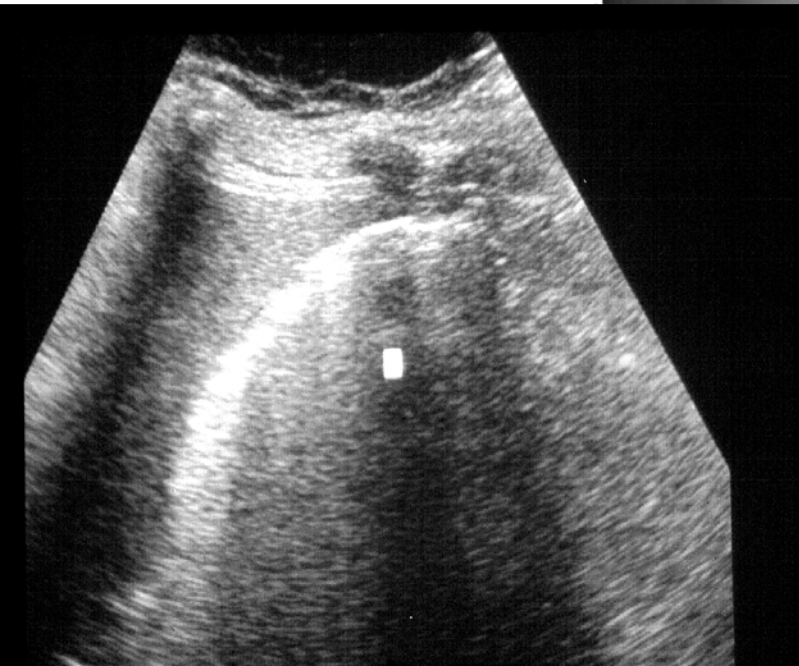
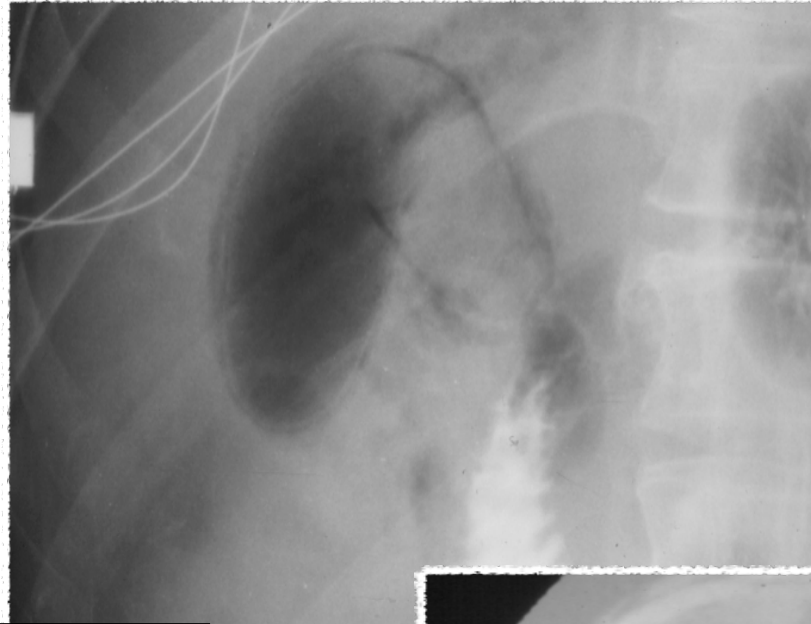
ELEMENTS CLES

- = > paroi irrégulière
- = > défaut de prise de contraste
- = > épaisseur de la paroi
- = > petit axe de la vésicule

G.L. Be

cystitis,

DD Cholécyстите Emphysémateuse



RESEARCH

Open Access

Accuracy of ultrasonography in the diagnosis of acute calculous cholecystitis: review of the literature

Antonio Pinto^{1*}, Alfonso Reginelli², Lucio Cagini³, Francesco Coppolino⁴, Antonio Amato Stabile Ianora⁵, Renata Bracale⁶, Melchiorre Giganti⁷, Luigia Romano¹

Abstract

Background: To evaluate the accuracy of ultrasonography in the diagnosis of acute calculous cholecystitis in comparison with other imaging modalities.

Conclusions: US is currently considered the preferred initial imaging technique for patients who are clinically suspected of having acute calculous cholecystitis.



Adenomyomatosis

Prevalence: 3-5% (W/M: 3/1)

Mecanism: wall hyperplasia

Wall: > 10mm (diffuse ou focal)

Etiology: ?

Asymptomatic.

No R/



Lin *et al. BMC Gastroenterology* 2011, **11**:106
<http://www.biomedcentral.com/1471-230X/11/106>

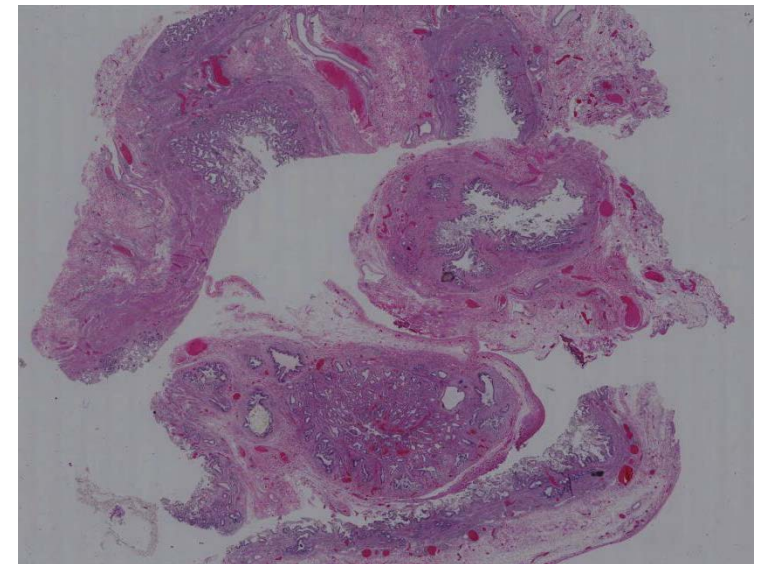


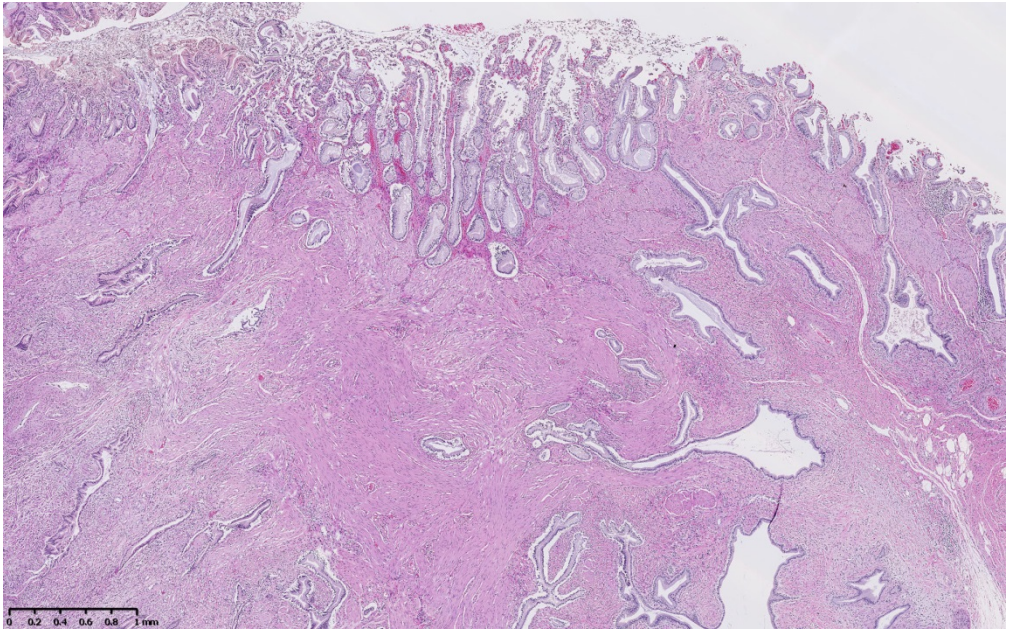
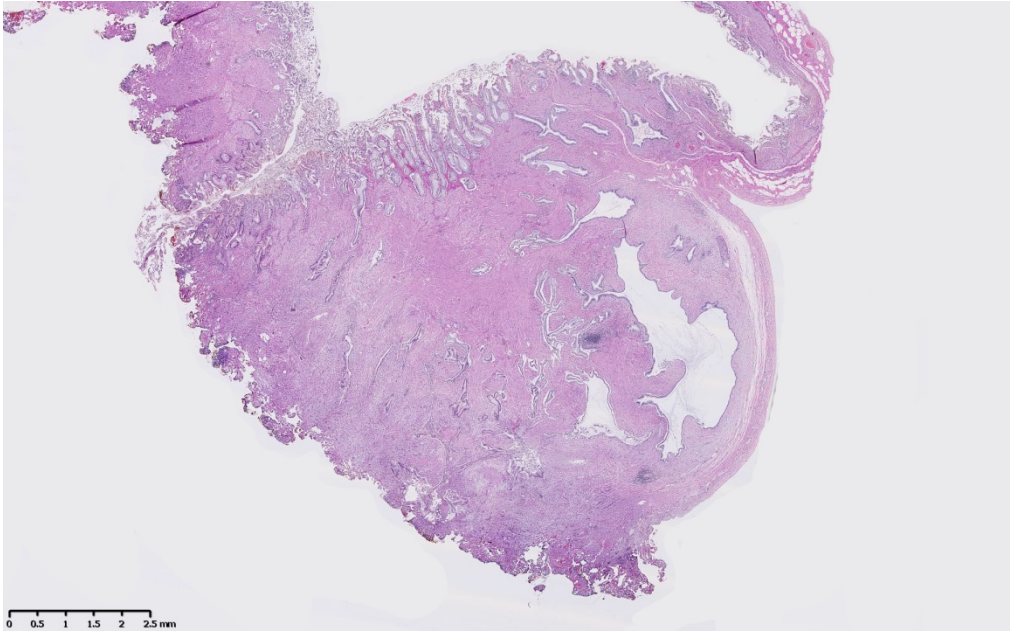
CASE REPORT

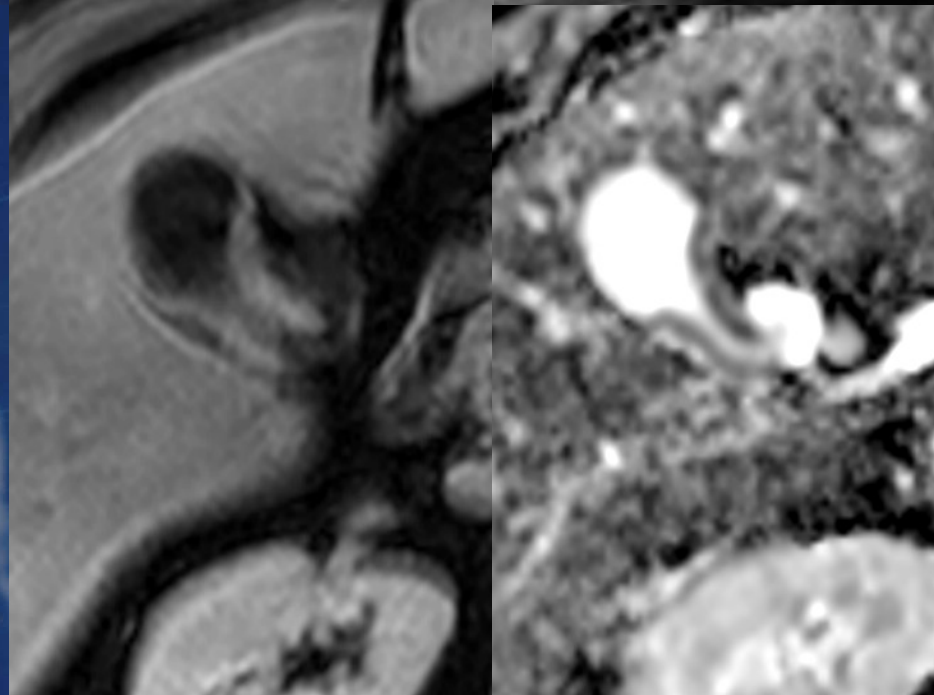
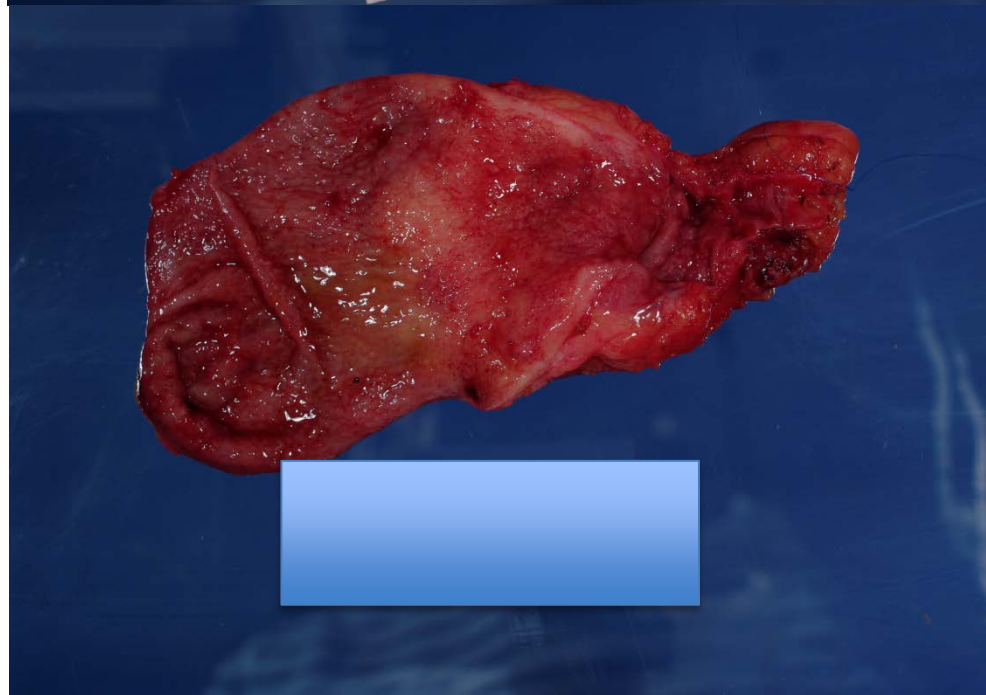
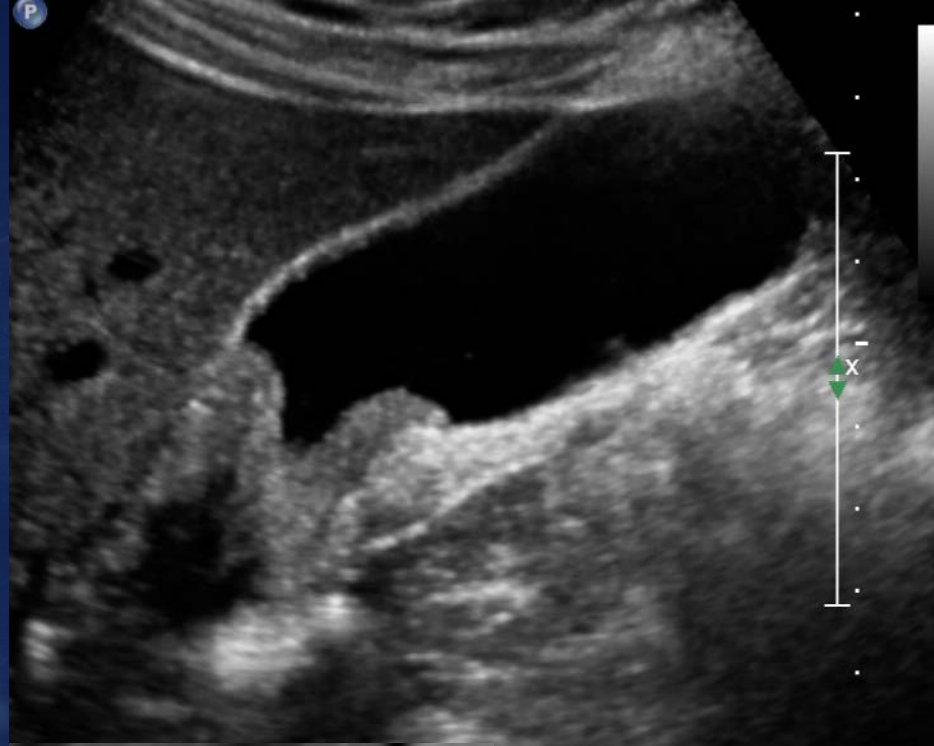
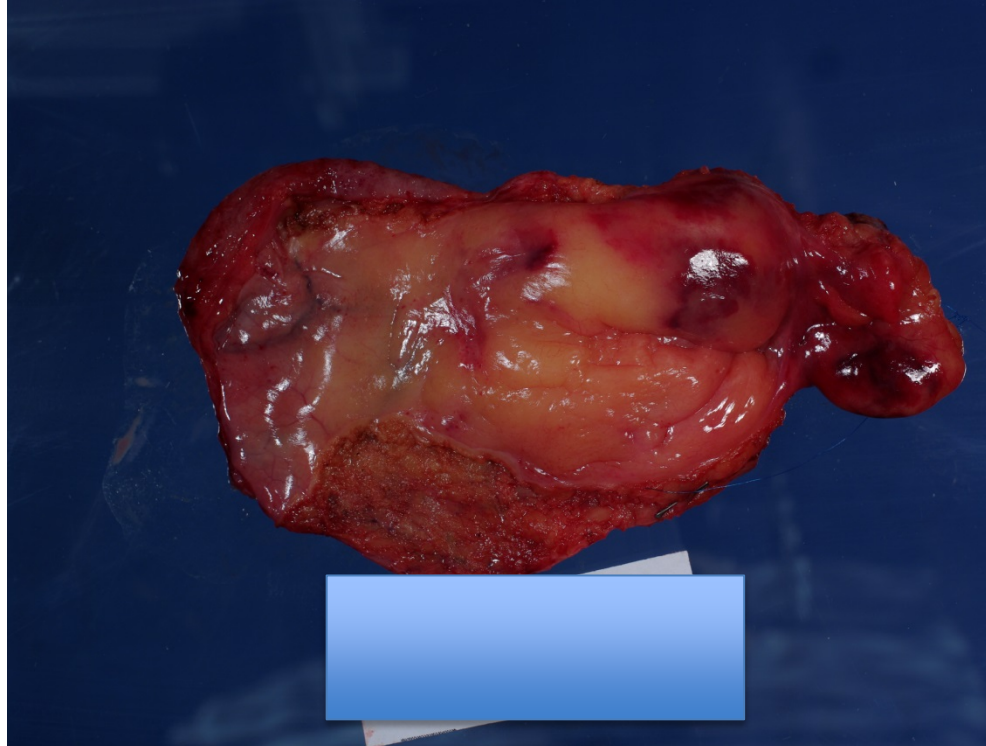
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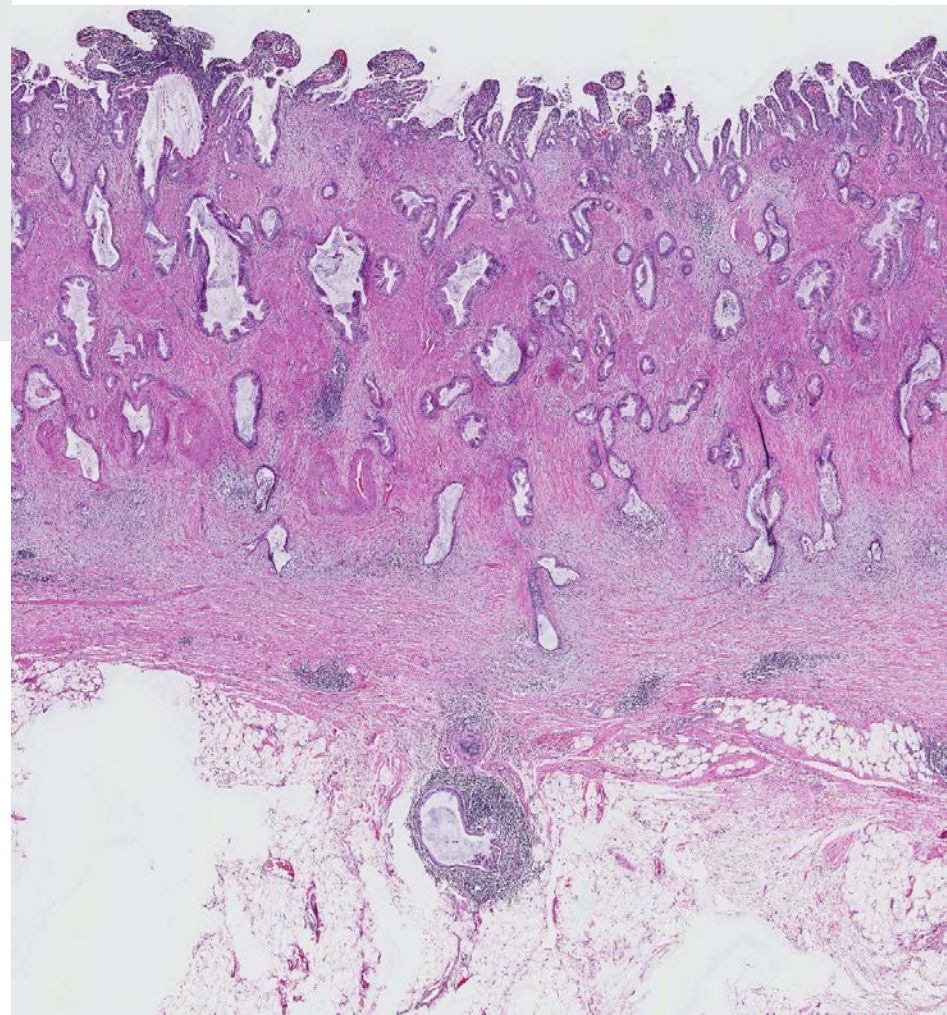
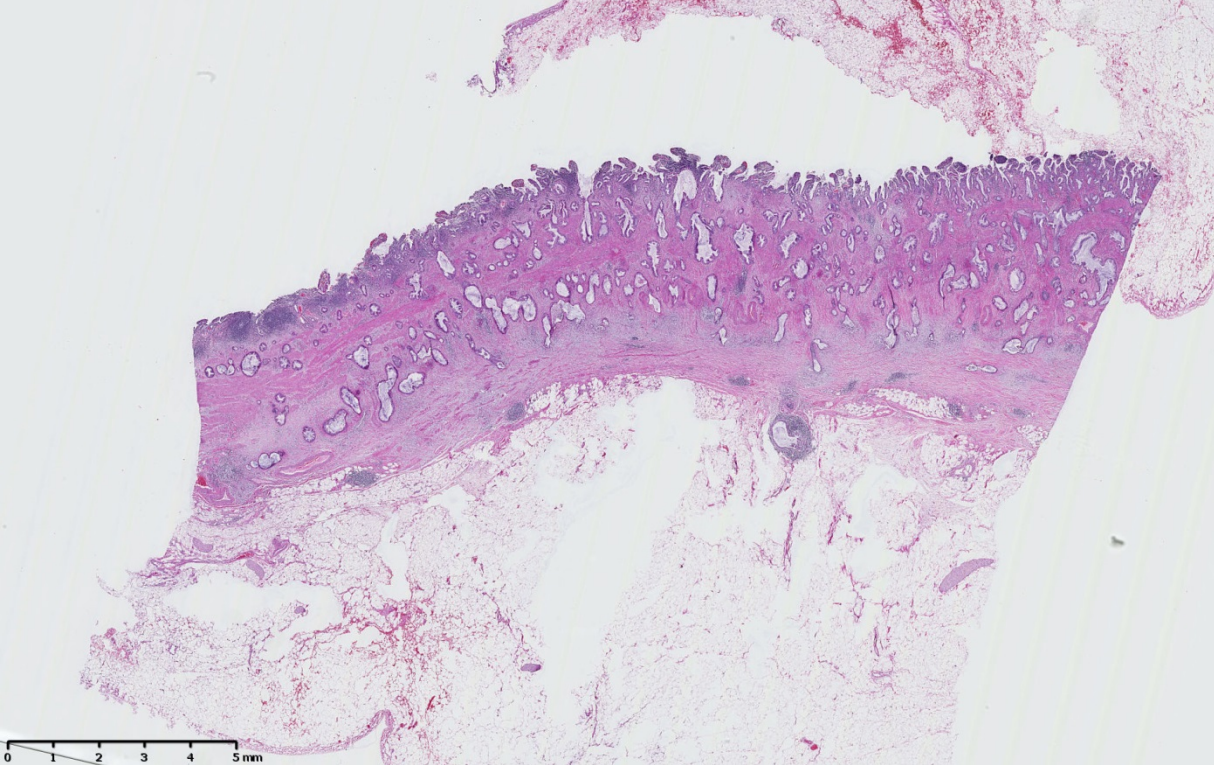
Rare gallbladder adenomyomatosis presenting as atypical cholecystitis: case report

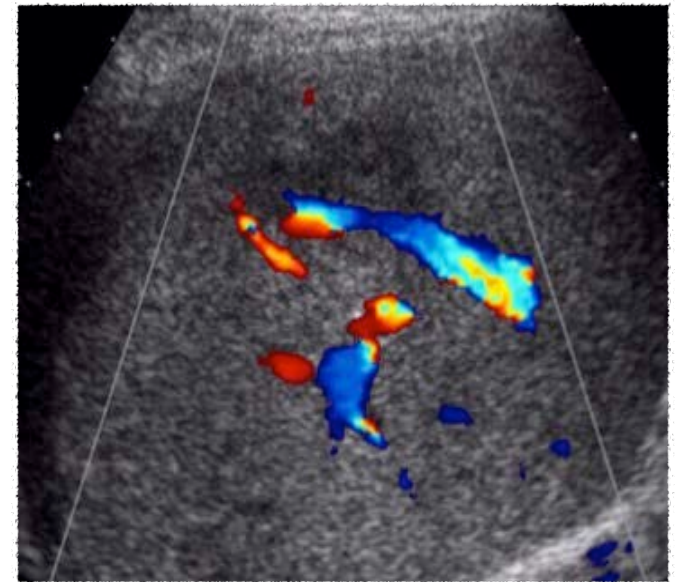
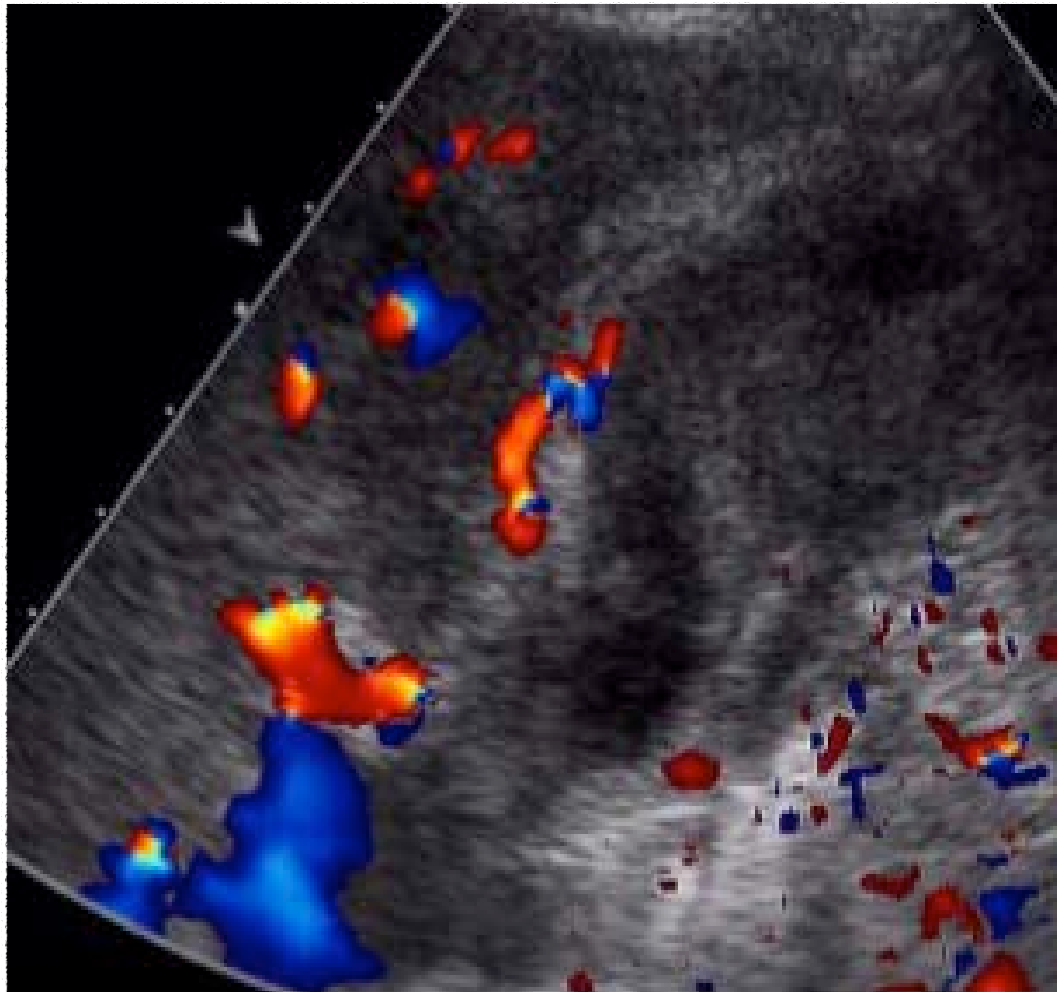
Sheng-Hong Lin^{1†}, Feng-Yee Chang^{2†}, Ya-Sung Yang^{2†}, Jong-Shiaw Jin^{3†} and Teng-Wei Chen^{4*}



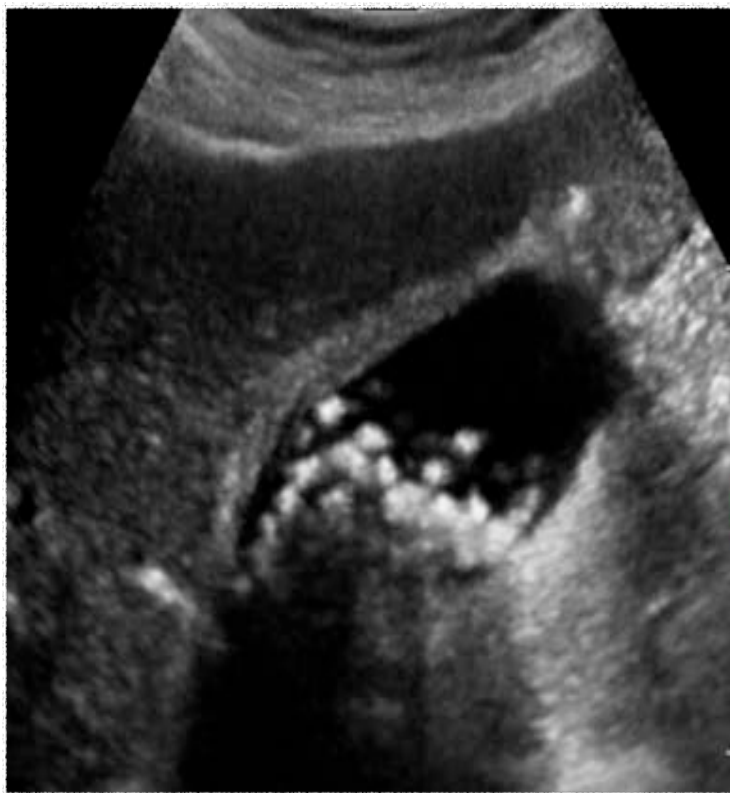




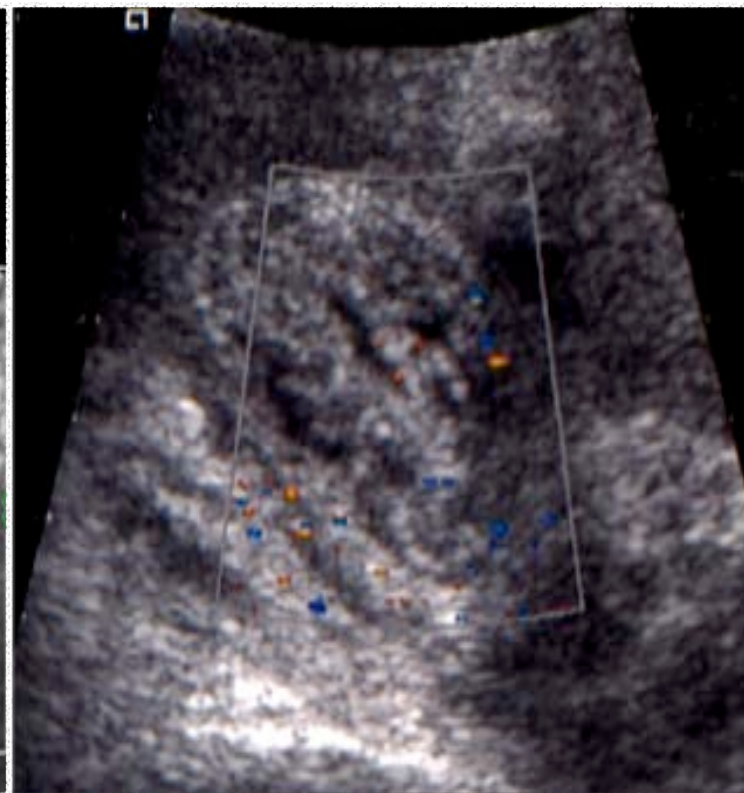




NEOPLASIE



Cirrhose



Hépatite



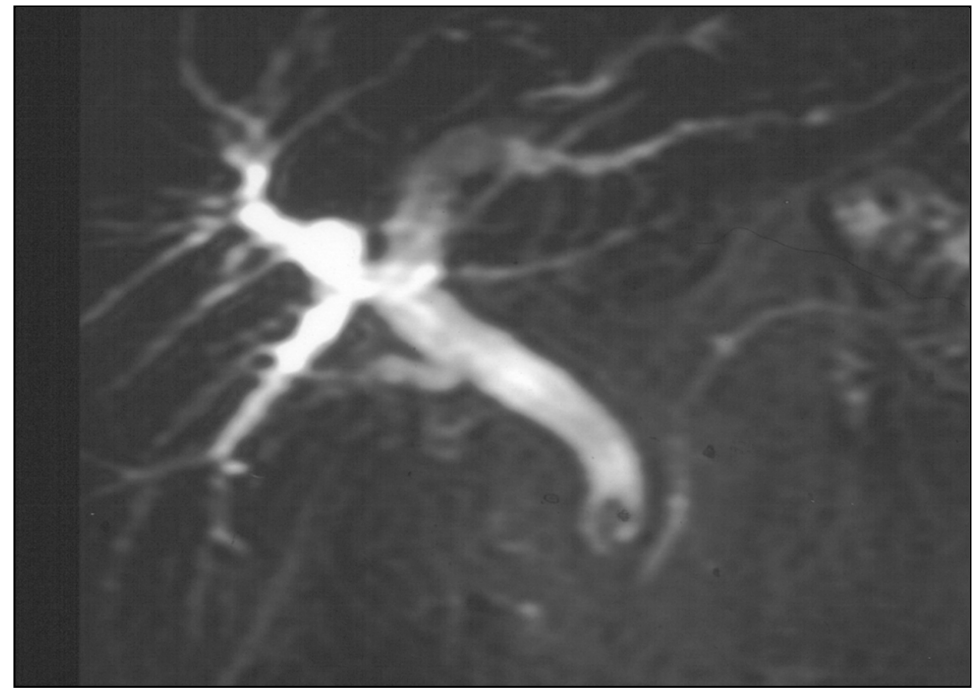
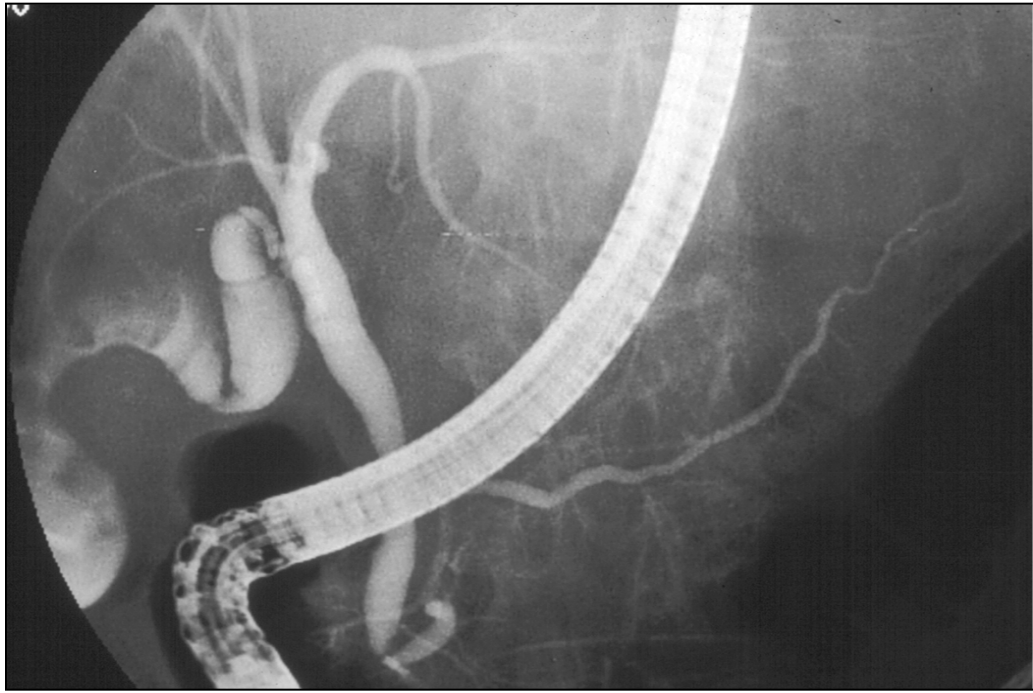
Insuffisance Cardiaque

Lithiase des voies biliaires

- Elle provient souvent de la migration d'un calcul vésiculaire
- Elle peut également se former dans les voies biliaires en étant favorisée par la stase et l'infection
- Elle peut provoquer un obstacle (ictère, angiocholite) ou une pancréatite aiguë

Imagerie de la lithiase des voies biliaires

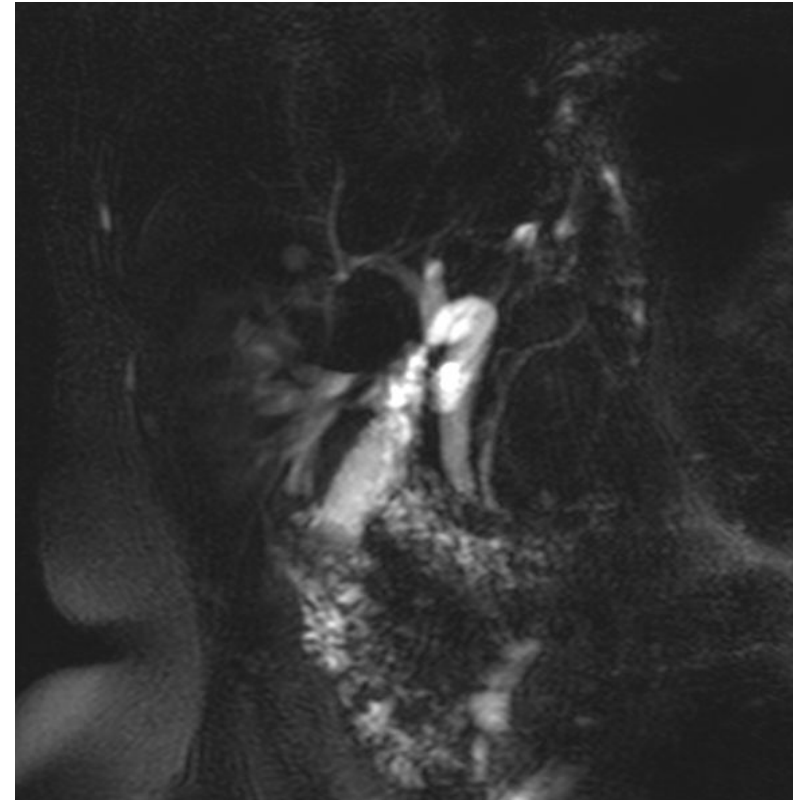
- Echographie : sensibilité faible
- CholangioIRM : sensibilité élevée
- Echoendoscopie : lithiase du cholédoque



Stop décembre2018



Lithiase de la voie biliaire principale



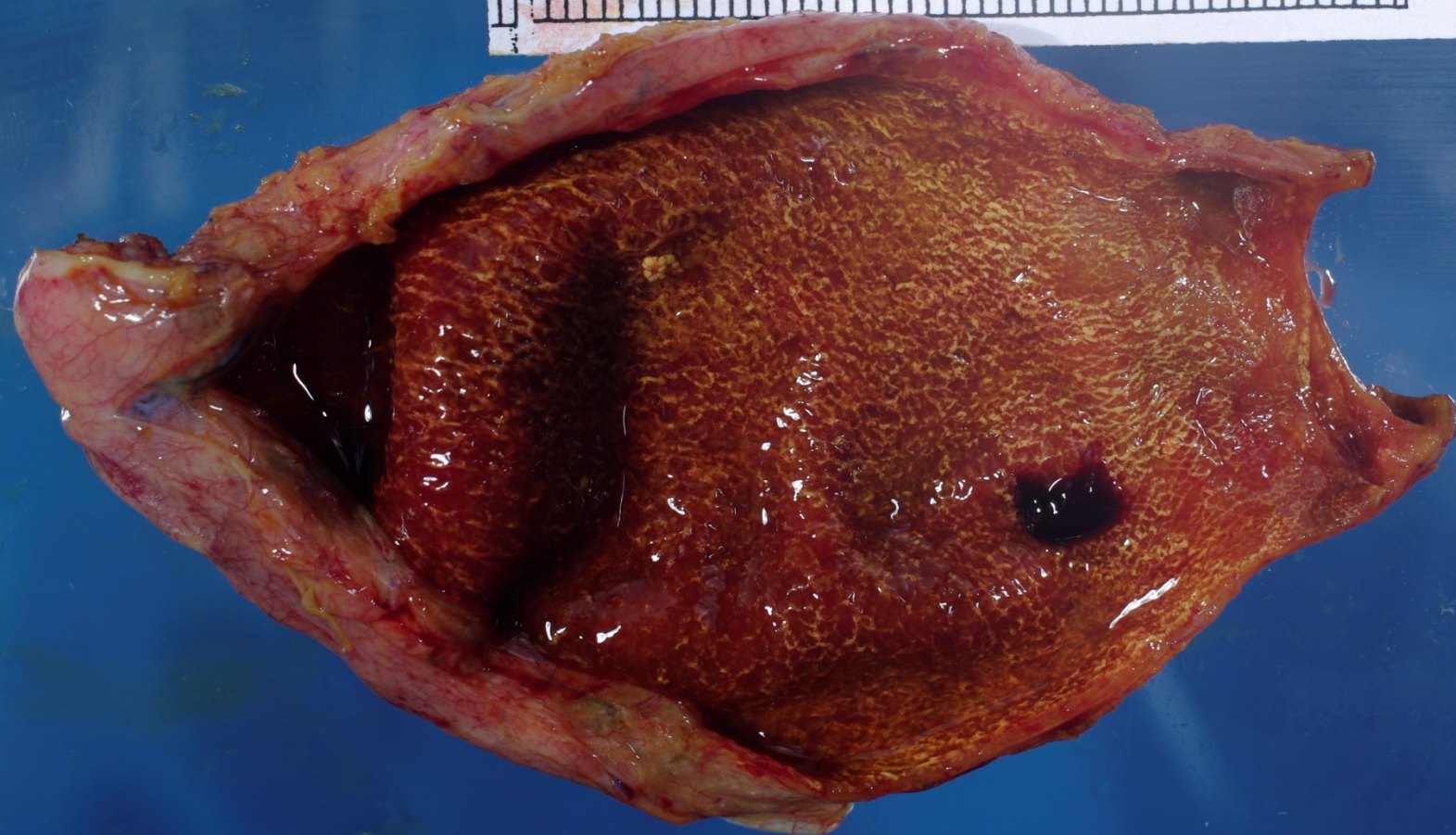
Cas normal

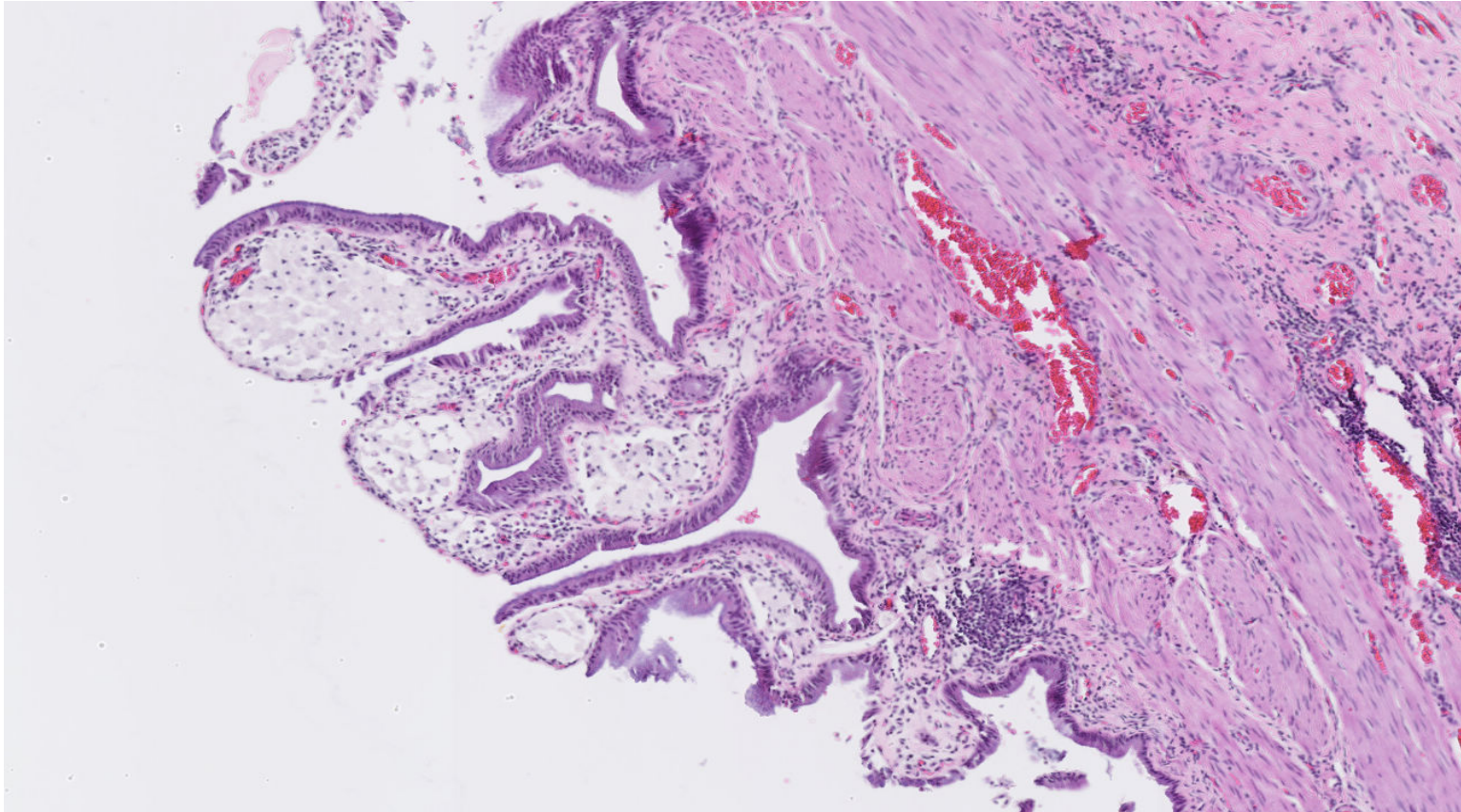
Vésicule biliaire : tumeurs et pseudotumeurs

- Granulome à cholestérine (< 6 mm)
 - Unique
 - Multiples (cholestérolose, vésicule fraise)
- Adénomyose
 - Hyperplasie de la muqueuse et de la musculuse
 - Épaississement pariétal (localisé, diffus)
 - Artéfacts en queue de comète
- Tumeur
 - Polype (> 6 mm)
 - Adénocarcinome
 - Polype > 10 mm ou épaississement pariétal focal
 - Si découverte tardive : masse envahissant foie et voies biliaires



Granulomes et polypes





Voies biliaires

- Techniques
- Vésicule biliaire
 - Lithiase
 - Inflammation
 - Tumeurs et pseudo-tumeurs
- Voies biliaires
 - Lithiase
 - Anomalies congénitales
 - Inflammation
 - Tumeurs