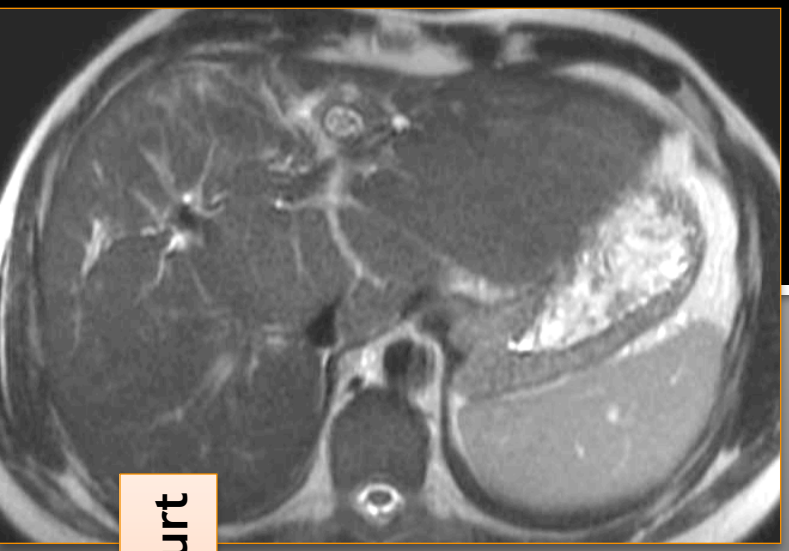
Ateliers IRM juin 2012

ED Voies Biliaires

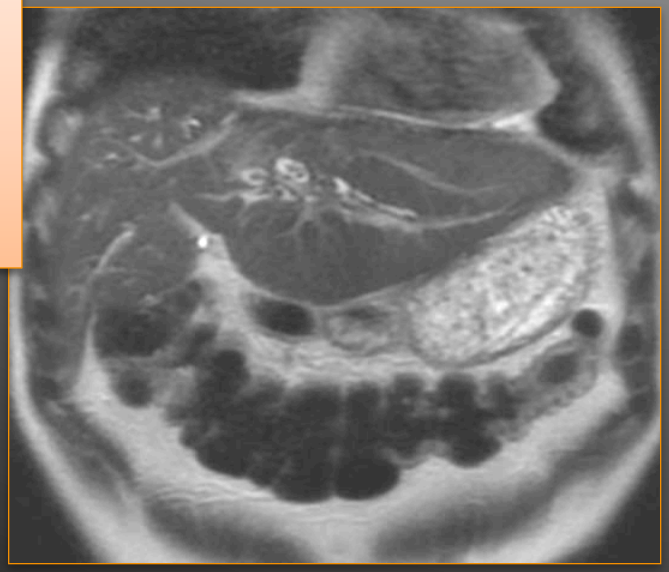
Olivier BRUOT
Julien MATHIAS

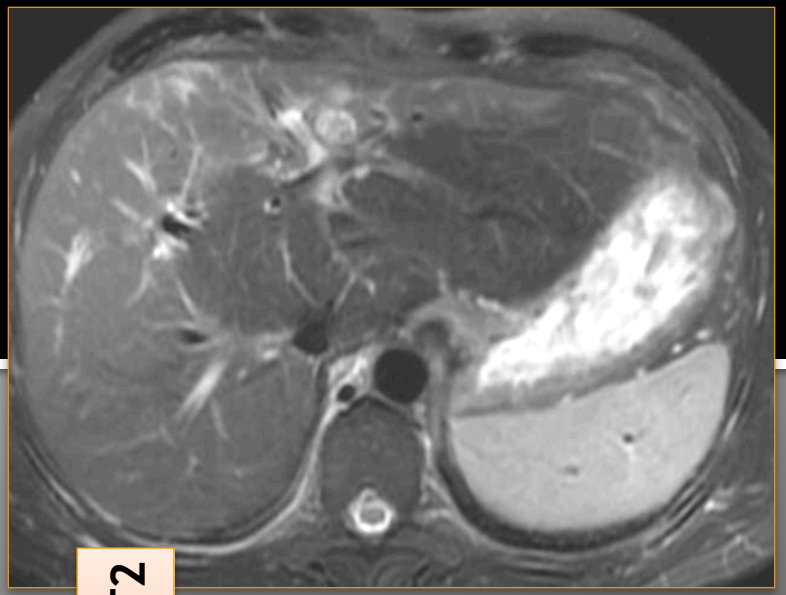
Cas n°1

Homme 40 ans
Ictère …

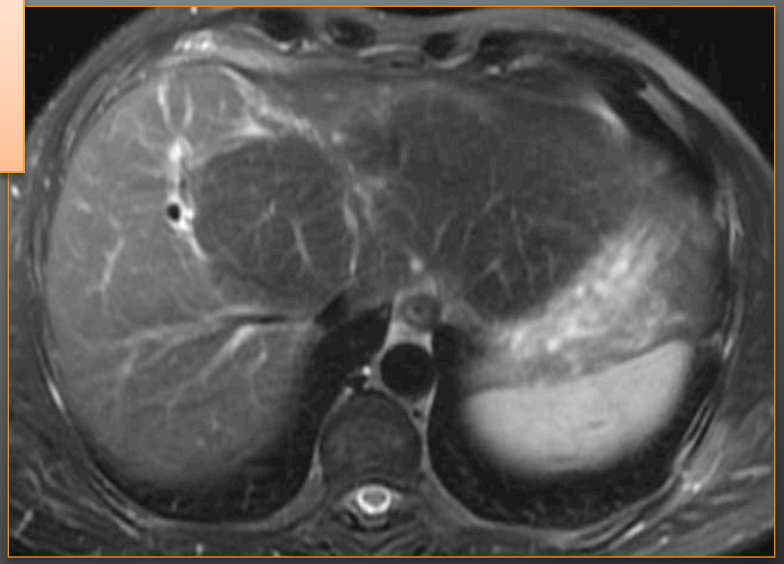


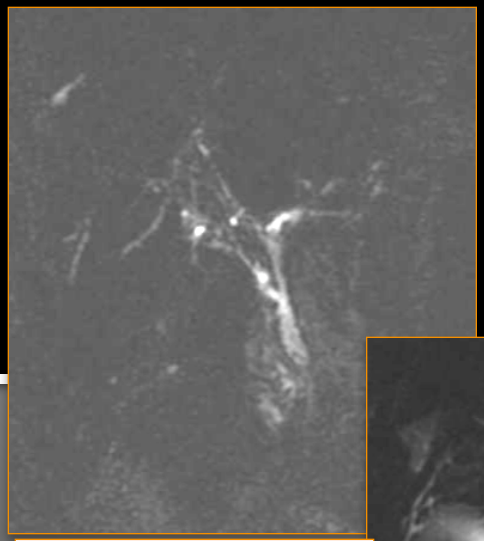
SSFSE Te court

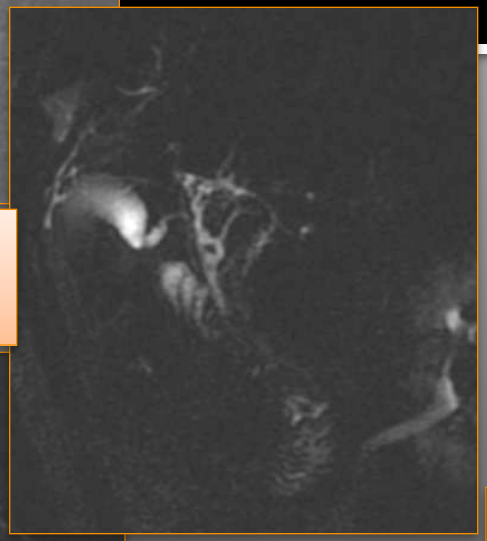




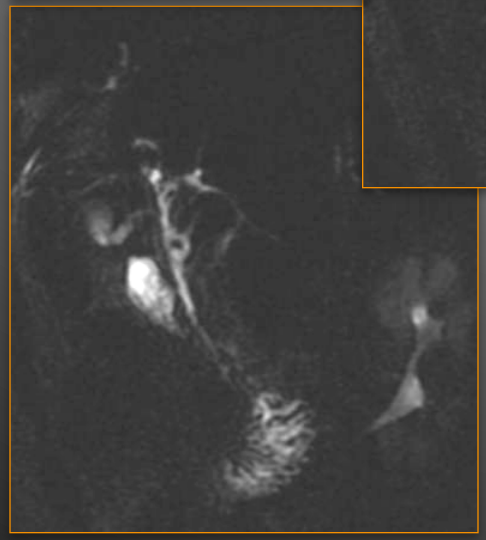
Fr FSE T2

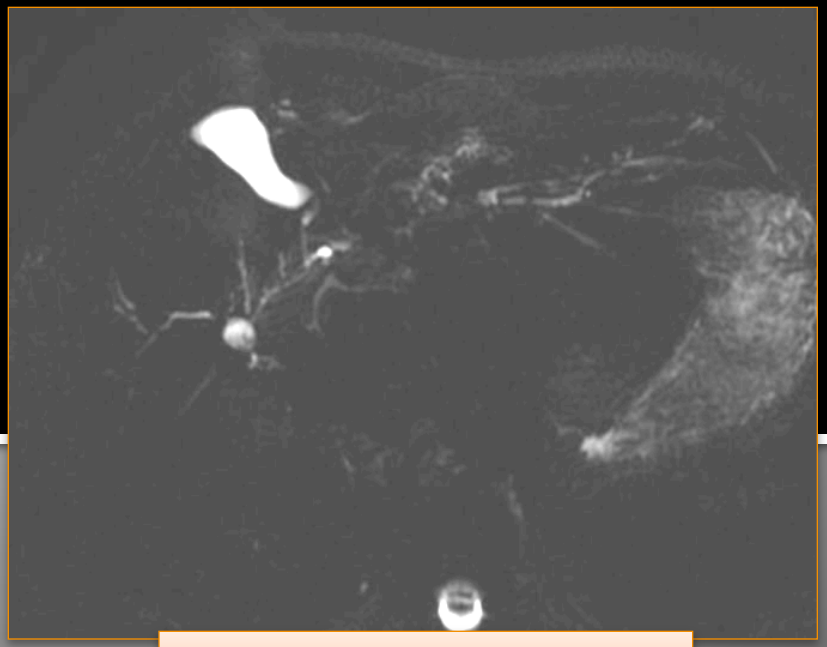






Radiaires
SS FSE Te long





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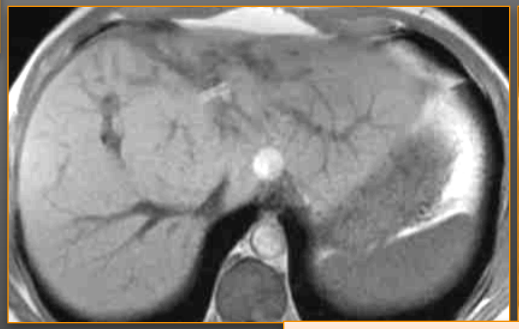
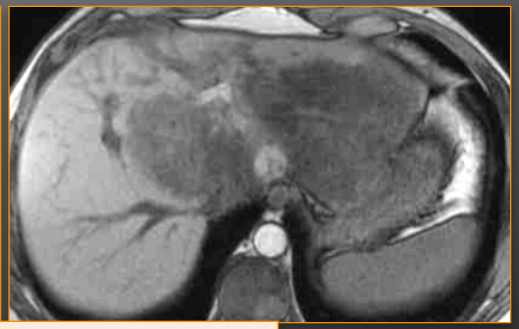
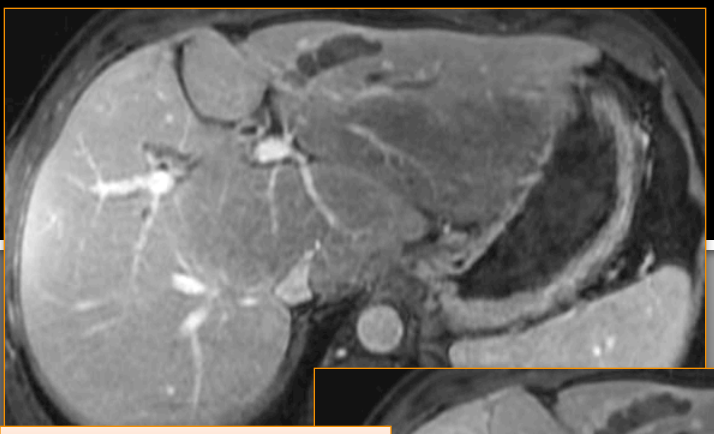




In Phase / Out Phase



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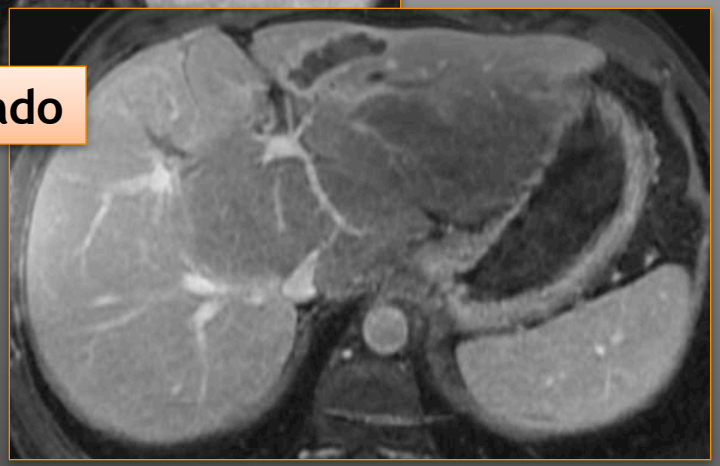
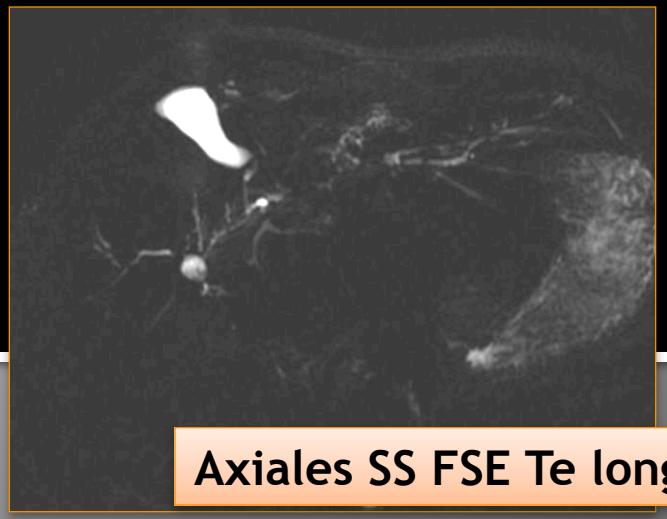
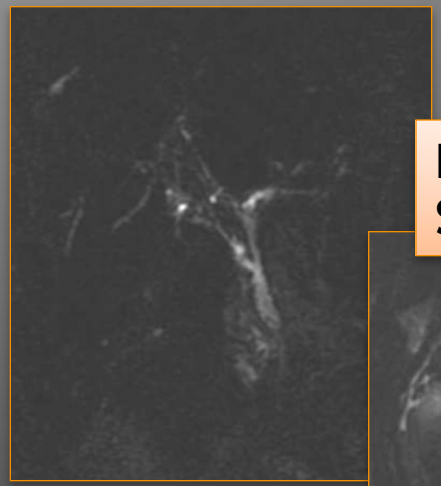
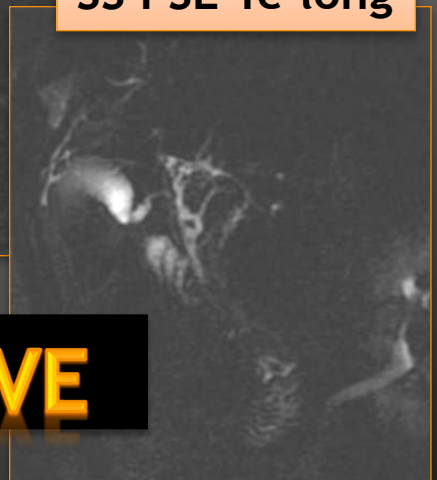




Axiales SS FSE Te long



Radiaires
SS FSE Te long



CHOLANGITE SCLÉROSANTE PRIMITIVE

Cholangite sclérosante primitive

- **Maladie inflammatoire des voies biliaires d'origine inconnue:**
  Inflammation, fibrose et destruction progressive des voies biliaires intra et extra hépatique évoluant vers la cirrhose biliaire

- I = 3 à 10/100 000 habitants
- H > F
- entre 3ème et 4ème décennie,
- 50 à 75% d'association avec une colite ulcéreuse ou Crohn
- Mécanisme immunitaire + terrains génétiquement prédisposés

- **Diagnostic**: Anapath +++

  CholangioIRM ou CholangioGraphie rétrograde: sténoses irrégulières et multifocales, dilatation modérée

  Fines ulcérations pariétales et pseudo-diverticules

Clinique: **fièvre au long cours**, dl abdo, prurit, coliques hépatiques, décompensation oedémato-ascitique…

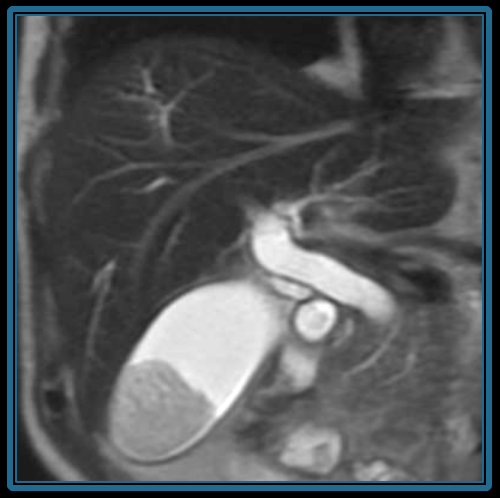
Bio: . cholestase, ictère (BC), cytolyse.
. pANCA (idem RCH..)

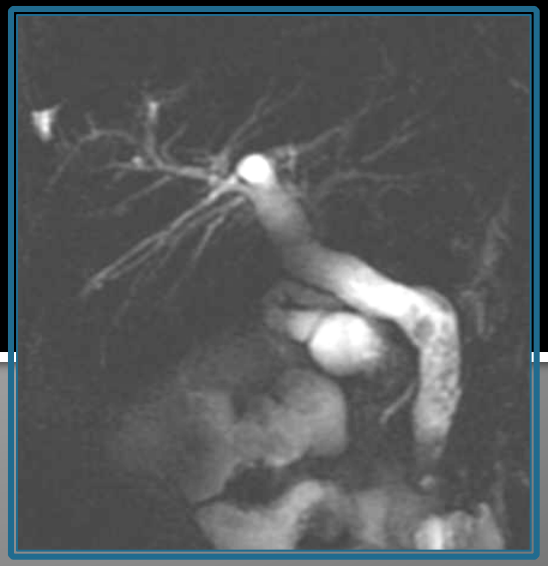
Pronostic: . **cirrhose** et ses complications.
. **10 à 15% de cholangioK** (tabac +++)
(et Kc colo-rectal quand association avec RCH)
. médiane de survie entre 10 et 15 ans

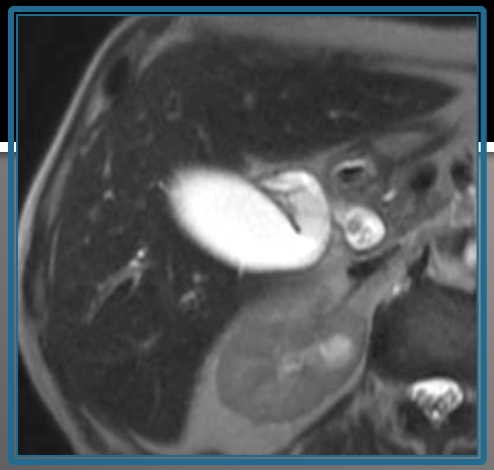
TTT: médical (symptomatique, des complications cirrhotiques, de la cholestase..)
Dilatation endoscopique, prothèse endo biliaire
transplantation hépatique (mais récidive dans 10 à 20% des cas.)

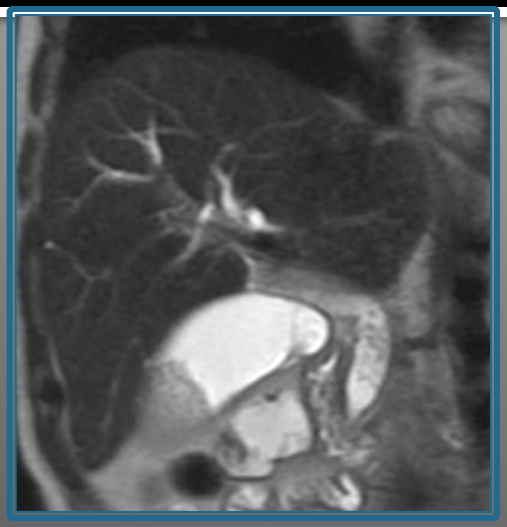
Cas n°2

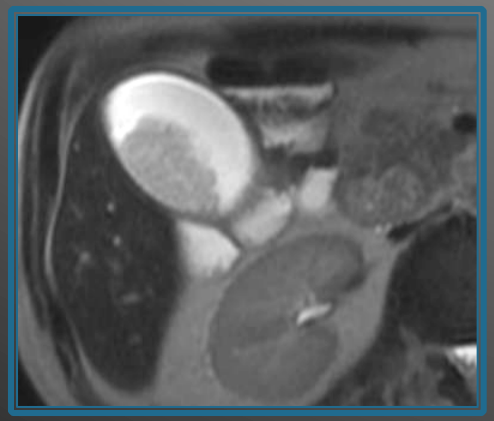
Homme 45 ans
Fievre + ictere
VIH +

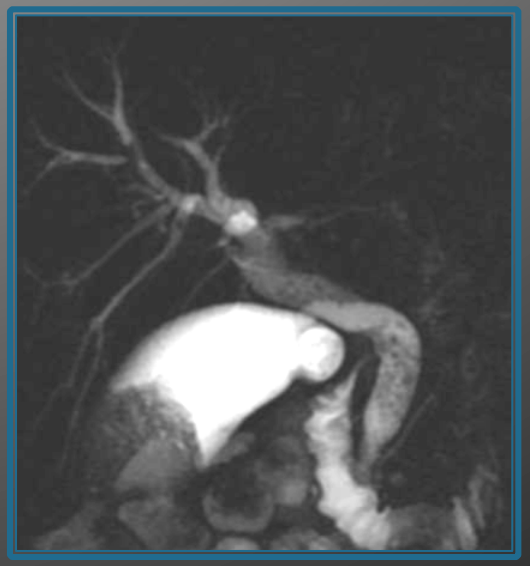




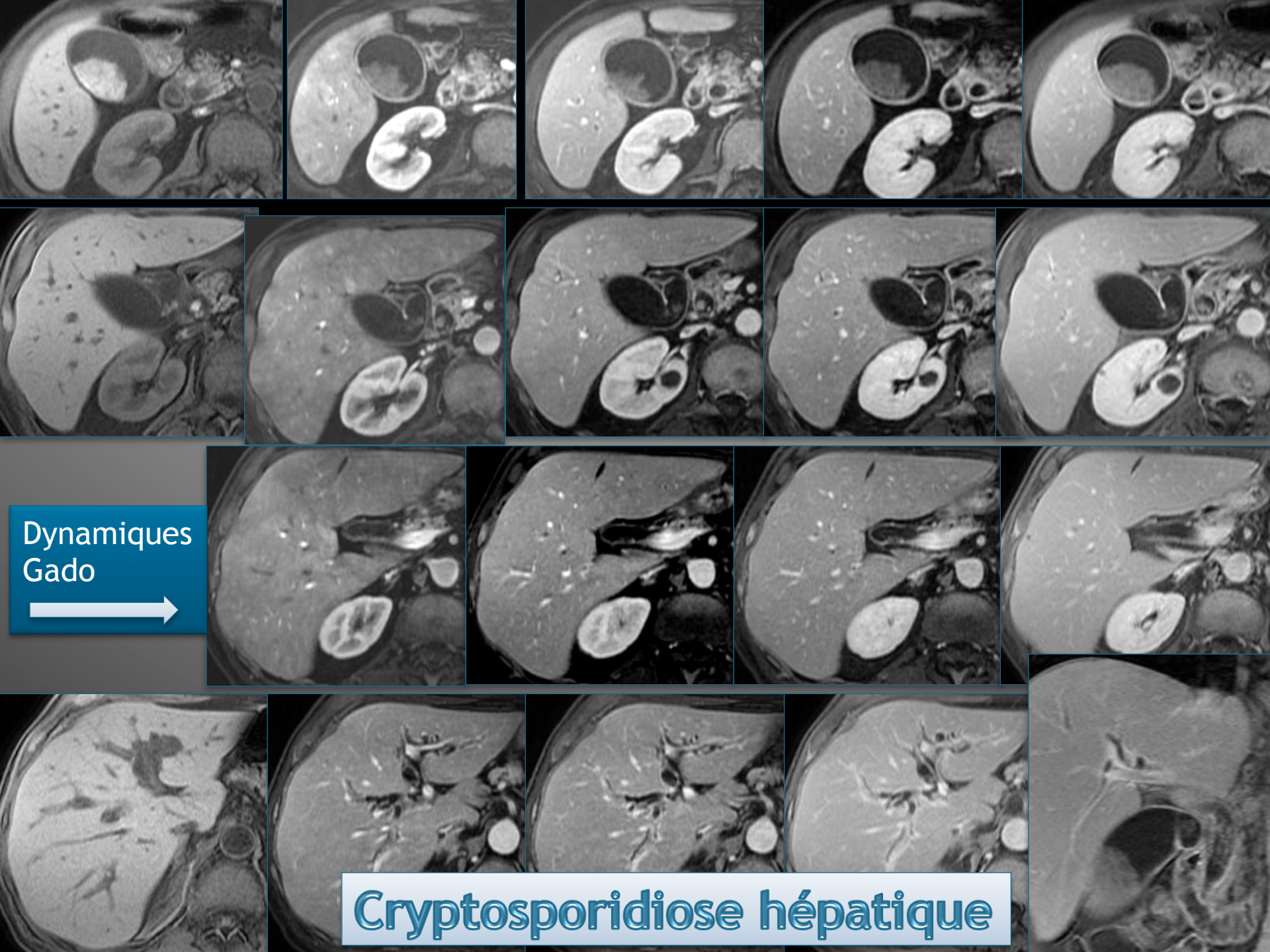








Imagerie T2



Cryptosporidiose hépatique

Cryptosporidiose

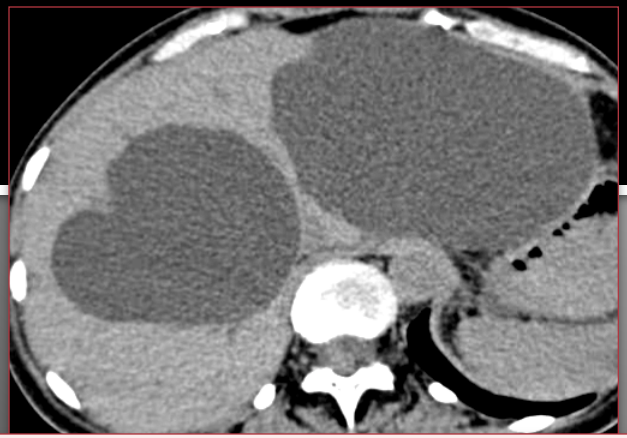
- L'atteinte biliaire est observée chez environ 15% des patients sidéens.

L'imagerie met en évidence une dilatation des voies biliaires, avec un épaississement pariétal et parfois un aspect de cholangite sclérosante; un épaississement de la paroi vésiculaire; une possible sténose papillaire.

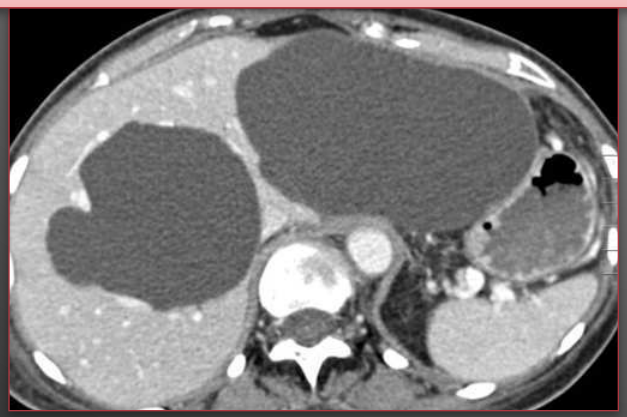
- Le parasite peut être retrouvé au sein des voies biliaires et de la vésicule, mais dans la plupart des cas le diagnostic est présomptif, fondé sur l'association anomalies en imagerie de l'arbre biliaires et présence du parasite dans le tractus intestinal ou au niveau de l'ampoule de Vater.

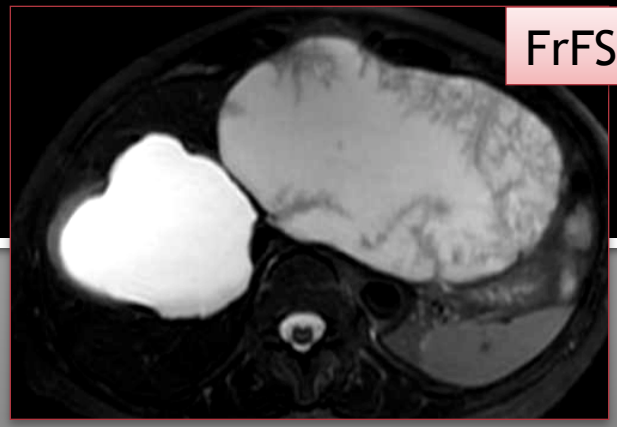
Cas n°3

Femme 35 ans
Douleurs abdominales brutales
Masse épigastrique palpable

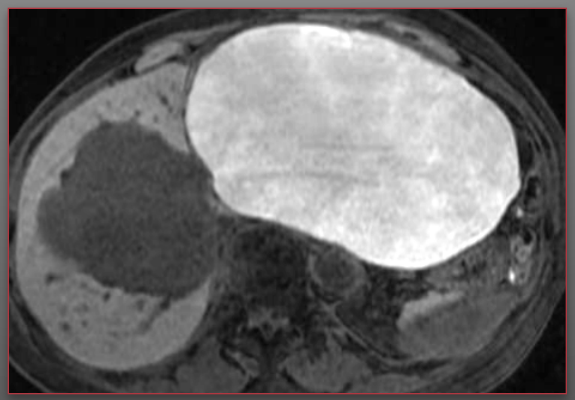


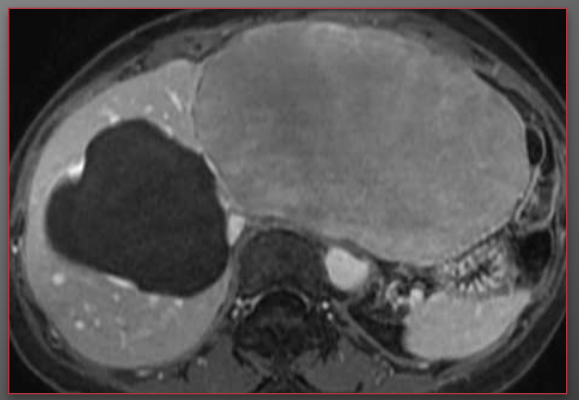
Scanner sans et avec injection





FrFSE T2



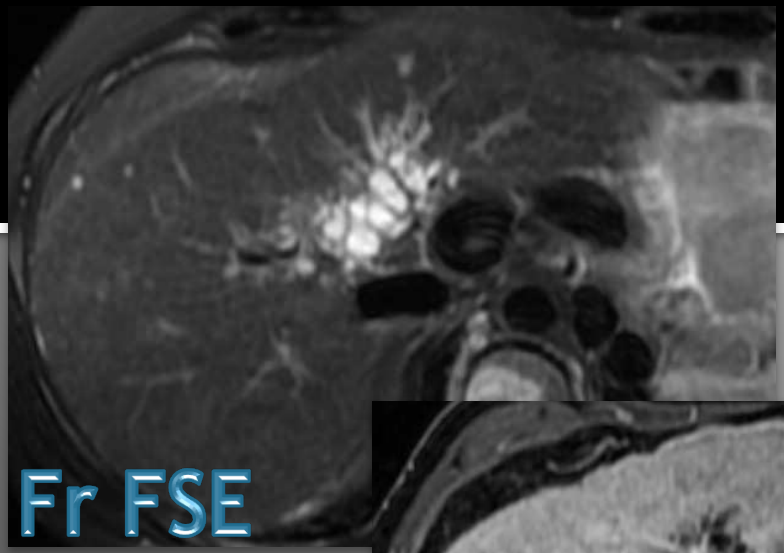


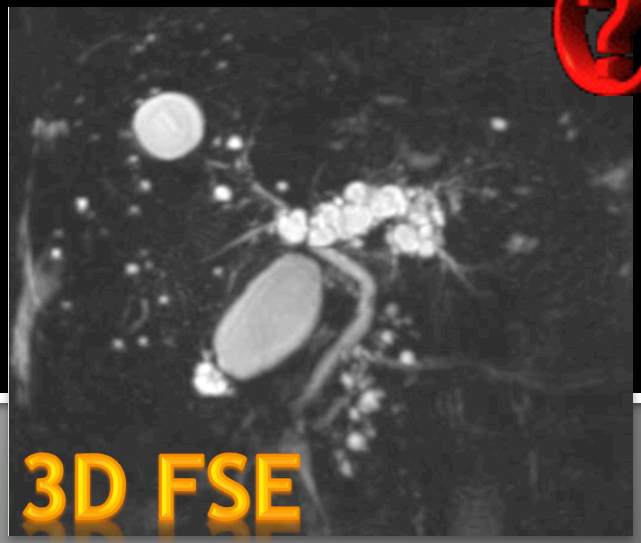
T1 sans et avec gado

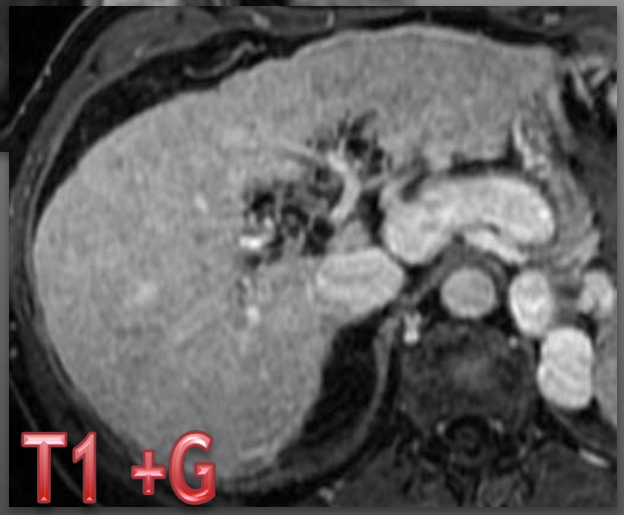
KYSTE BILIAIRE HÉMORRAGIQUE

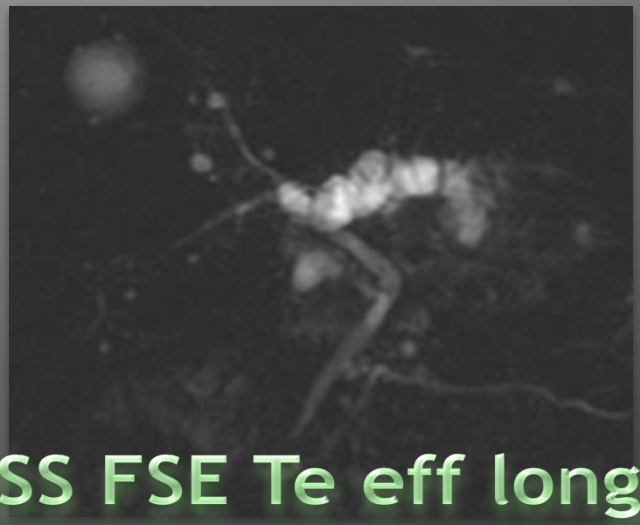
Cas n°4

Homme 72 ans
Cirrhotique
Dilatation des voies biliaires intrahépatiques en écho









Disposition péri portale
En chapelet
Non communiquant

KYSTES PÉRI BILIAIRES

Kystes péri biliaires

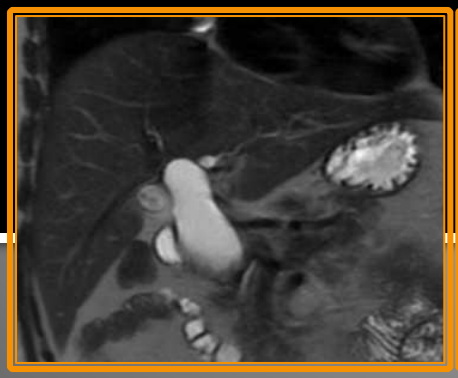
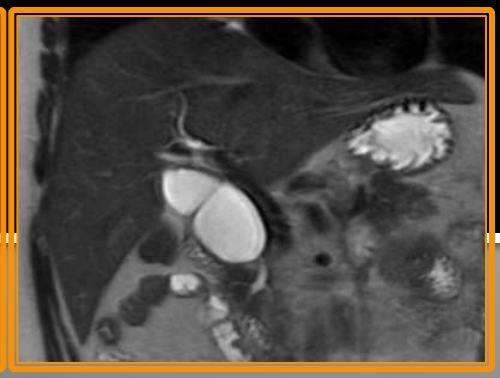
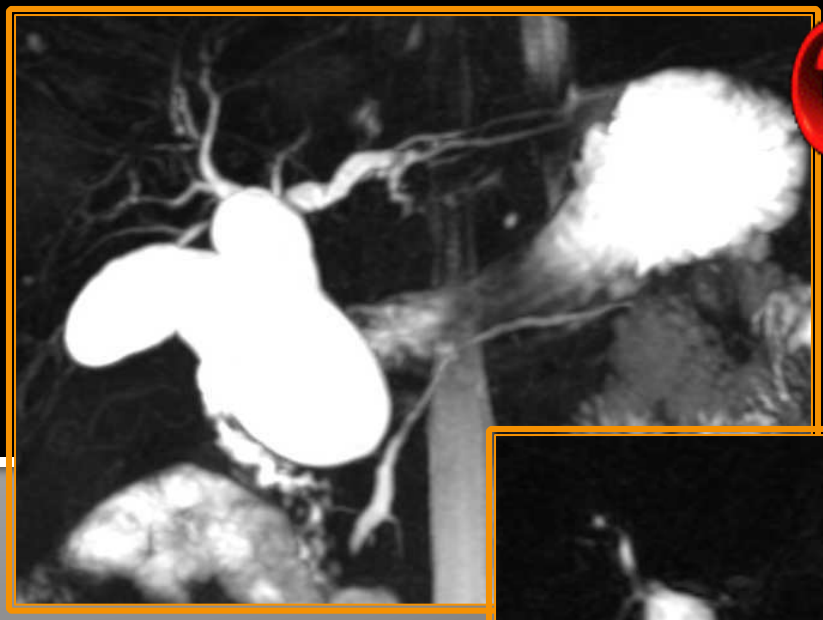
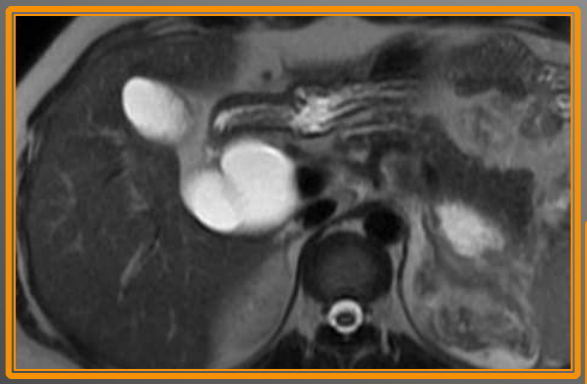
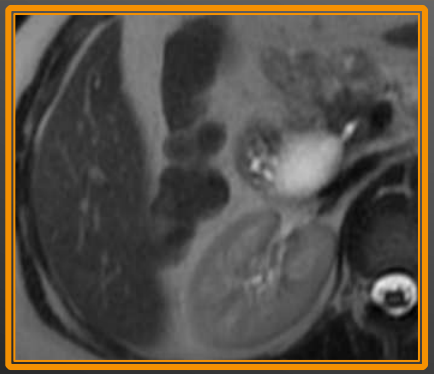
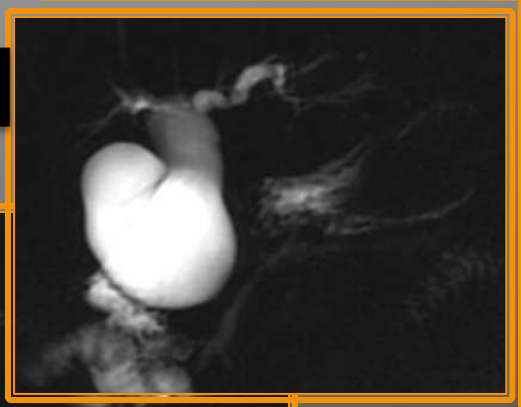
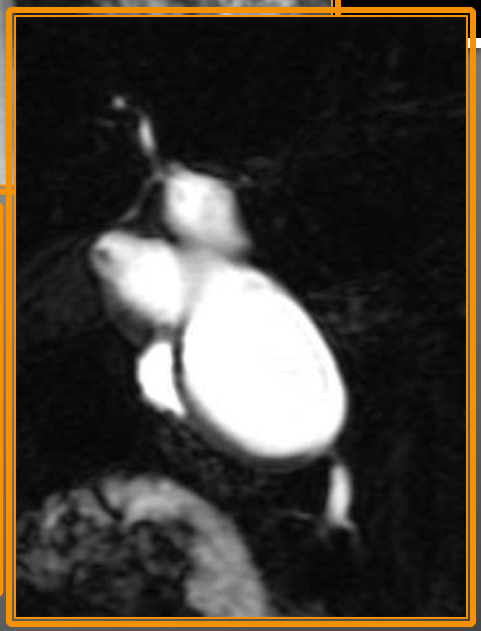
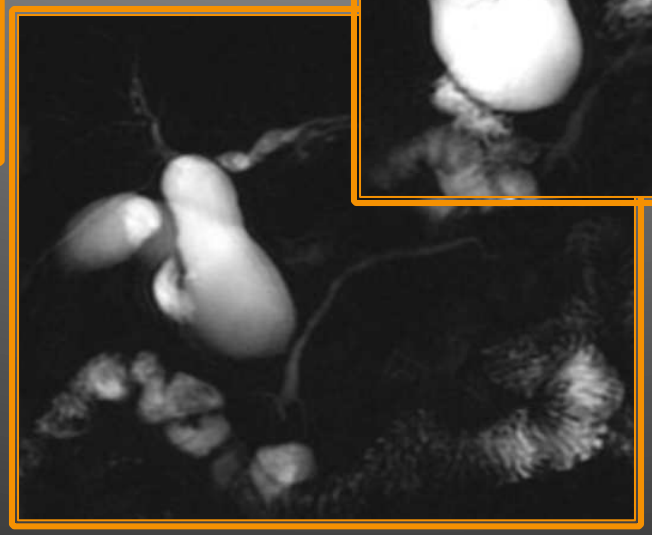
- Terrain : hépatopathie, cirrhose +++

- Diagnostics différentiels
  - dilatation segmentaire des VBIH sur cholangiocarcinome +++
  - Oedème périportal
  - Complexes de Von Meyenburg
  - Maladie de Caroli

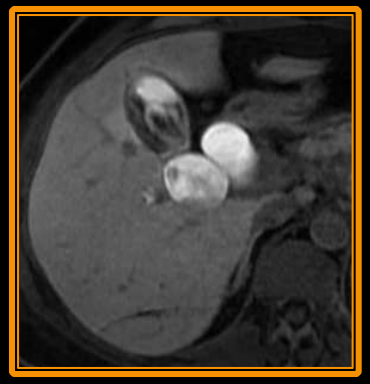
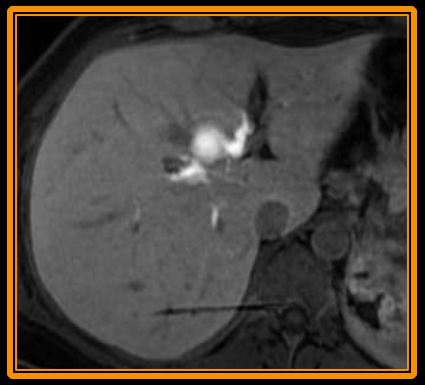
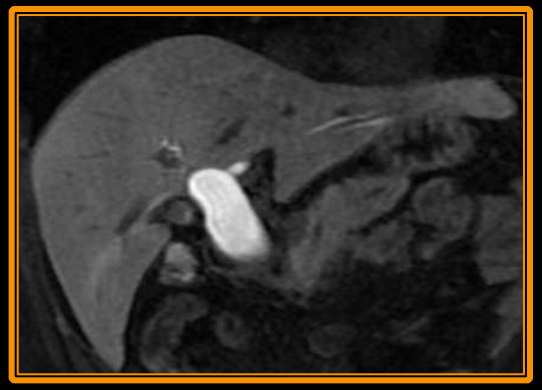
- Kystes péribiliaires
  - Aspect en chapelet
  - De part et d'autre de la veine porte
  - Non communiquant avec les voies biliaires (≠ maladie de Caroli)

Cas n°5

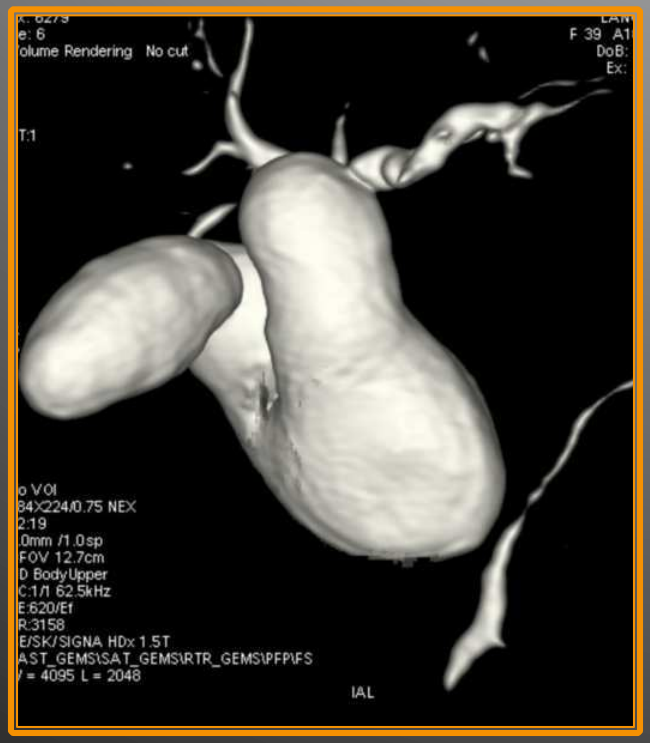
Jeune femme 39 ans
pesanteur épigastrique
Dyspepsie

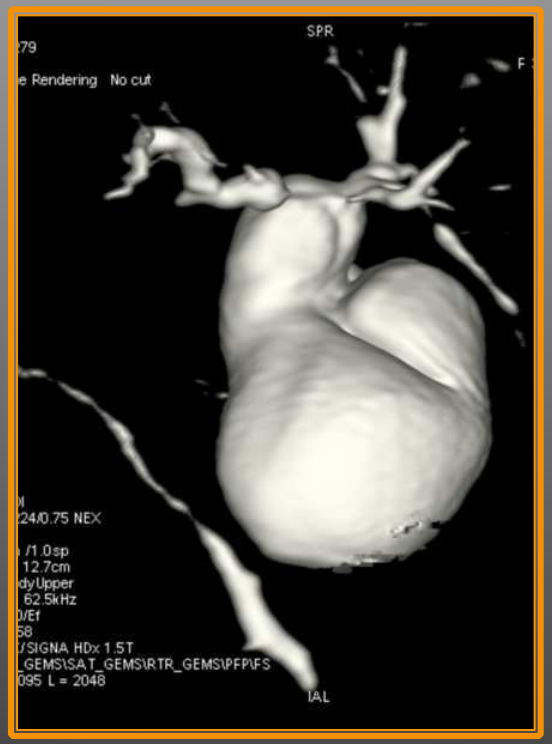









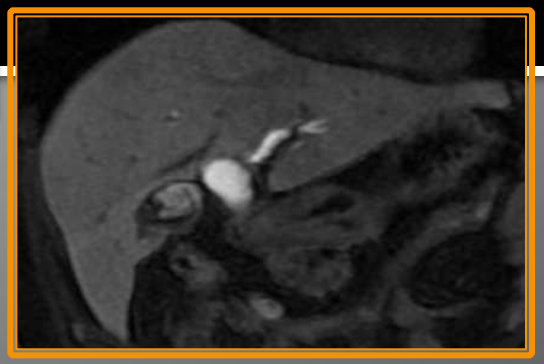
Imagerie T2

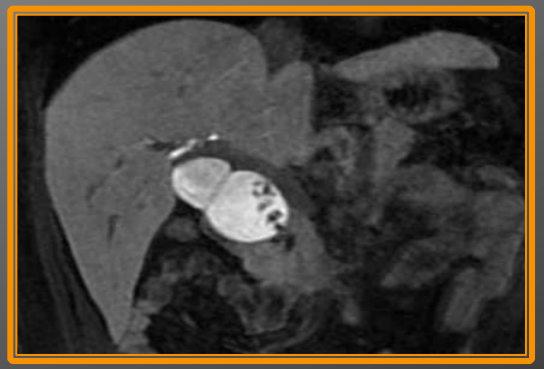





Kyste du cholédoque avec canal commun long



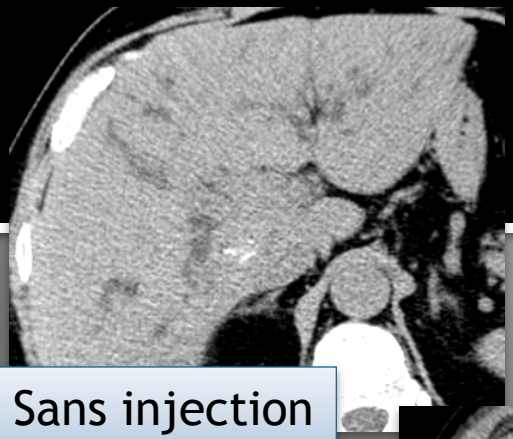




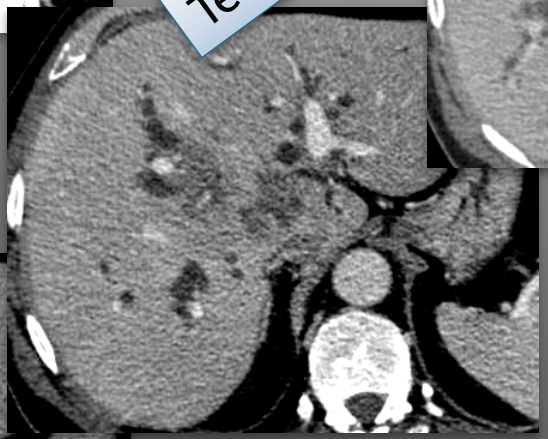


Cas n°6

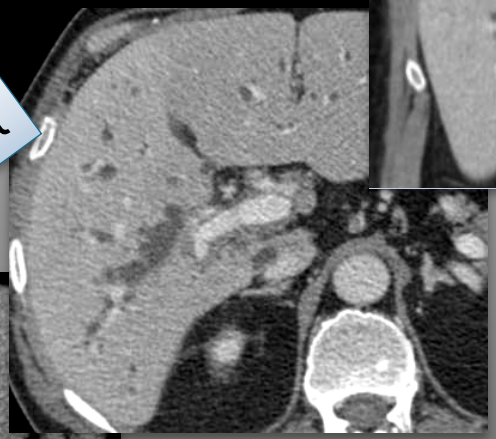
Homme 45 ans
Ictere
Douleurs abdominales

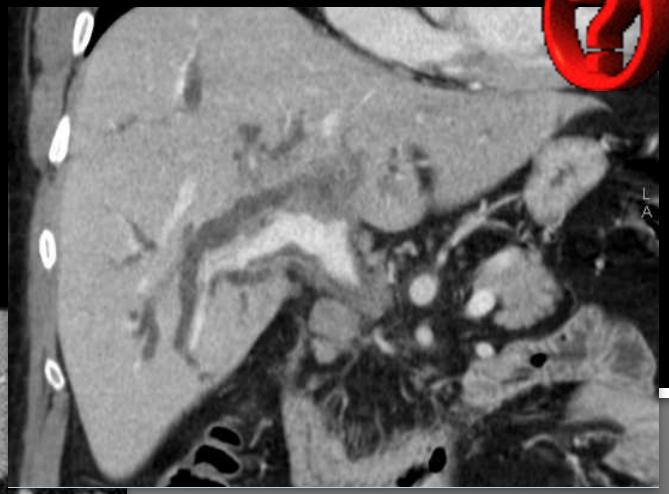


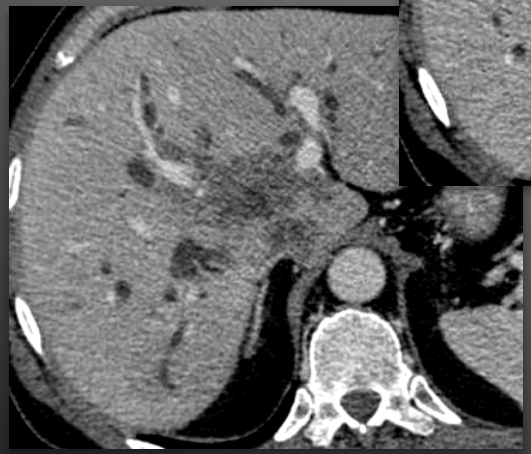
Sans injection



Temps portal



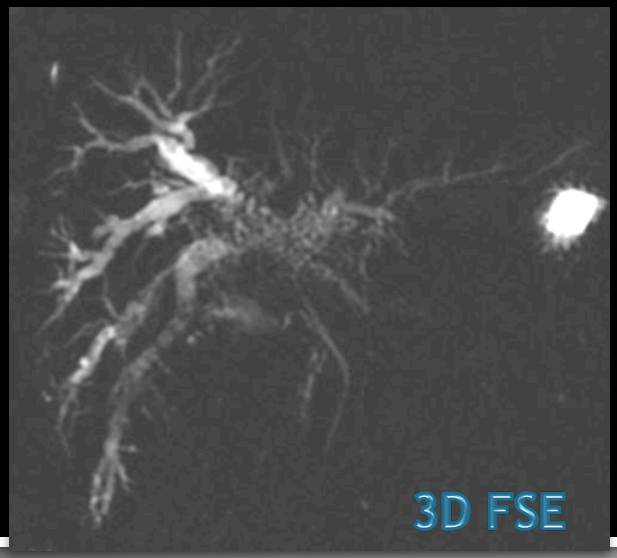




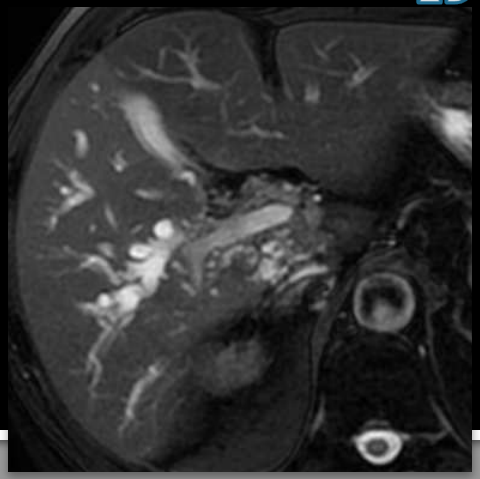
Lésion tumorale du hile hépatique, compression de la convergence.

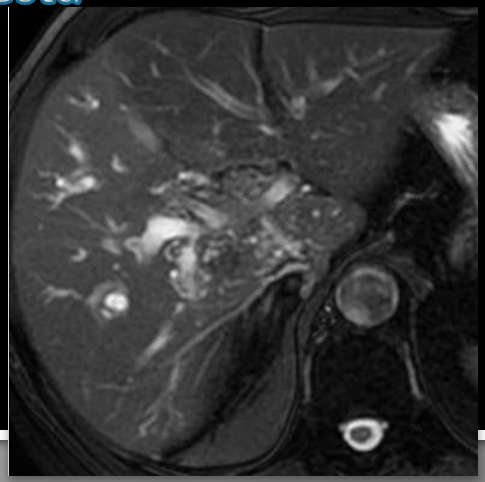
Cholangiocarcinome ?

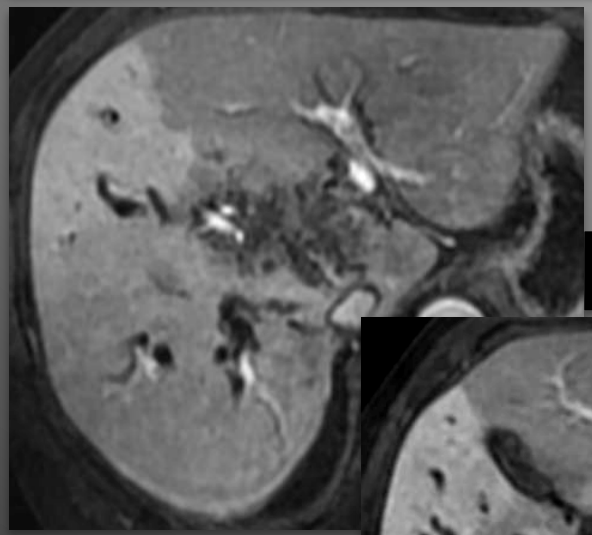
→ IRM



2D Fiesta







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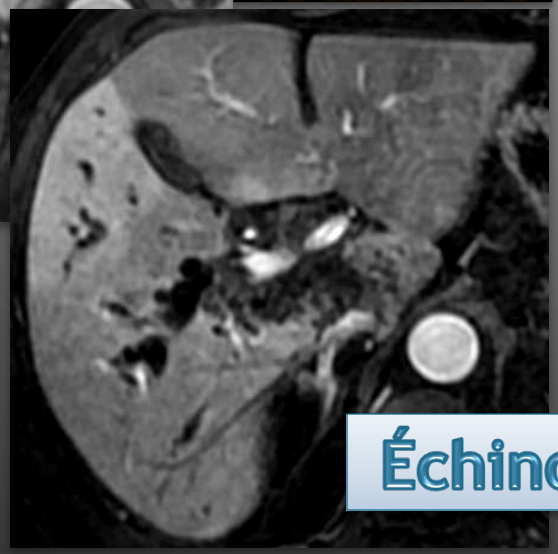

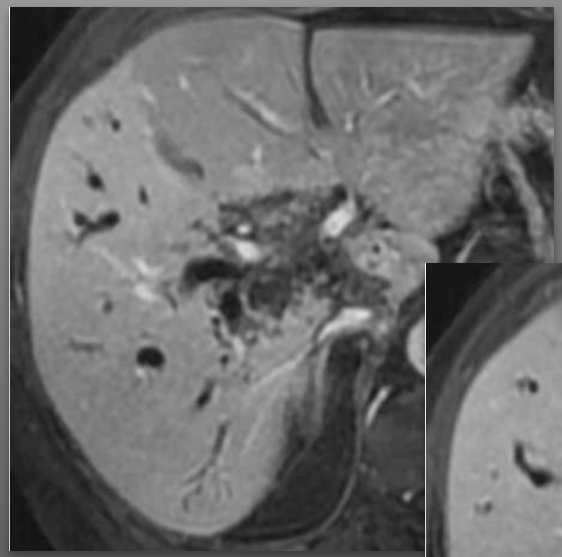

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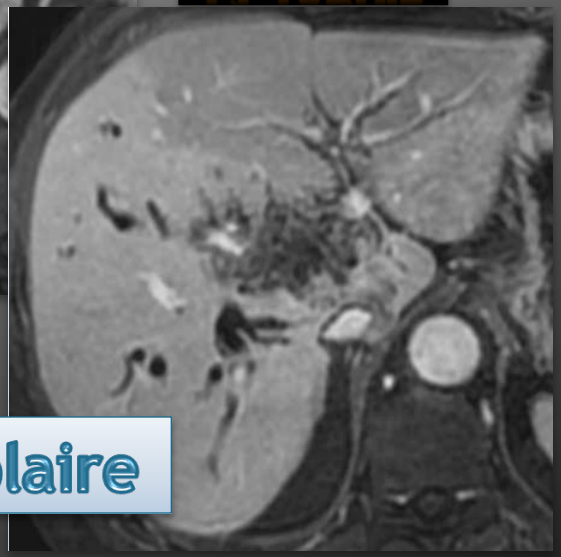
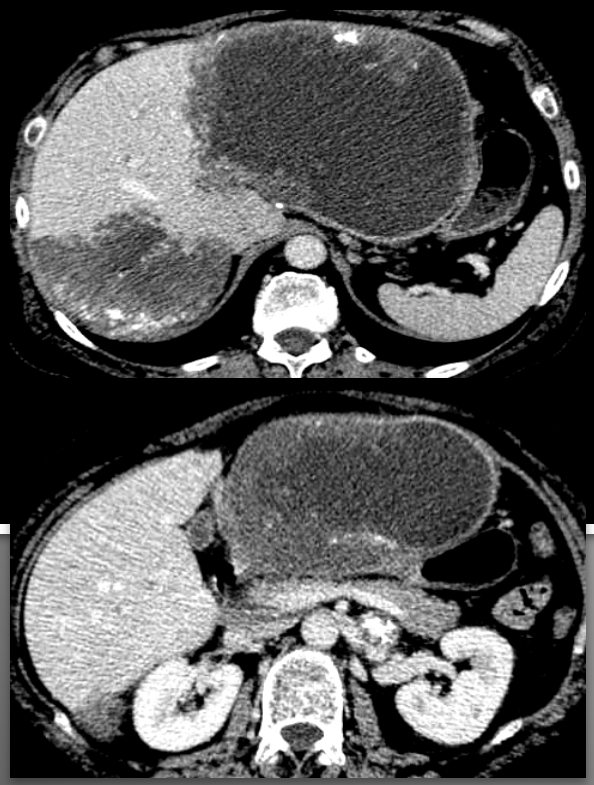


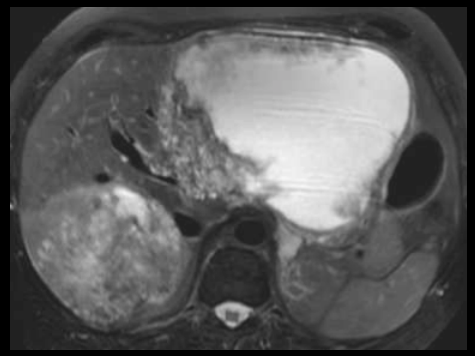
Échinococcose alvéolaire

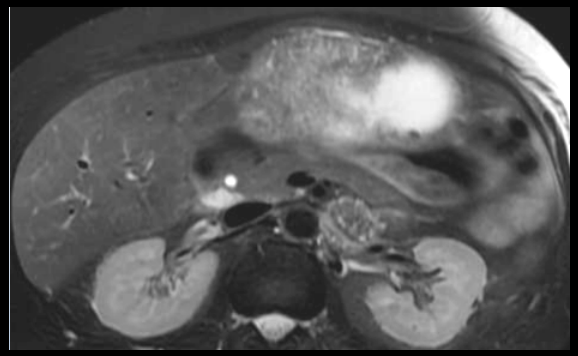
Échinococcose alvéolaire

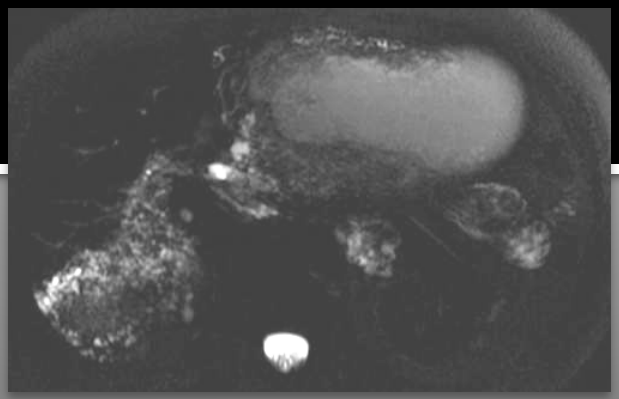
- **SCANNER** : masse hépatique, souvent unique, généralement de grande taille, globalement hypodense par rapport au parenchyme normal, de contours irréguliers. **Les calcifications sont fréquentes (90%)**

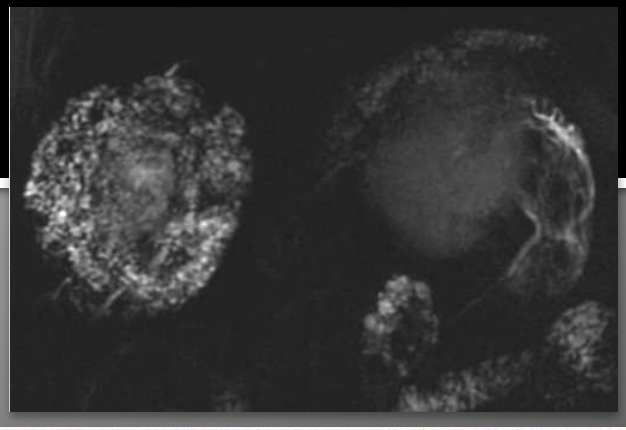
- **IRM** : met en évidence la structure fibreuse de la lésion par un hyposignal en pondération T1 et T2. Elle montre les vésicules parasitaires en hypersignal T2 qui forment une masse multiloculaire, constituée par l'adossement de multiples vésicules parasitaires infracentimétriques, réalisant un aspect en « **rayon de miel** » ou en « **mie de pain** », pathognomonique des lésions d'échinococcose alvéolaire.



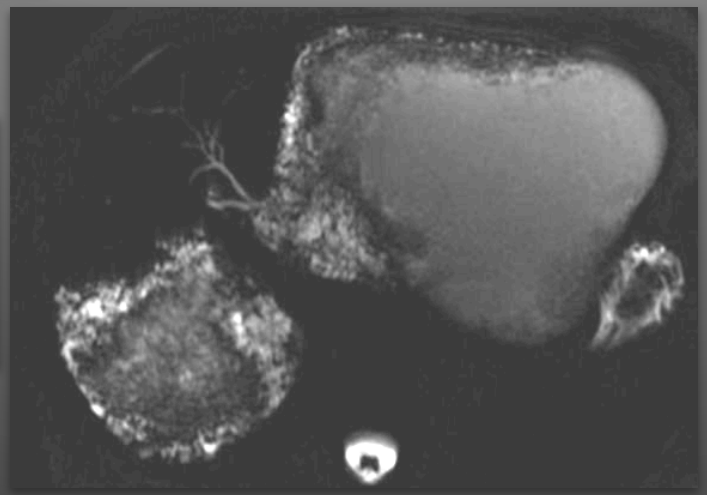








Échinococcose alvéolaire, double localisation hépatique et rétro péritonéale



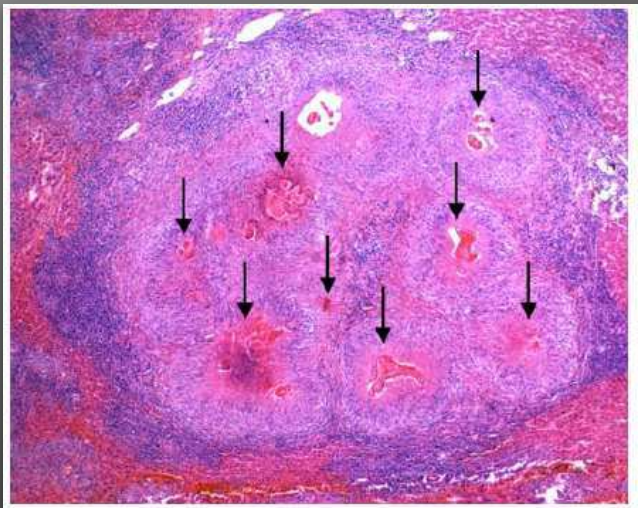
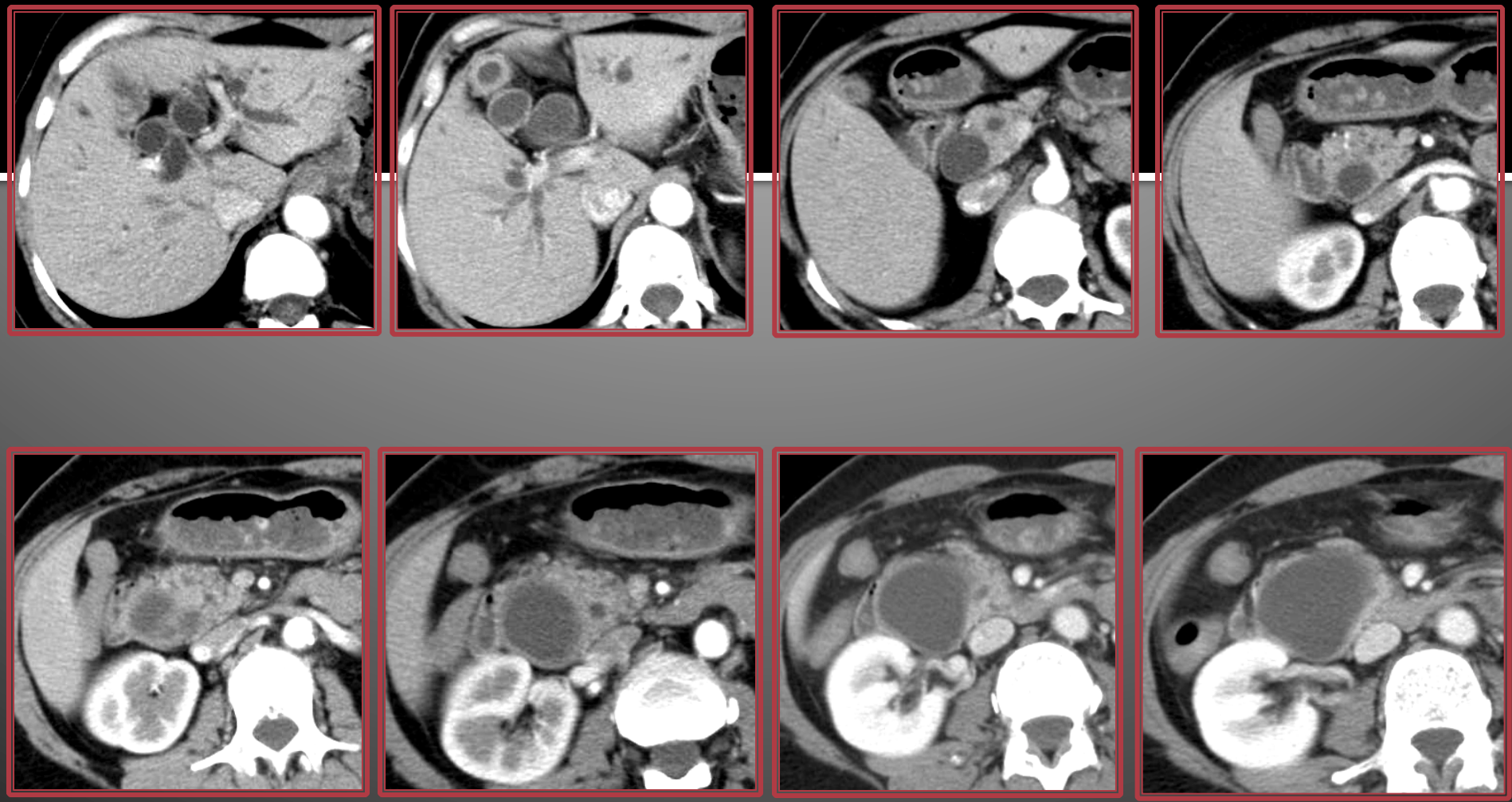
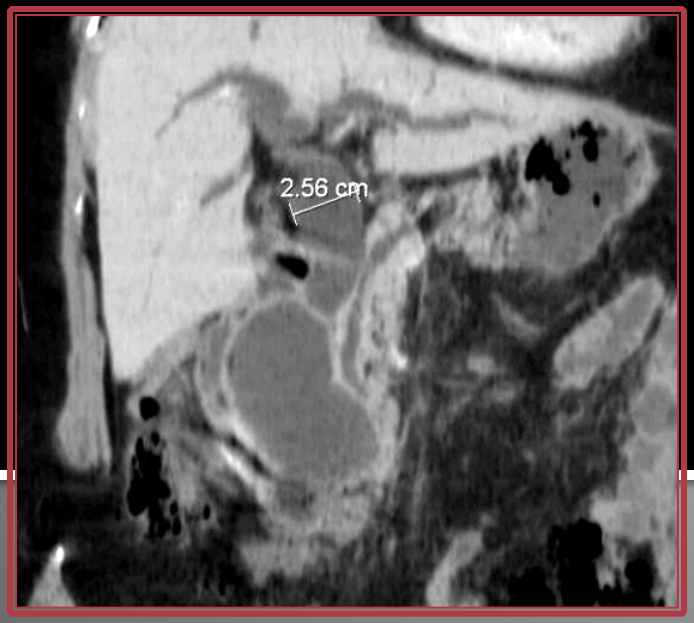


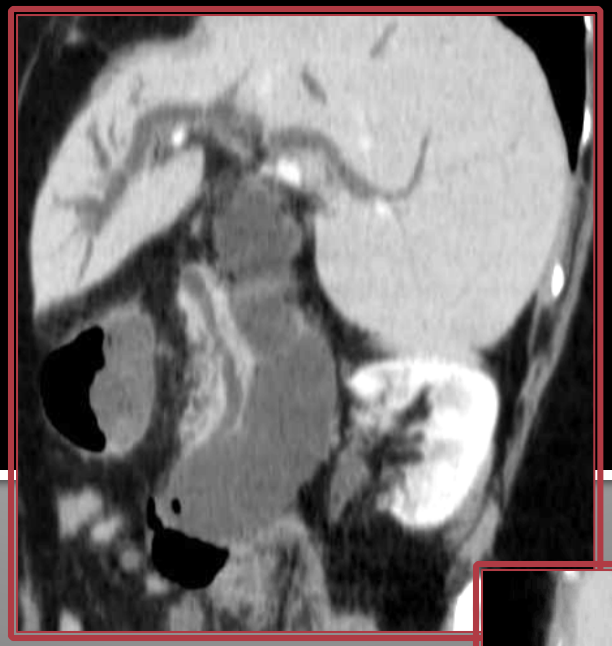
Fig. 16. Microphotograph of the liver infected with *E. multilocularis* showing multiple clustered lesions with central necrosis surrounded by a thin laminated layer (*arrows*) resembling alveoli or honeycomb.

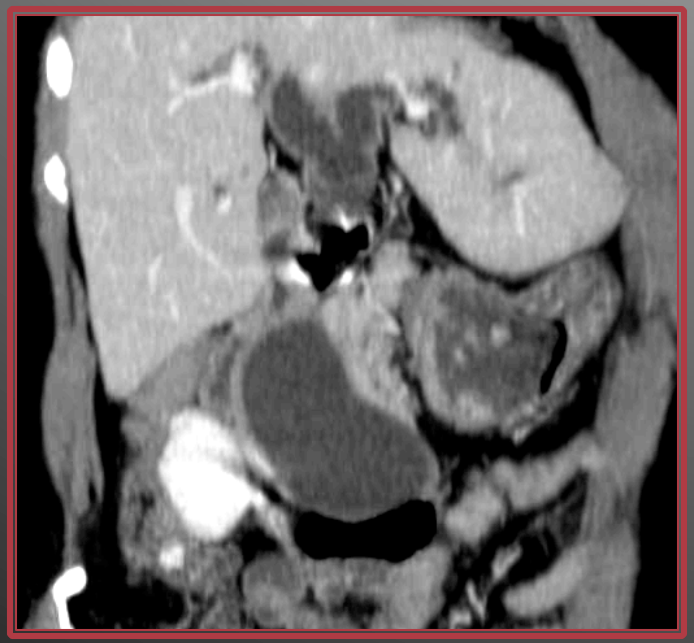
Cas n°7

Femme 54 ans
Bilan avant TNF alpha
Notion de pseudo kyste pancréatique

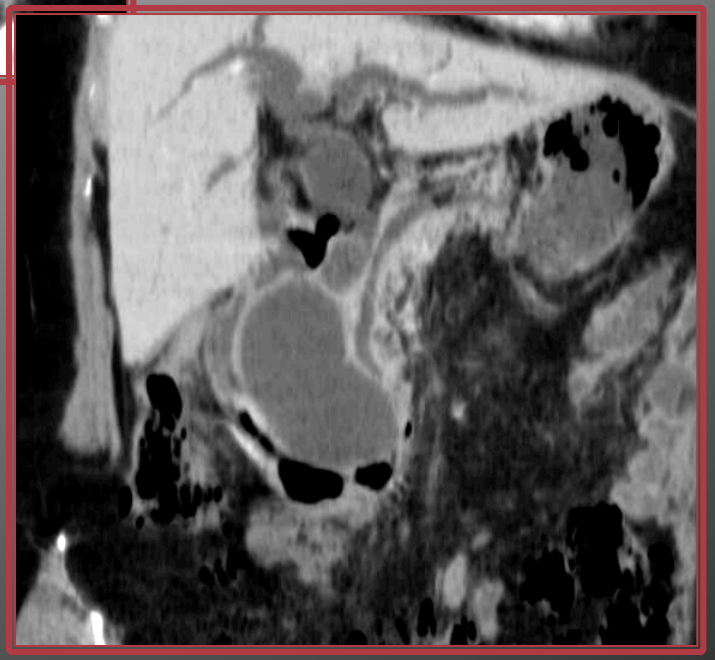




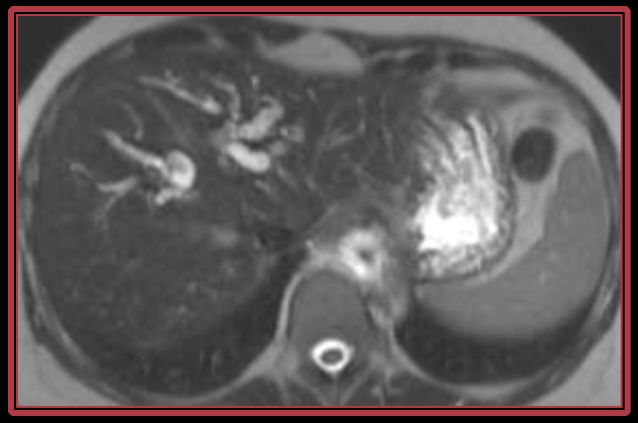


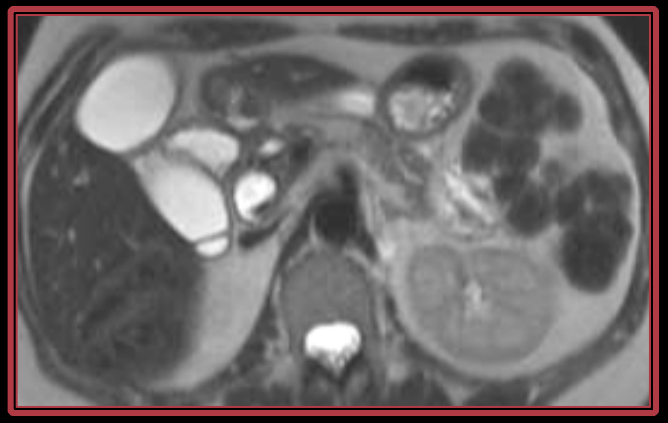


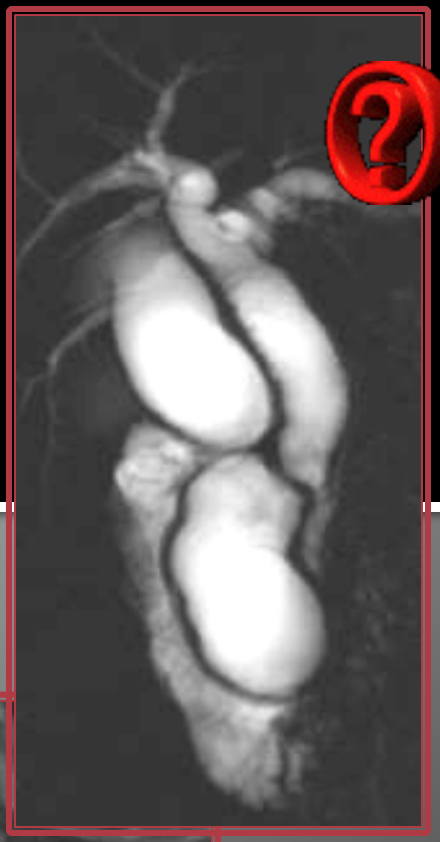
MPR

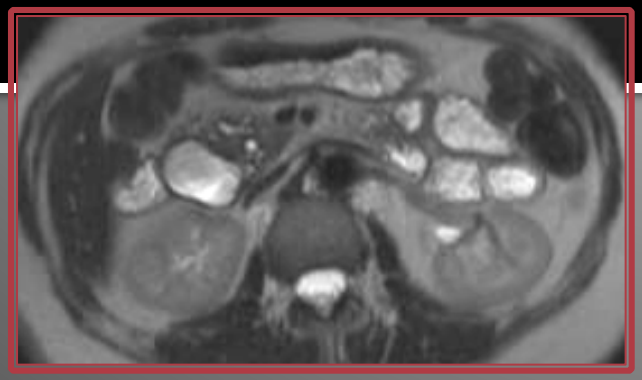


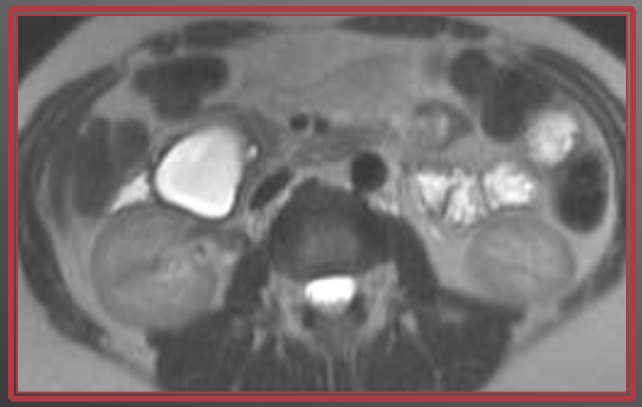
IRM

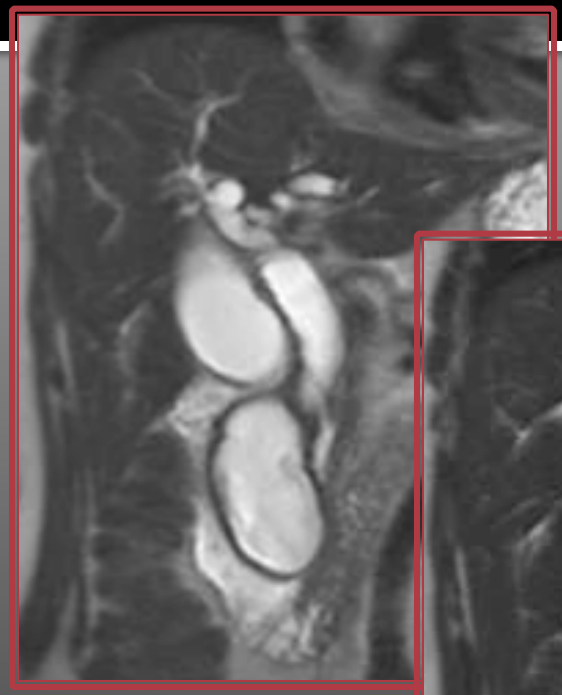


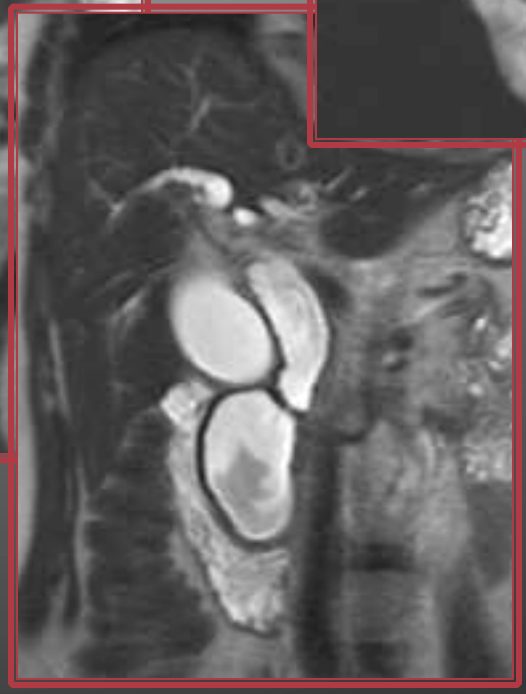






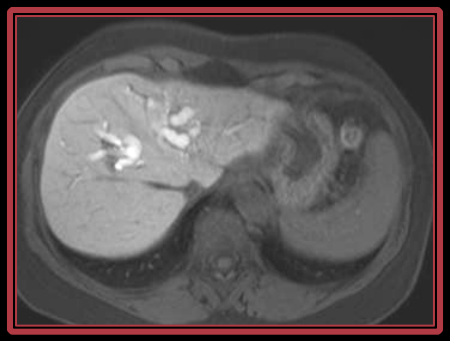
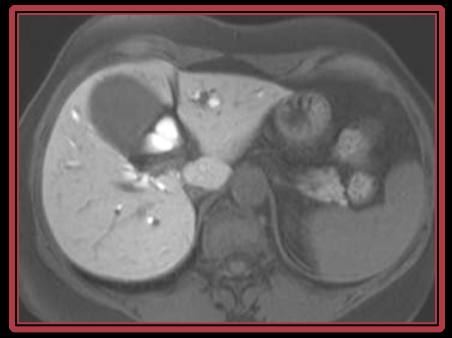
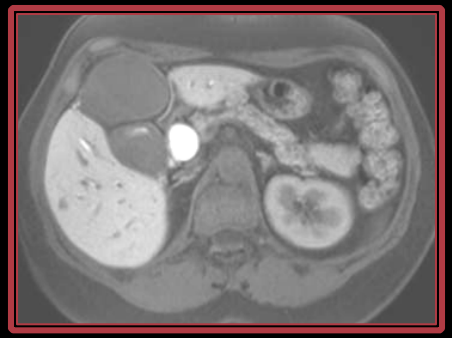
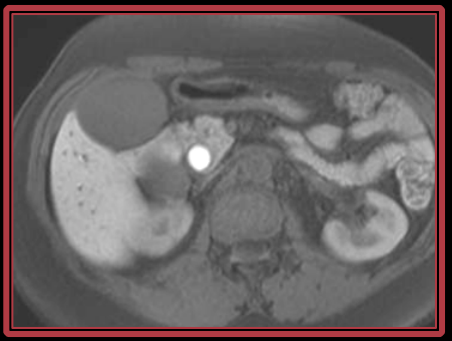
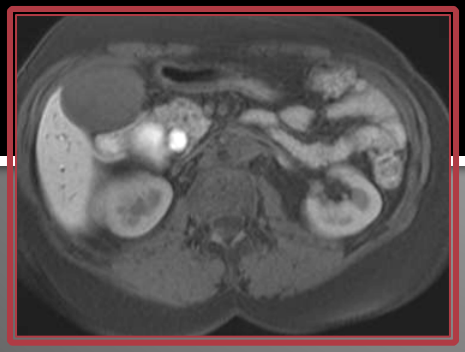
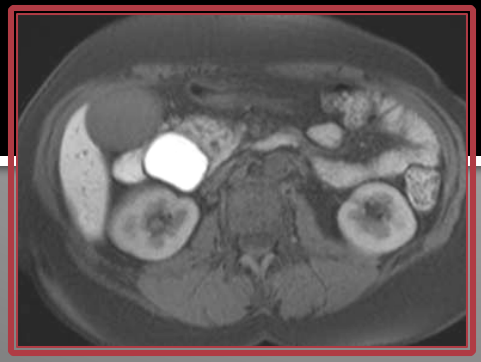
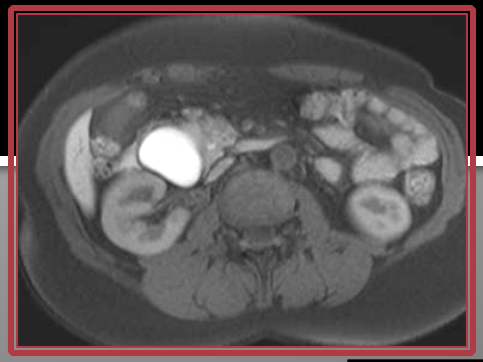
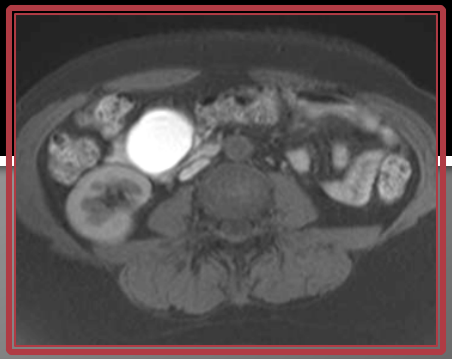




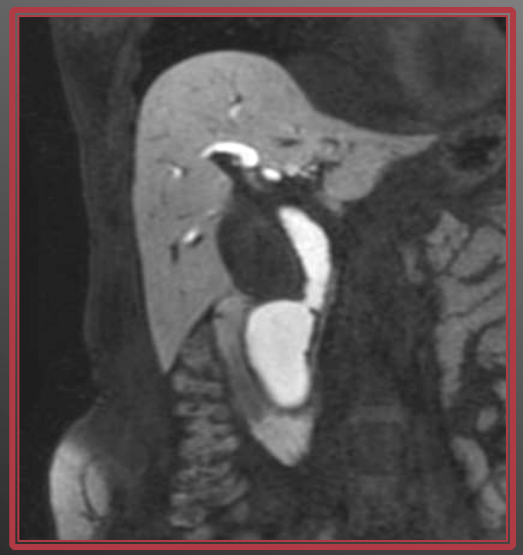
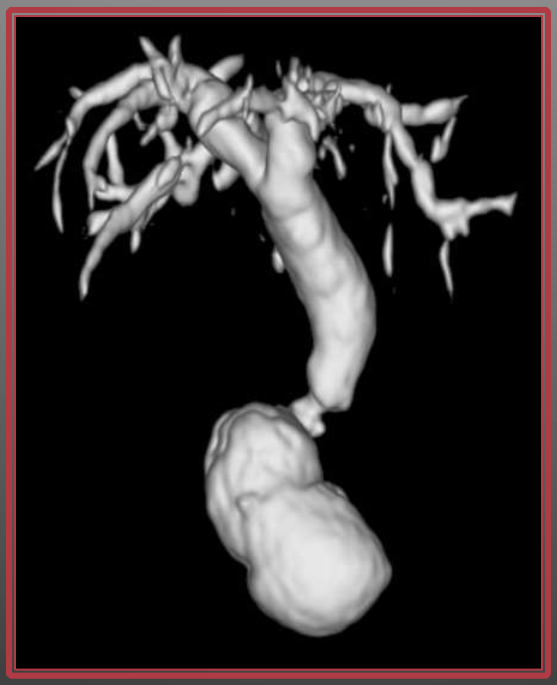
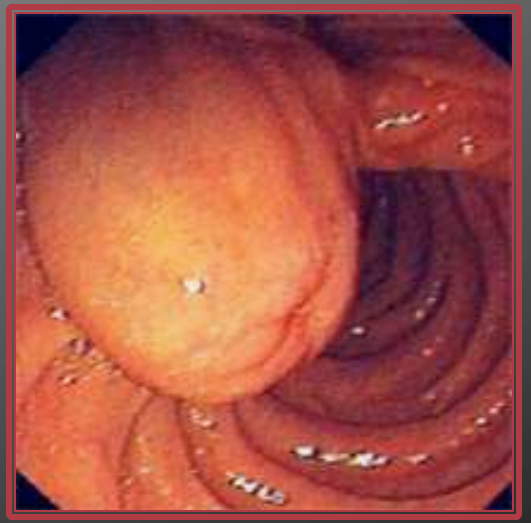


IMAGERIE T2

TESLASCAN

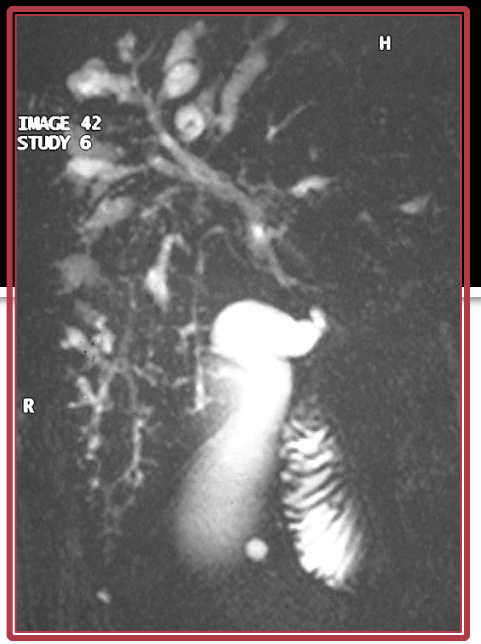
Cholédococèle
kyste du cholédoque

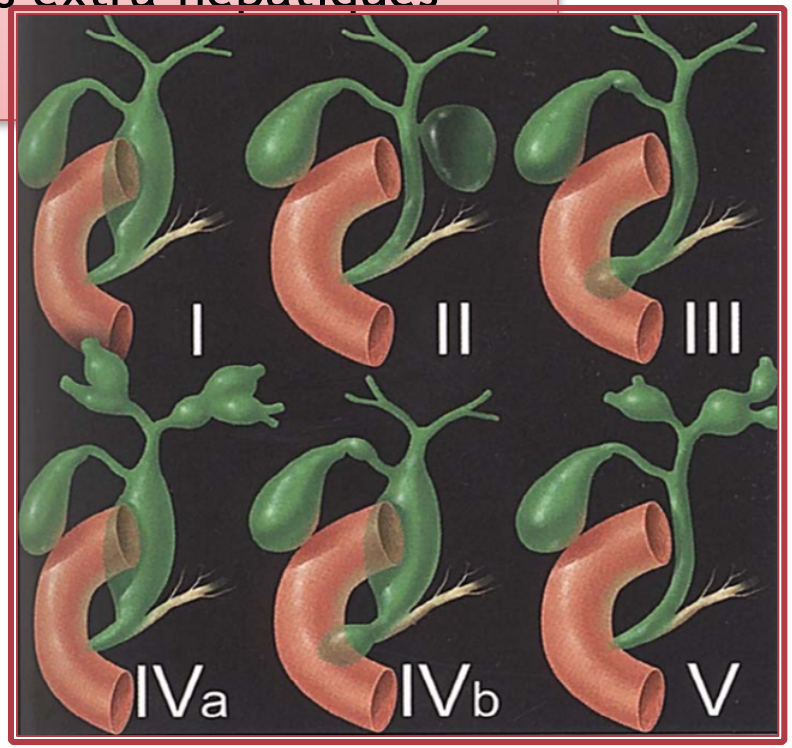
Kyste du cholédoque

- **Définition:**
  - Ectasie congénitale du cholédoque +/- voies biliaires
  - Dysplasie pré-maligne : risque de cholangiocarcinome
- **Etiologie:**
  - Anomalie de la jonction entre le cholédoque et le wirsung: long canal commun (longueur normale= 0.2-1 cm) Formes I et IV
  - Problème de pression trop élevée dans le wirsung et défaut du sphincter: reflux enzymatique au niveau du cholédoque: altération épithéliale, faiblesse et dilatation pariétale
- **Complications:**
  - lithiase, cholangite, pancréatite
  - rupture, péritonite biliaire, abcès, hémorragie
  - dégénérescence maligne: cholangiocarcinome x 20
- **Traitement:**
  - chirurgie: excision du kyste, hépatectomie selon extension et possibilité, hépatico-jéjunostomie par une anse en Y

Classification de Todani

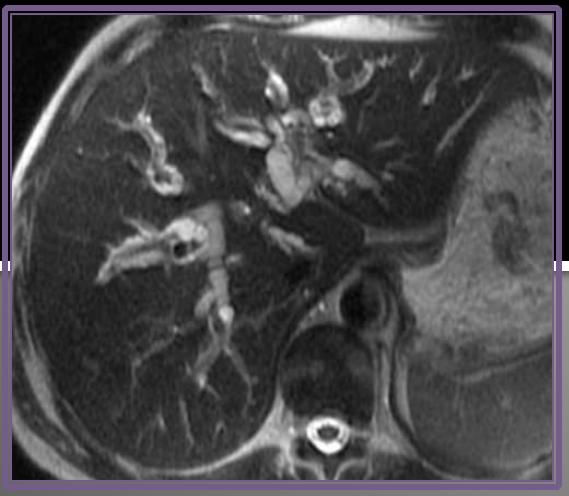


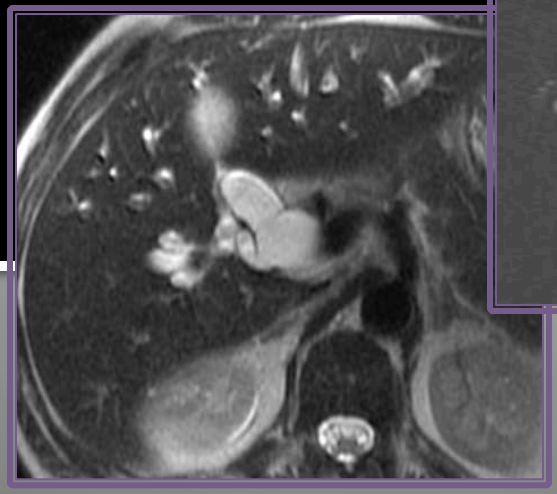
- Type I : ectasie fusiforme du cholédoque
- Type II : diverticule cholédocien sacciforme
- Type III : cholédococèle intra-murale duodénale
- Type IV a : K. cholédoque + ectasies intra-hépatiques
  IV b : multiples kystes extra-hépatiques
- Type V : Maladie de Caroli

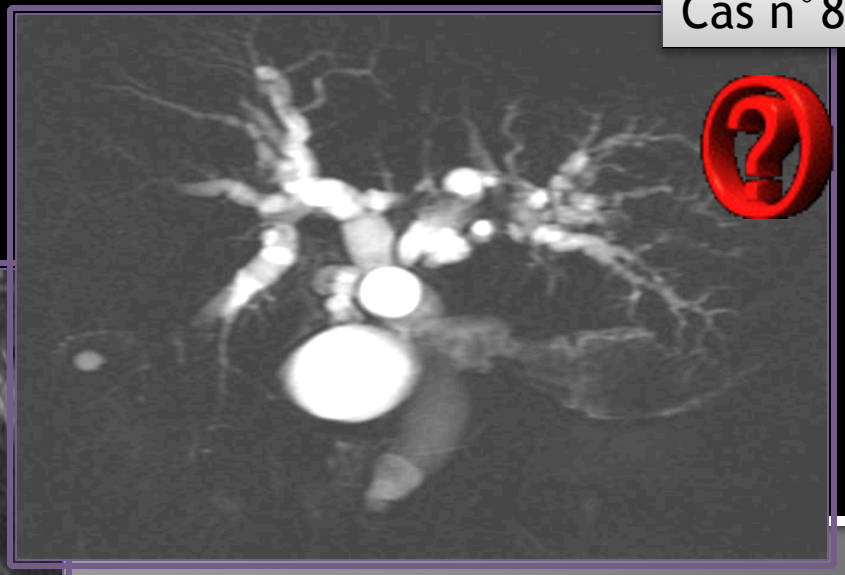


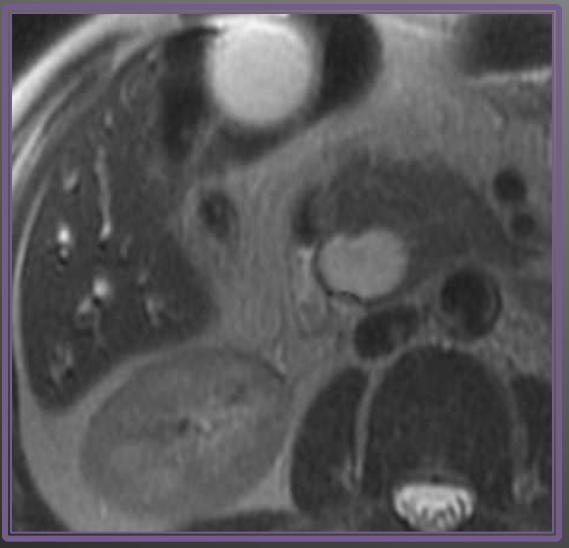
Cas n°8

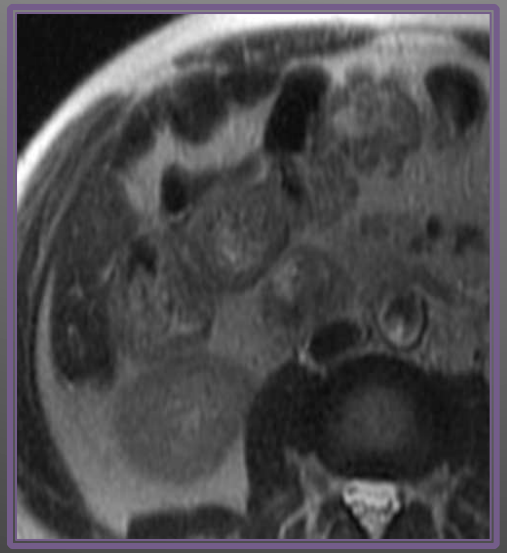
Homme 60 ans
Cholestase

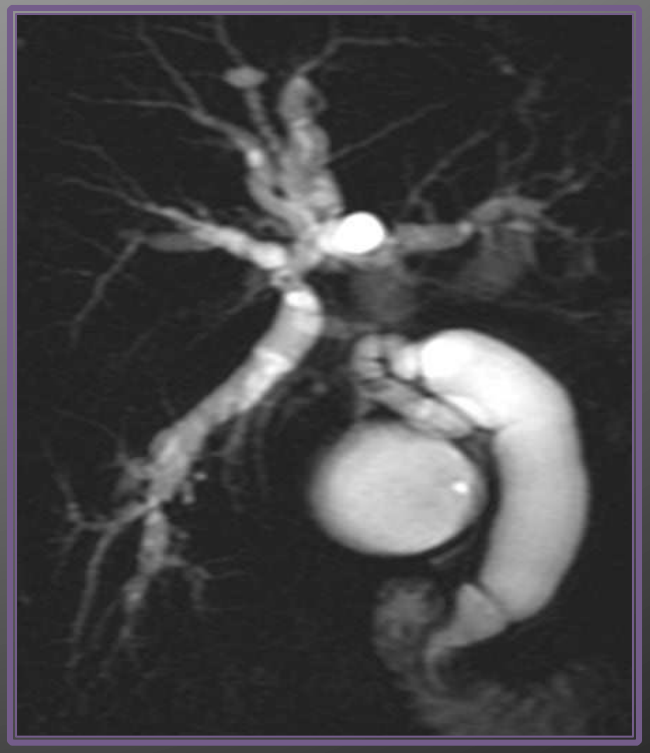


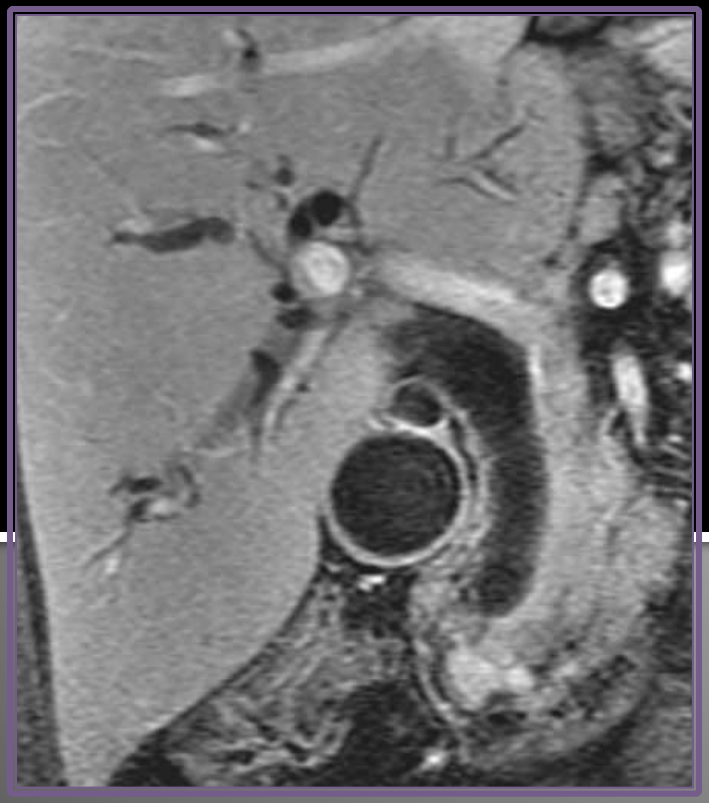


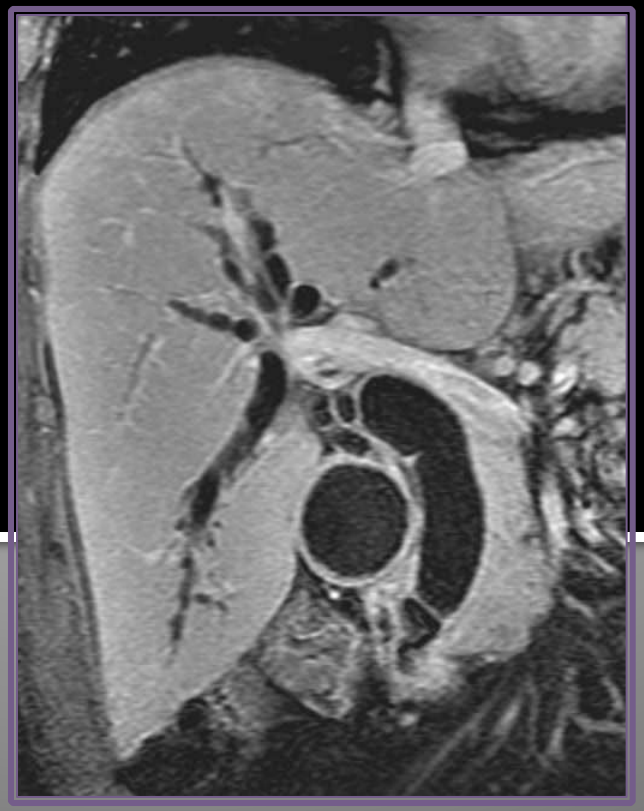


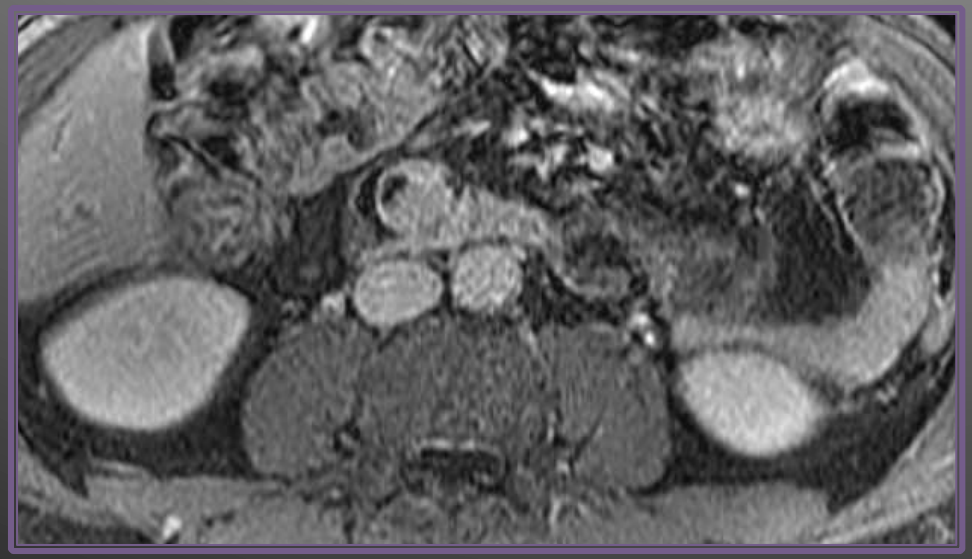










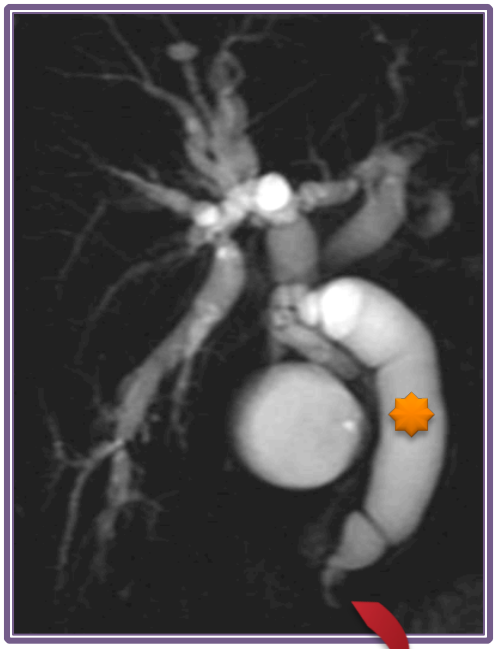


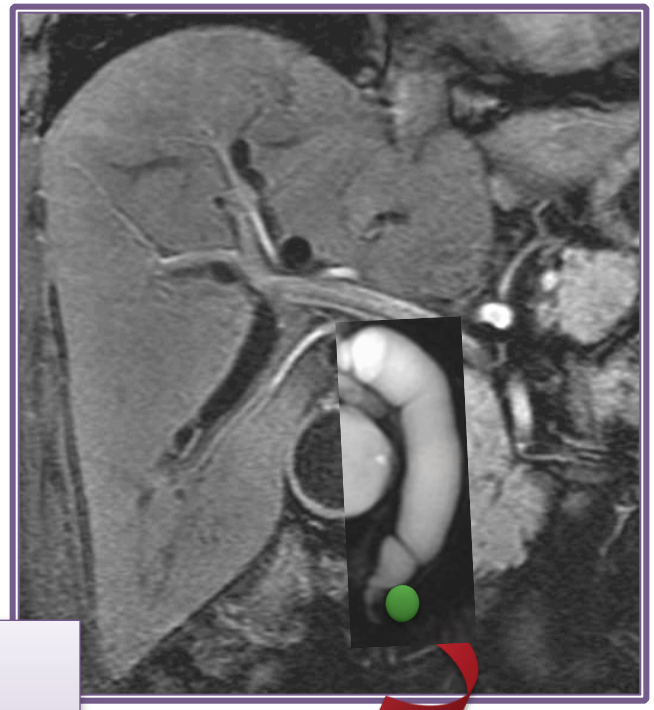
AMPULLOME

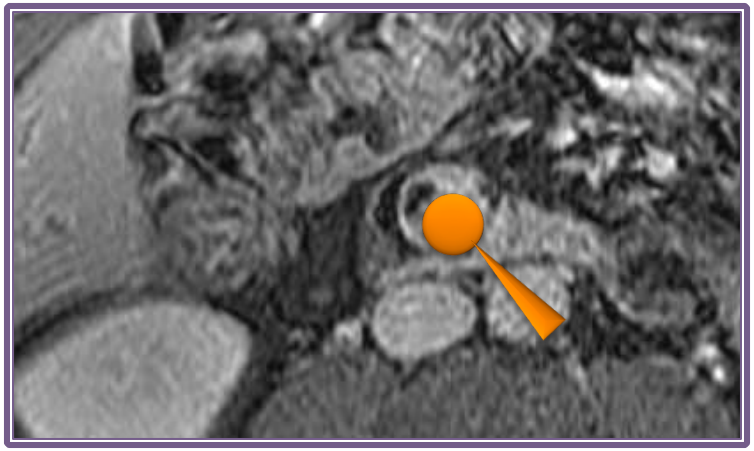
AMPULLOME

Adénocarcinome ampullaire, d'origine biliaire, pancréatique ou duodénale

Petite masse de la papille, excentrée.
Sténose irrégulière de la VBP.





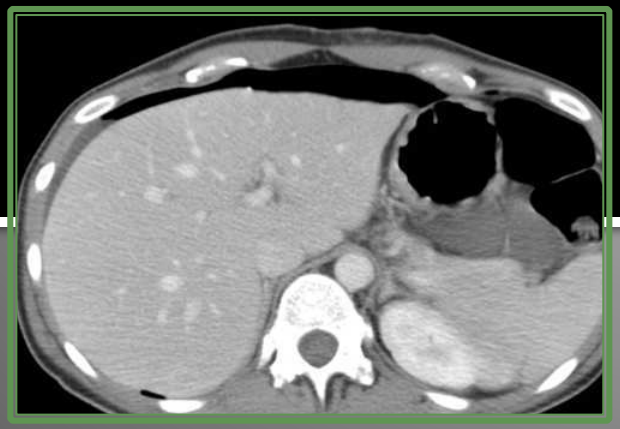
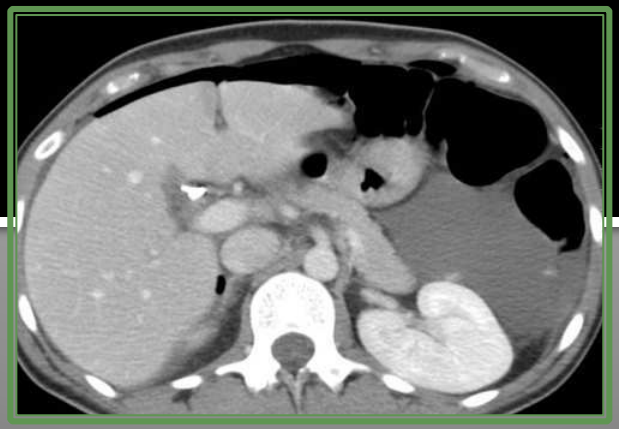
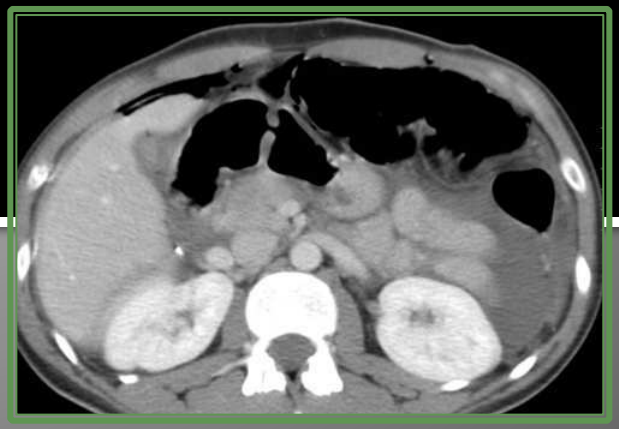


Dilatation de la VBP.
Sténose excentrée
Irrégulière

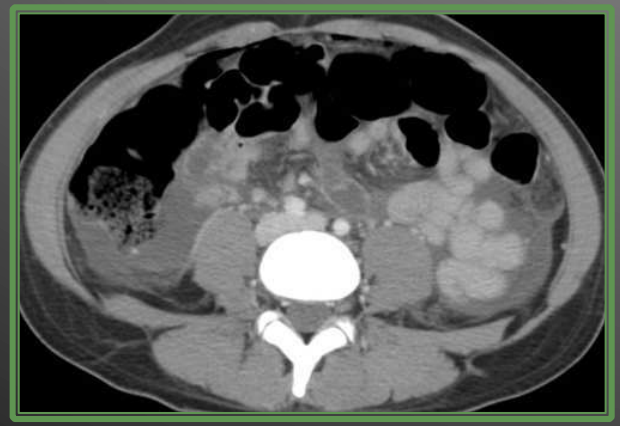
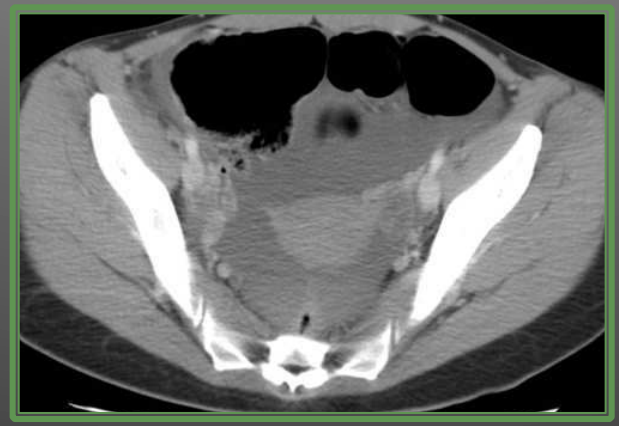
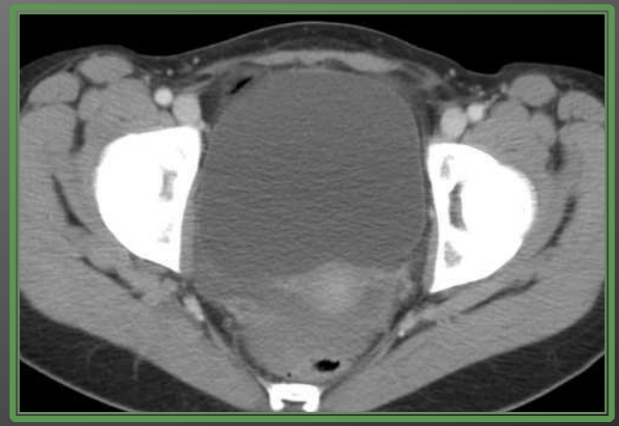
+++ LÉSION MALIGNE

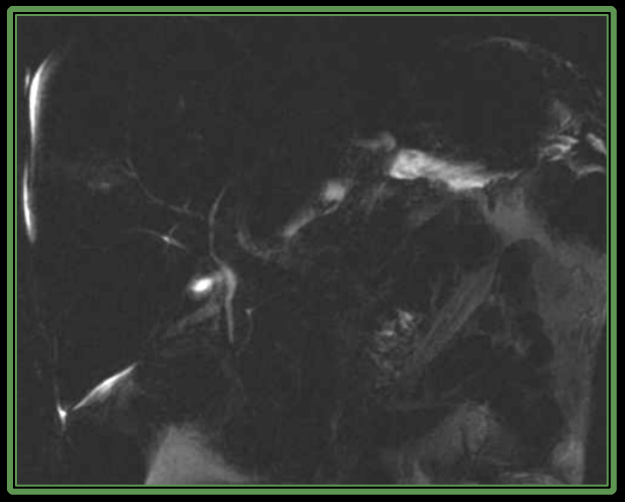
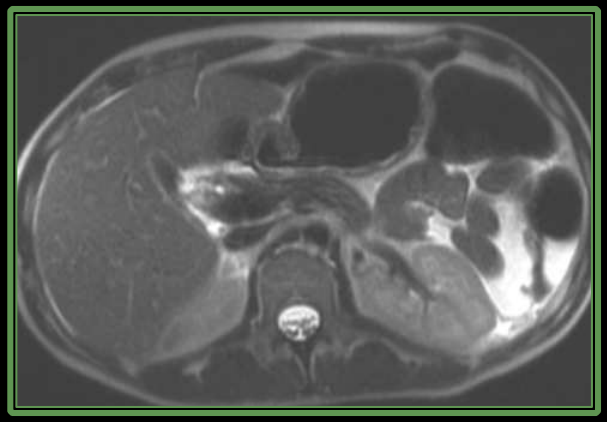
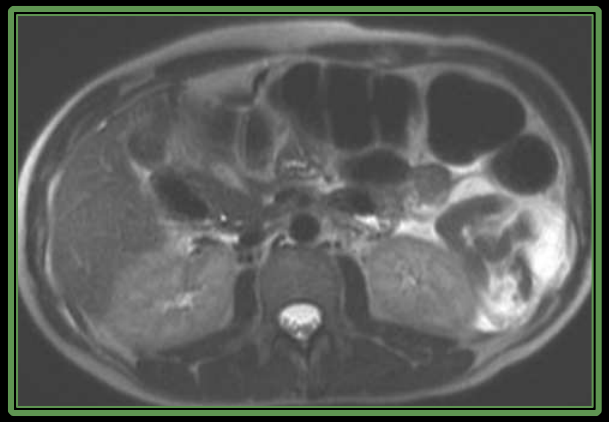
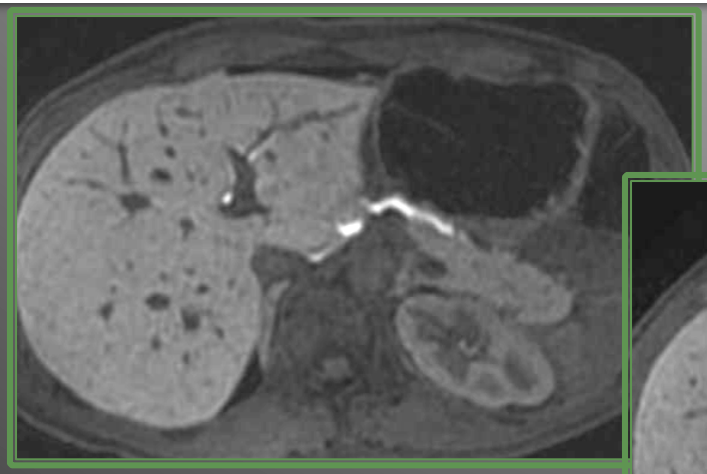
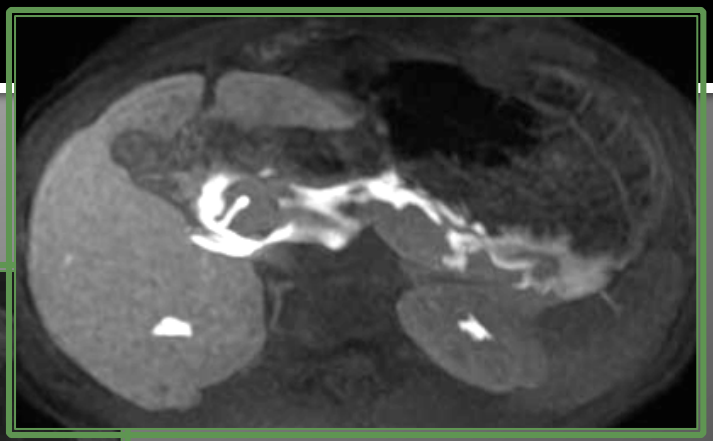
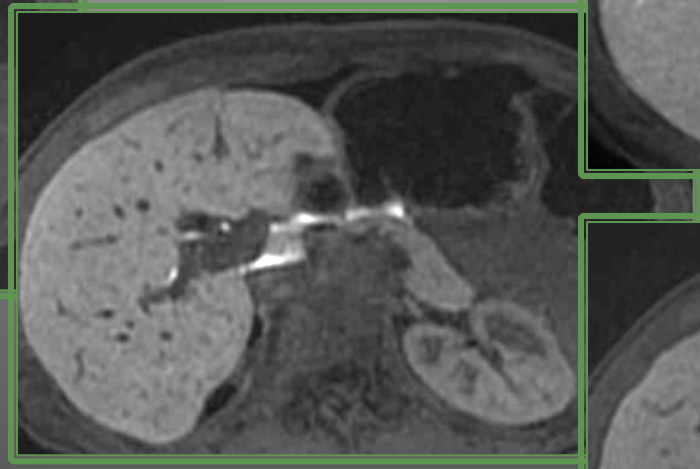
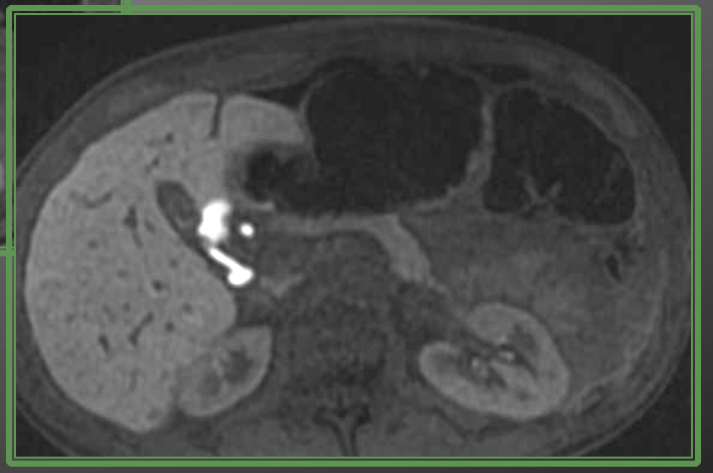
Cas n°9

Femme 32 ans
Douleurs abdo post cholécystectomie J2

Suspicion de fuite biliaire
Moyen simple de confirmer l' hypothèse ?

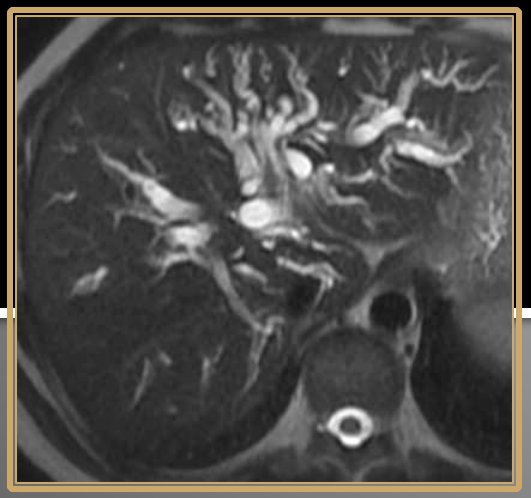




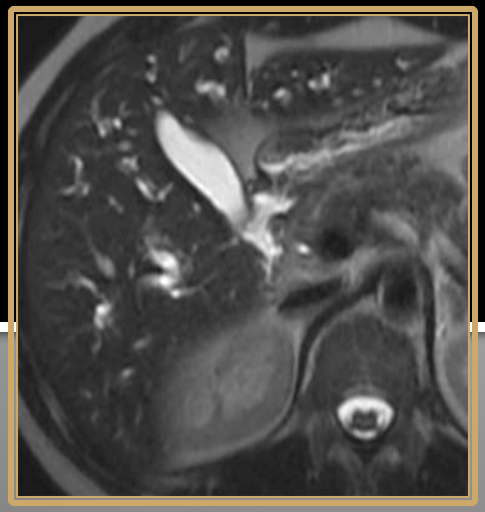








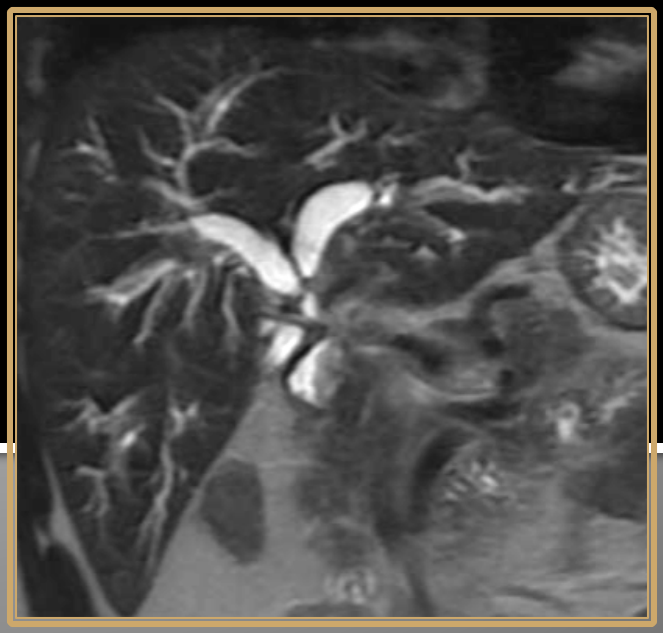

CHOLÉPÉRITOINE

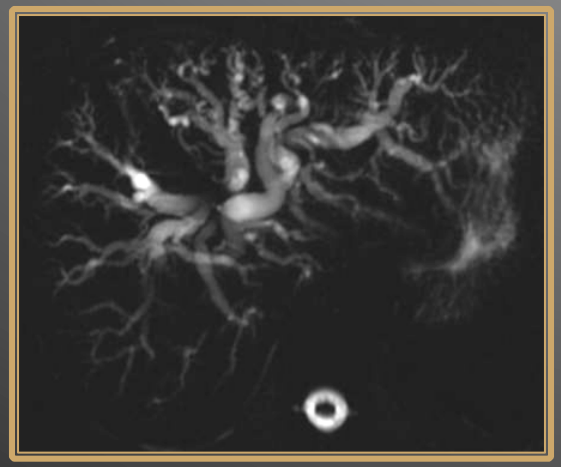
Cas n°10

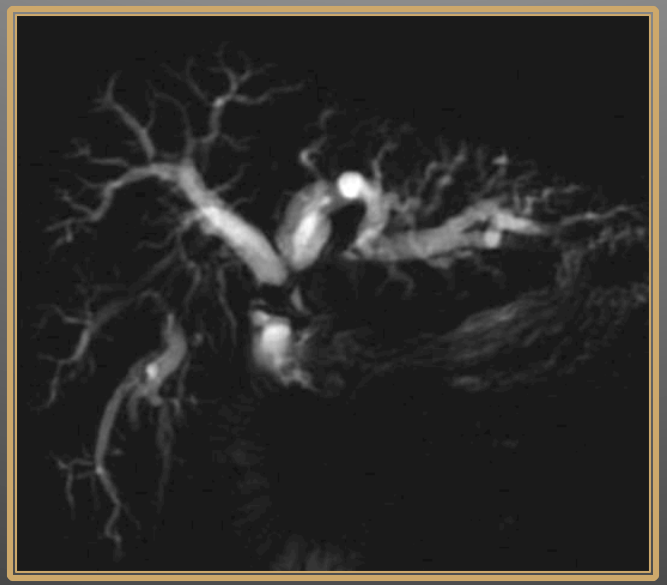
Jeune homme 35 ans
Ictère fluctuant (bili 50 -80)

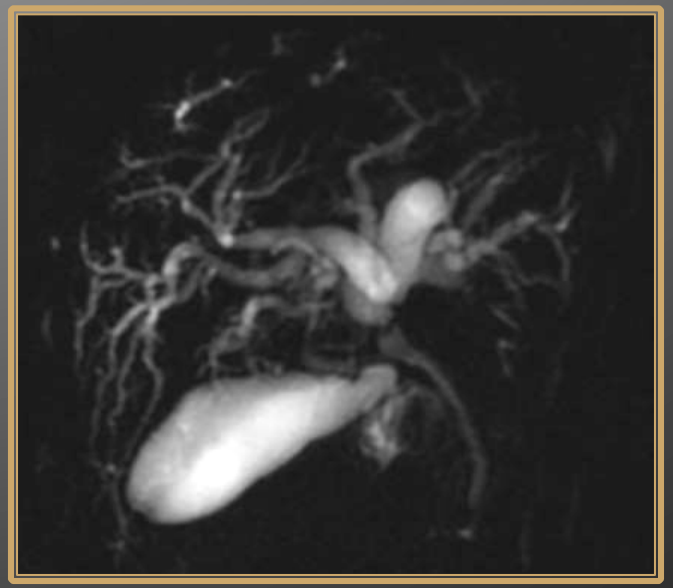


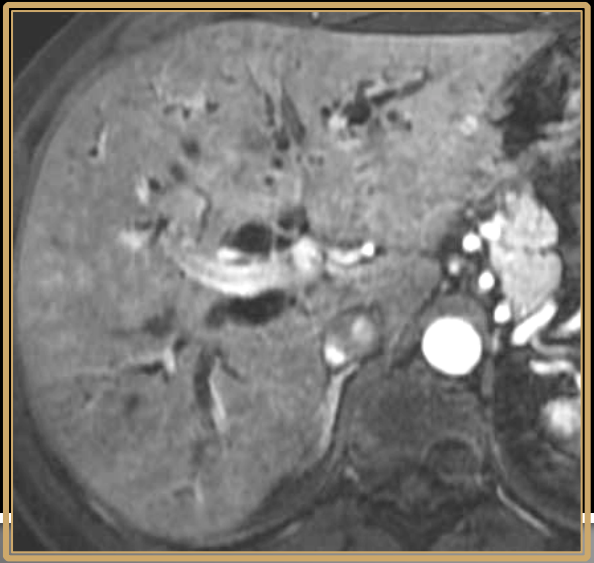
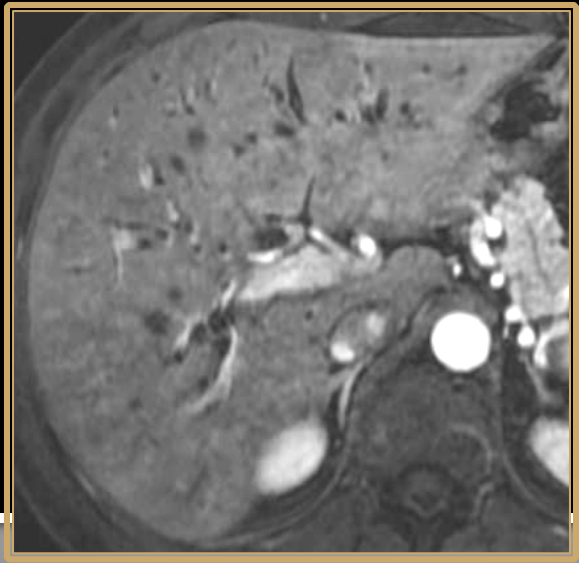
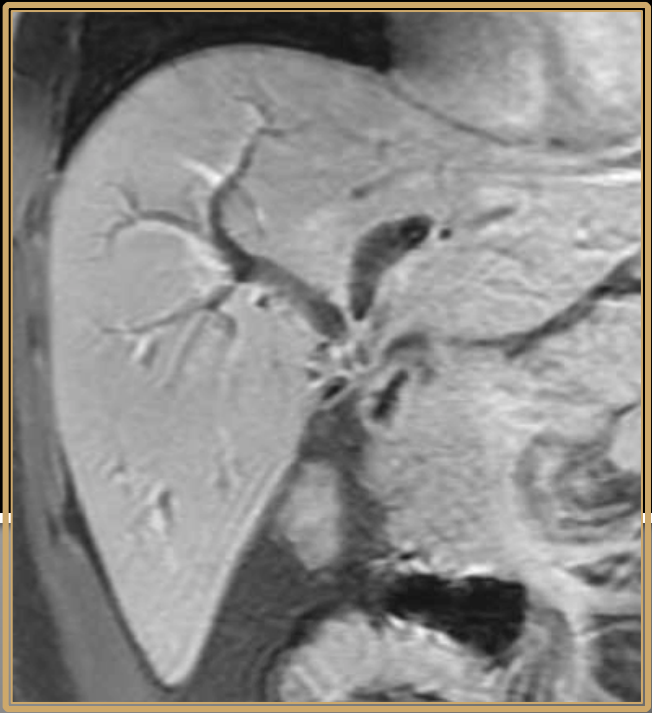
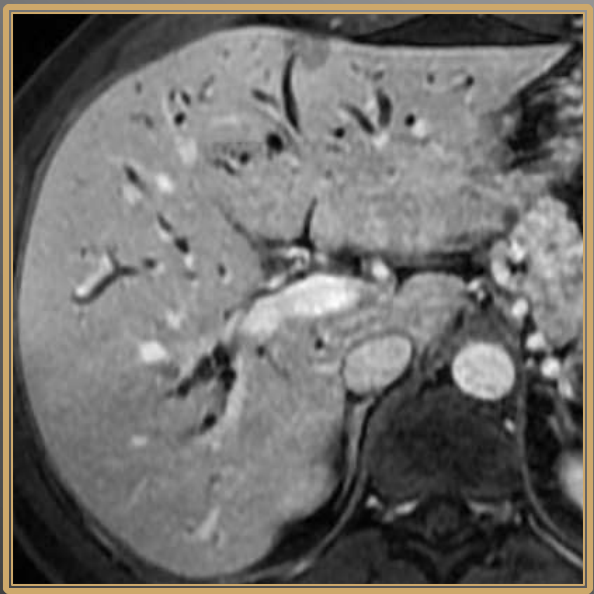
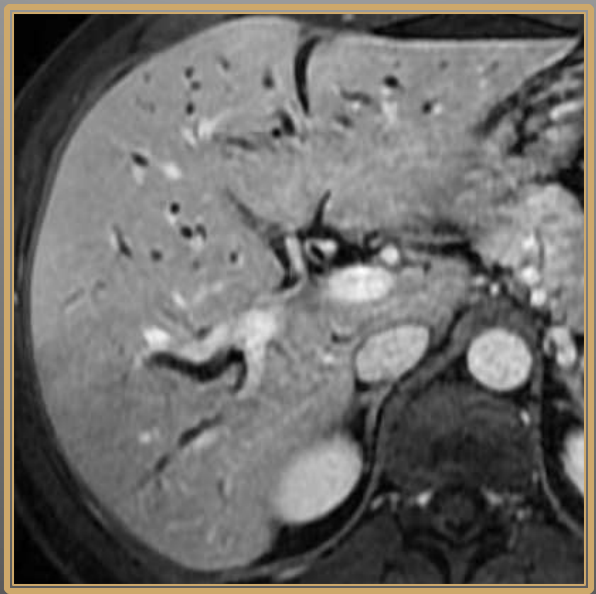










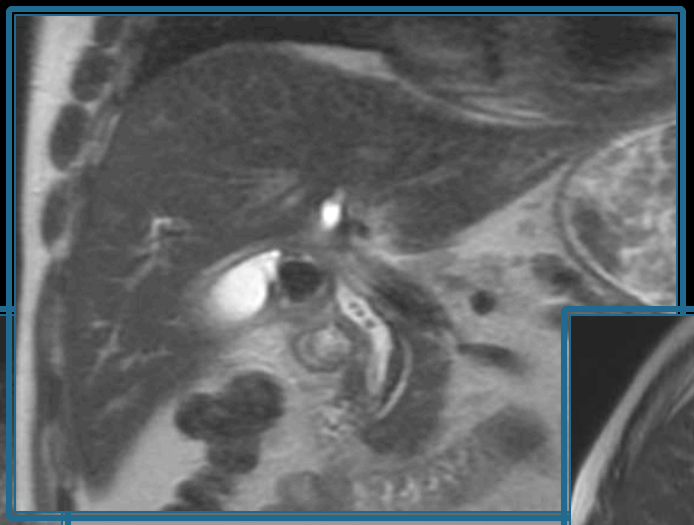
Prise de contraste de la sténose.
Progressive en faveur d' une origine fibreuse.

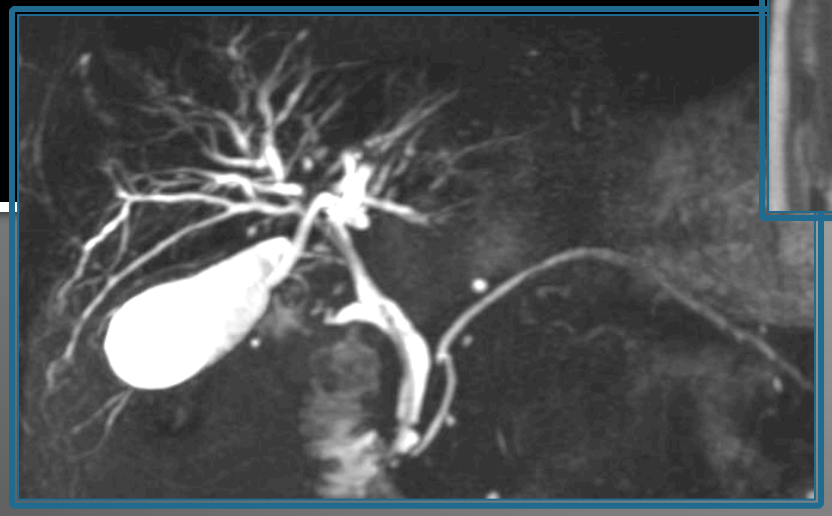
TUMEUR DE KLATSKIN II ?

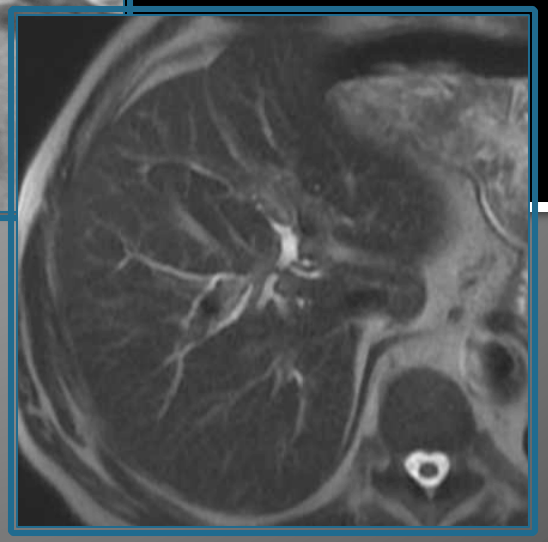
CHOLANGITE !

Cas n°11

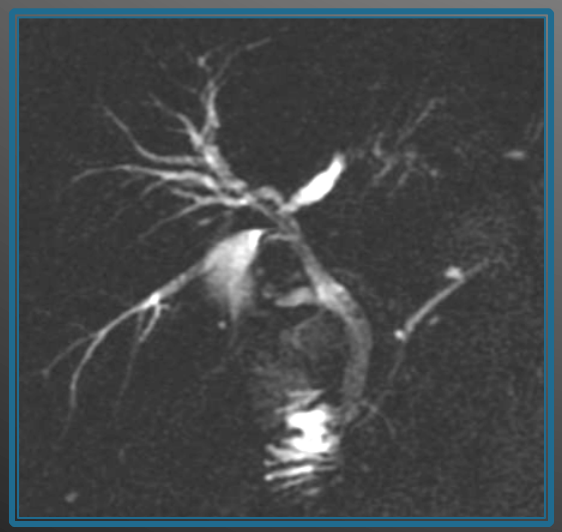
Homme 61 ans
Douleurs HCD
Cholestase

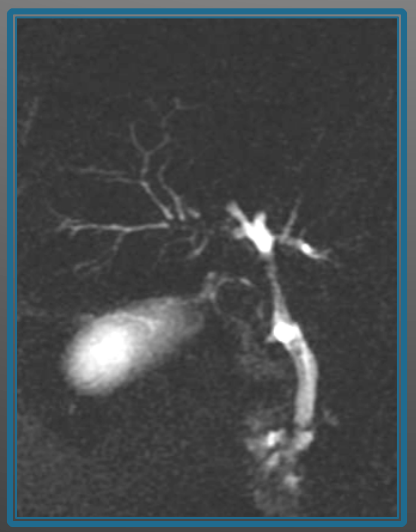


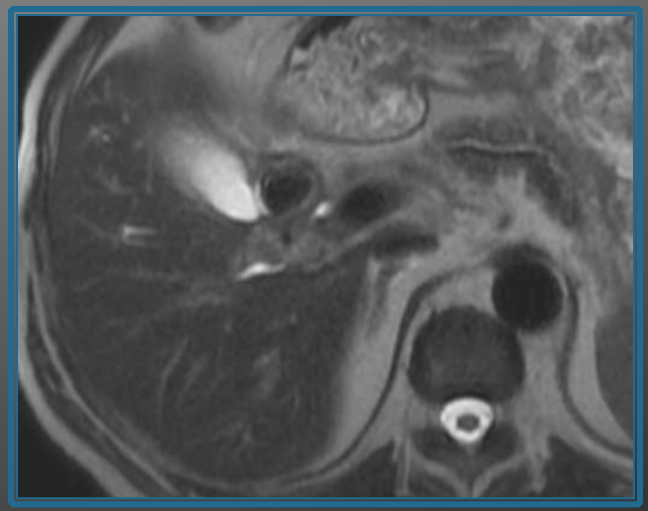


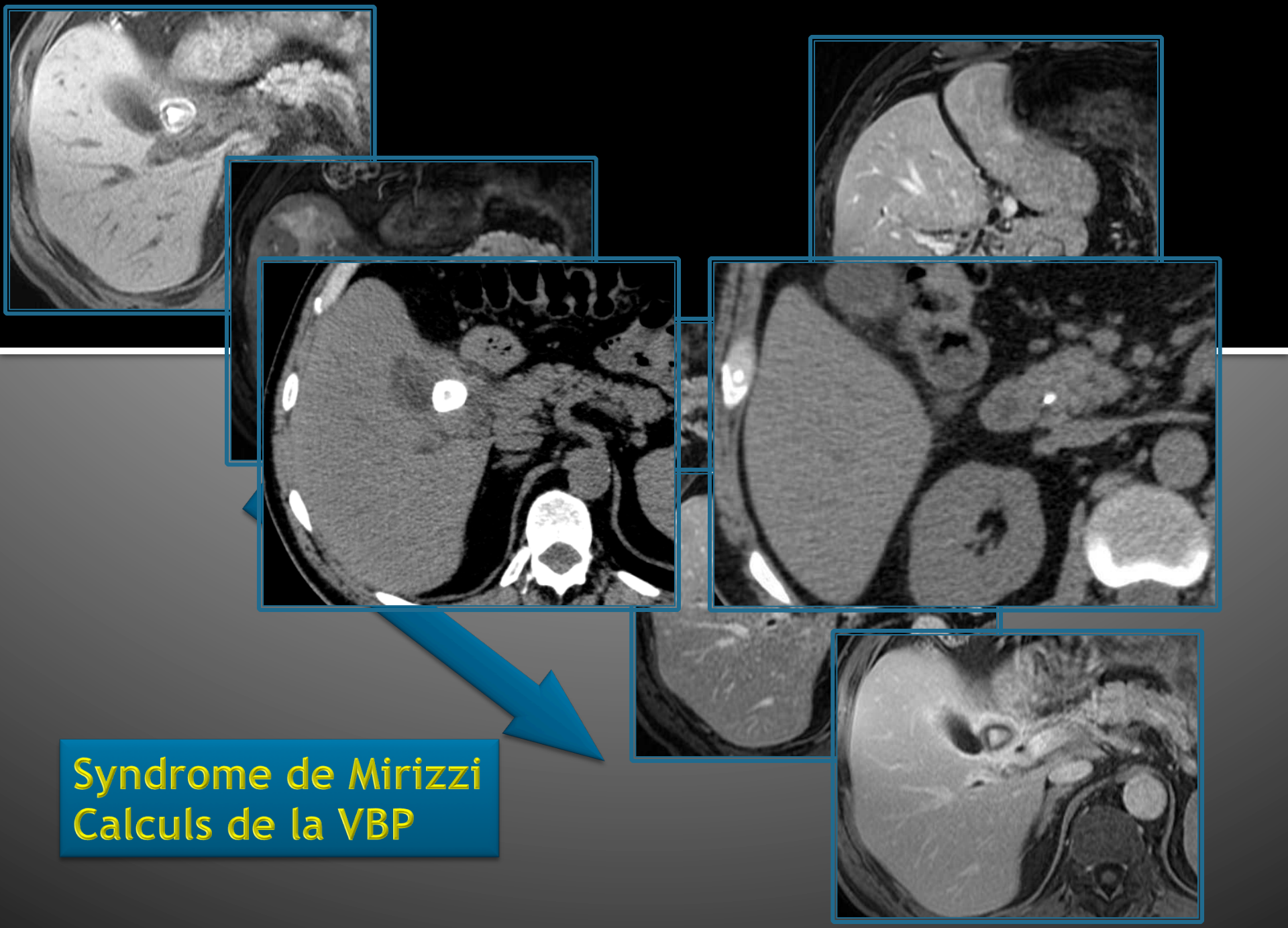


Imagerie T2





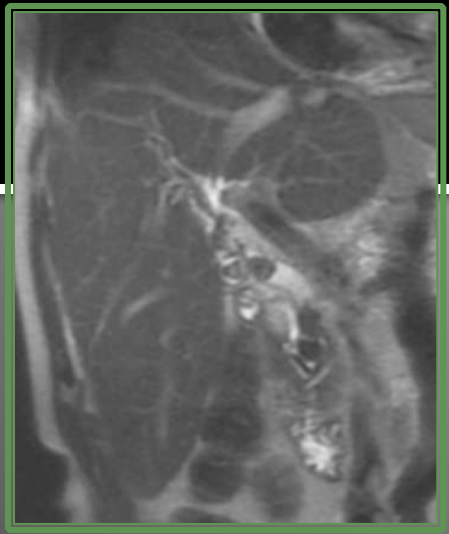


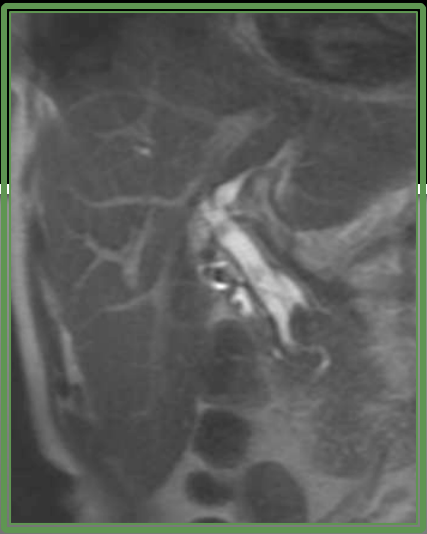


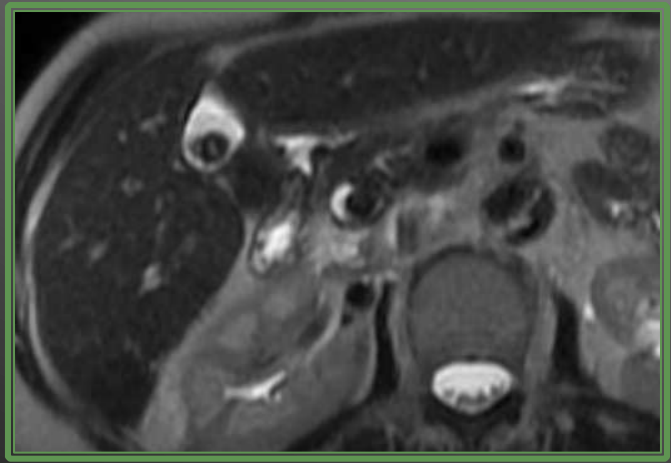
Syndrome de Mirizzi
Calculs de la VBP

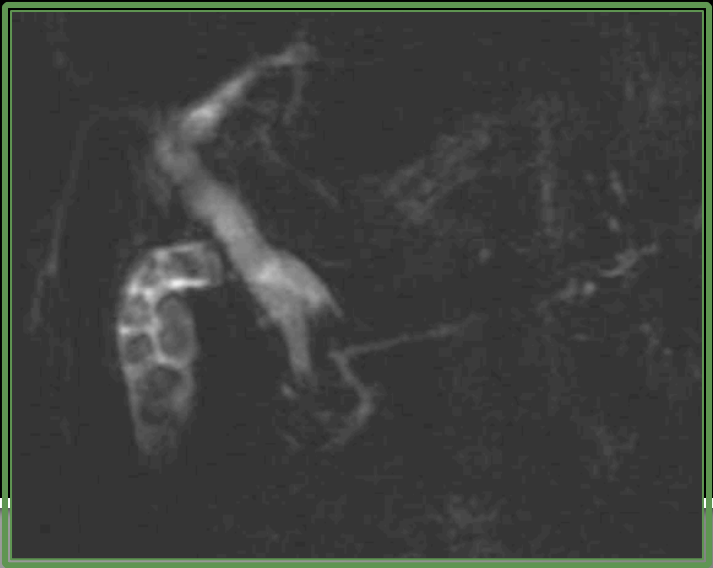
Cas n°12

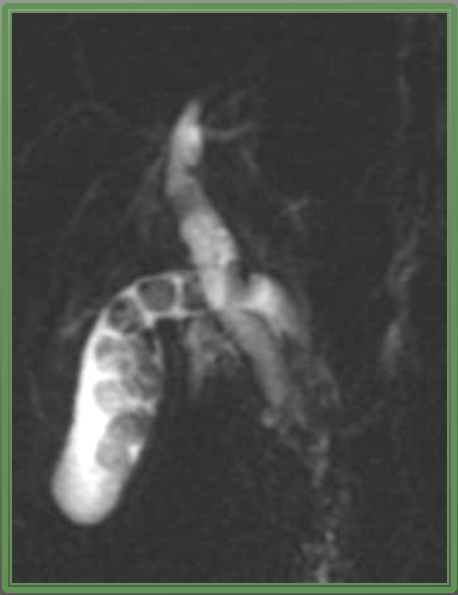
Bilan avant cholecystectomie cholestase

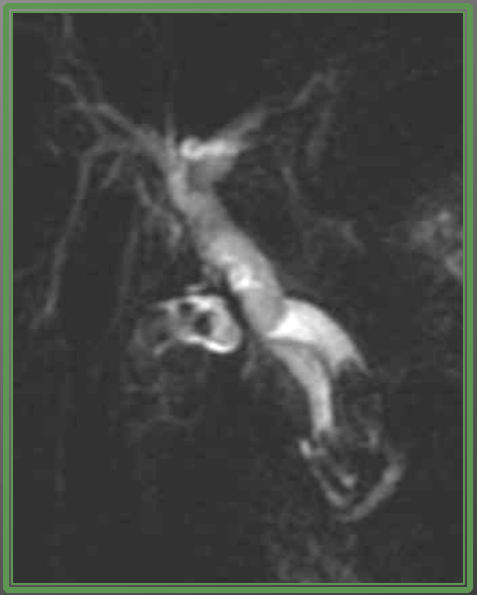






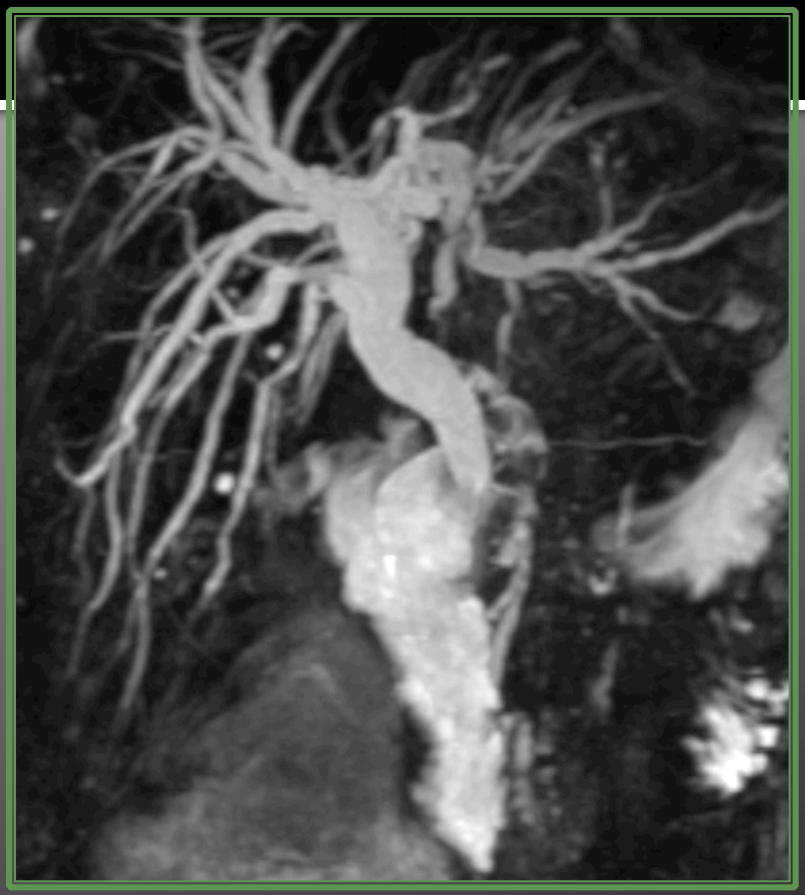






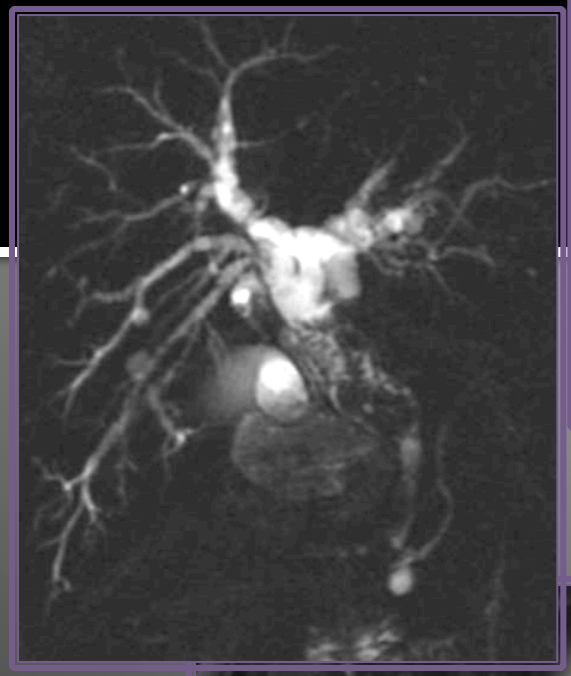
EMPIERREMENT DU CYSTIQUE
INSERTION BASSE MÉDIANE

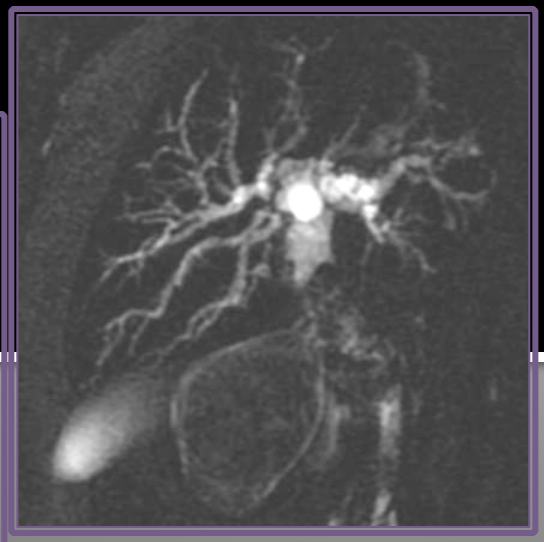
Importance des séquences 3D
ATCD de cholécystectomie
Ictère et dilatation VBP

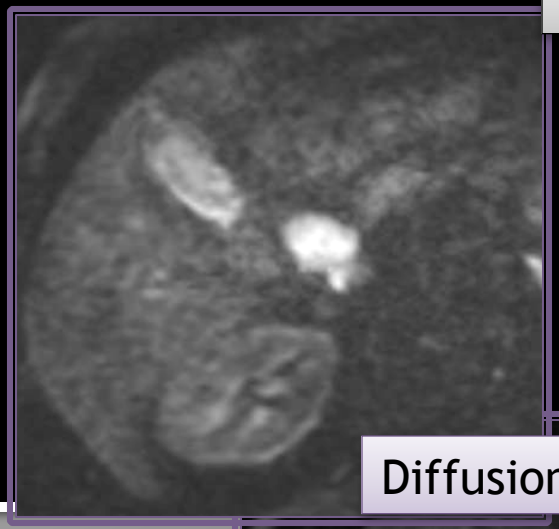


Cas n°13

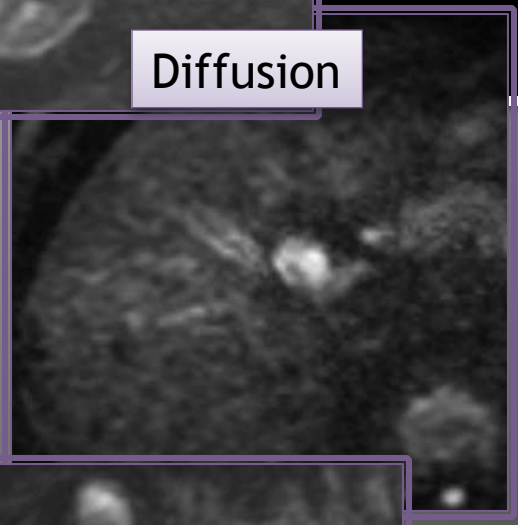
Homme 66 ans
Ictère

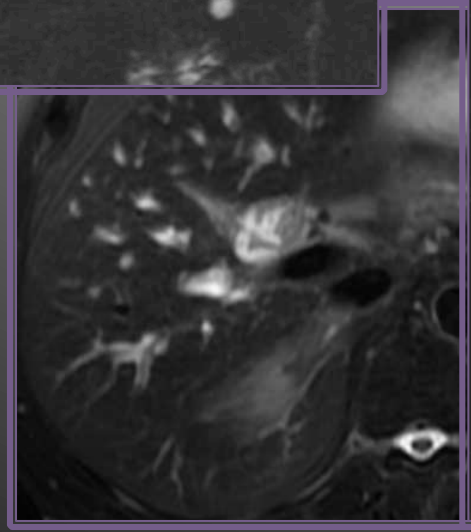


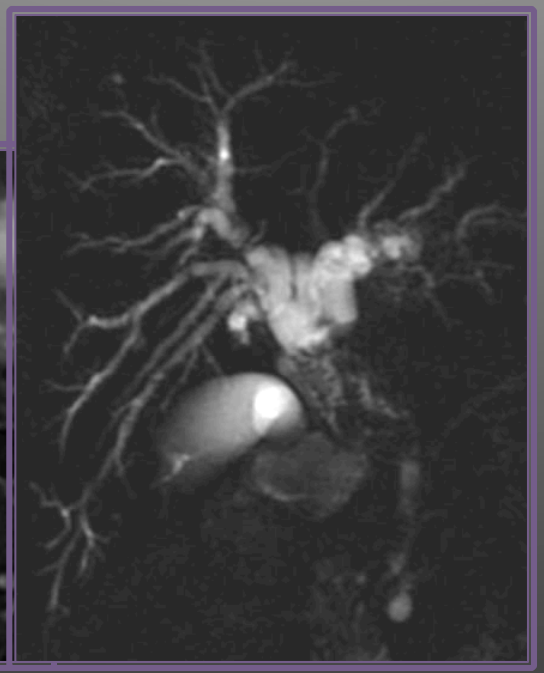


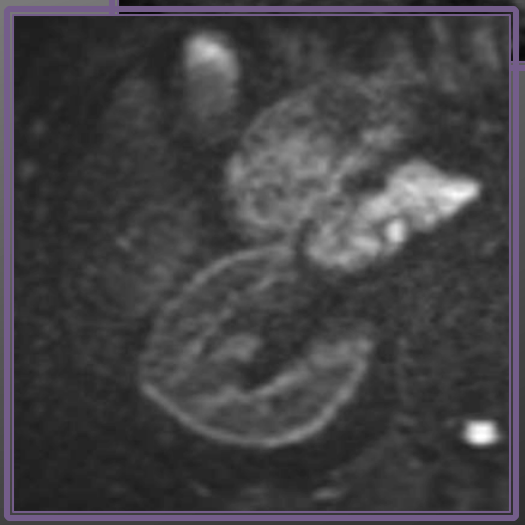


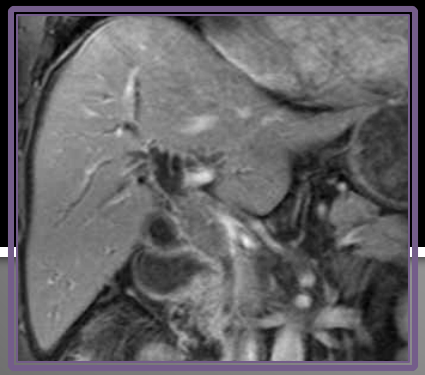
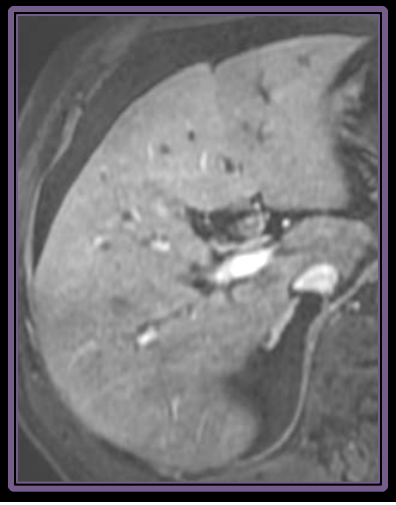
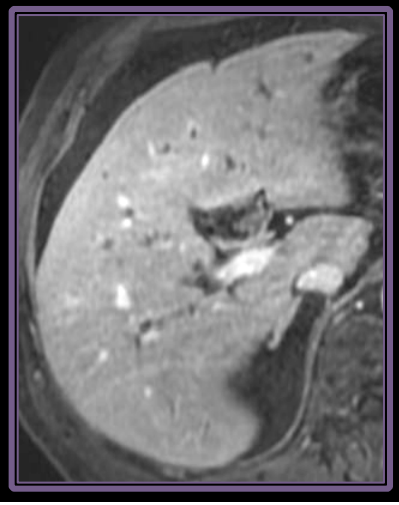
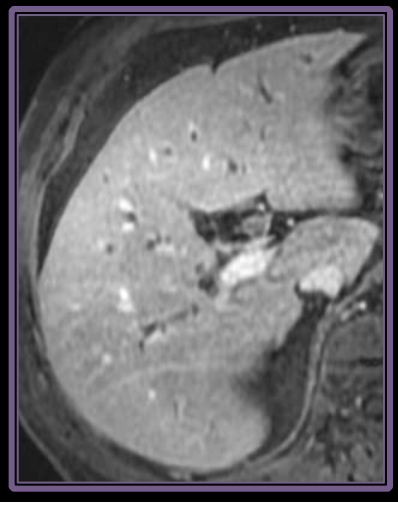
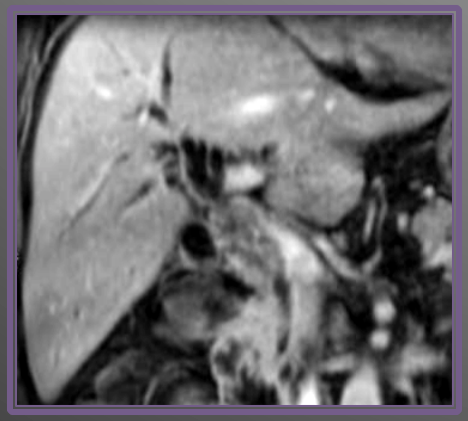
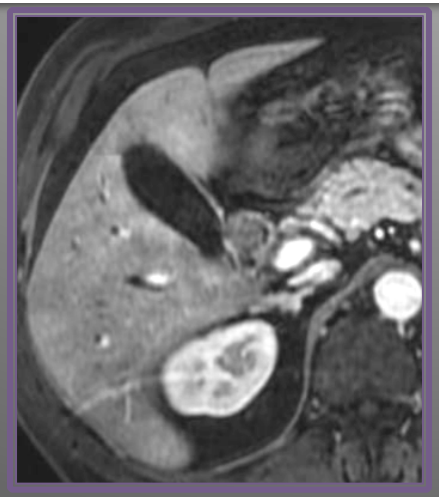
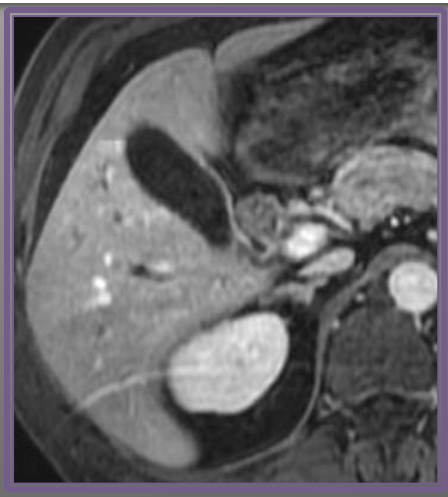
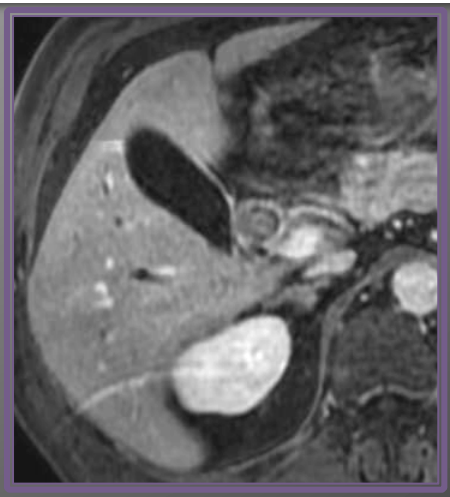
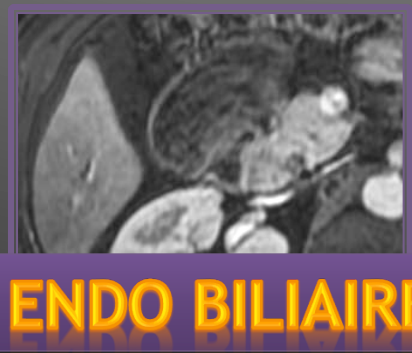
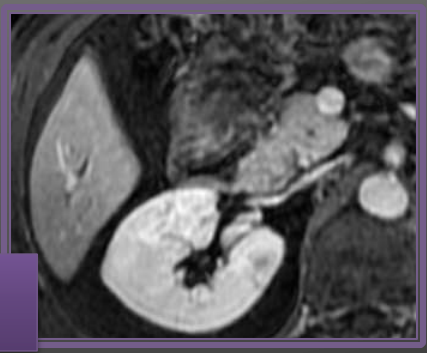
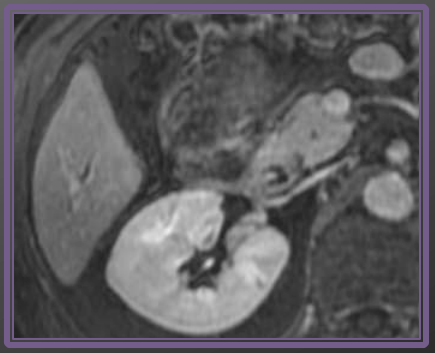
Diffusion









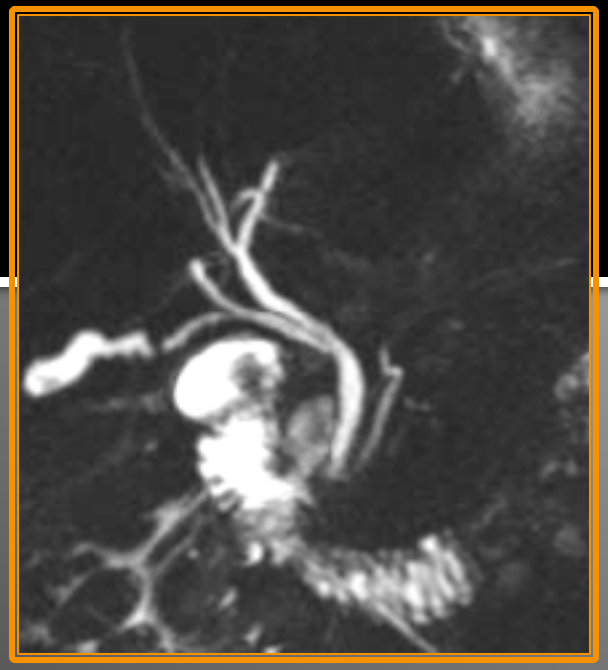












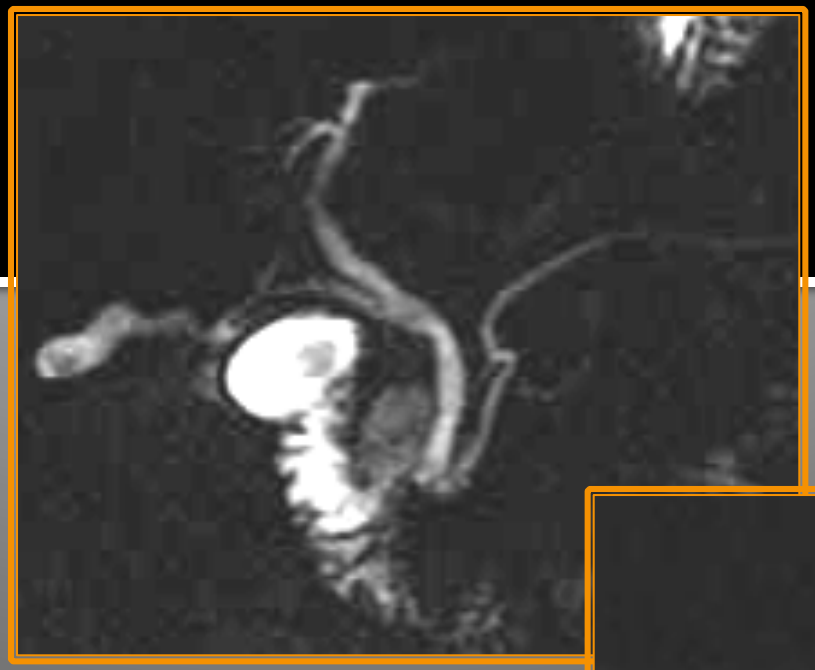
PAPILLOMATOSE ENDO BILIAIRE

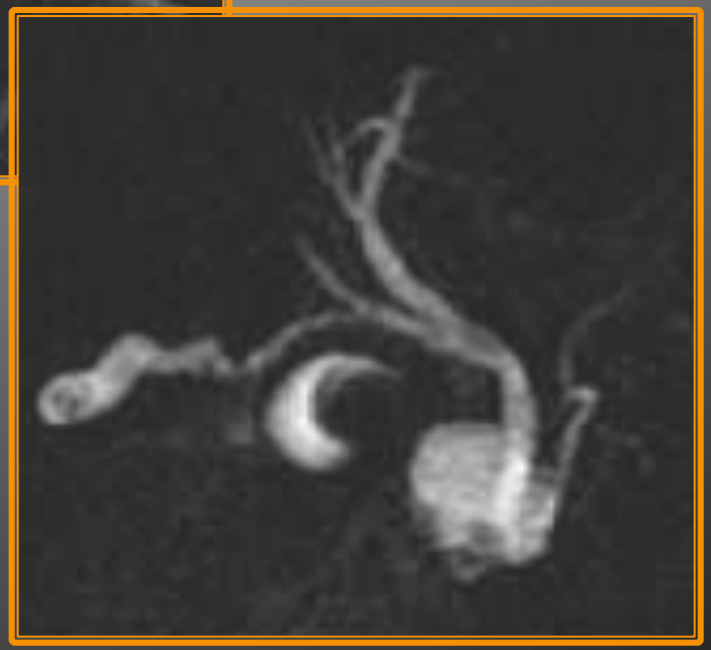
Papillomatose biliaire

- Pathologie rare caractérisée par une prolifération papillaire de l'épithélium des canaux biliaires.
- Dégénère en adénocarcinome dans environ 35% des cas.
- Elle concerne les voies biliaires extra hépatiques dans 58% des cas, les voies biliaires intrahépatiques dans 9% des cas, ou les 2 dans 33% des cas; elle prend son origine dans les canaux les plus centraux et s'étend en périphérie.
- Le diagnostic n'est souvent évoqué qu'après de multiples épisodes d'ictère et d'angiocholite.
- Le seul traitement curateur est la transplantation hépatique.
- Certaines tumeurs produisent de la mucine en grande quantité, ce qui entraîne d'importantes dilatations des voies biliaires intra hépatiques, segmentaires ou diffuses. La stase biliaire peut favoriser la formation de calculs.

Bilan avant cholecystectomie LVBP ?

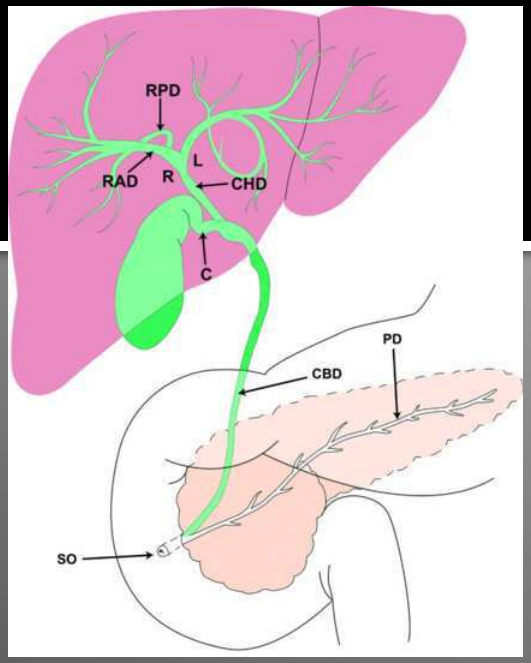


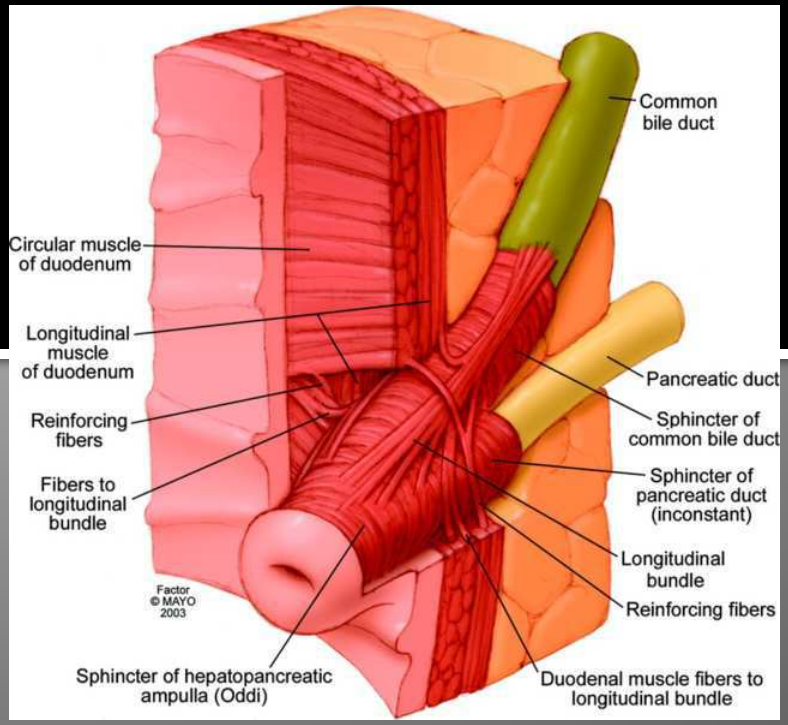




INSERTION ECTOPIQUE DE LA VOIE BILIAIRE DROITE DANS LE CANAL CYSTIQUE

Variante Anatomique



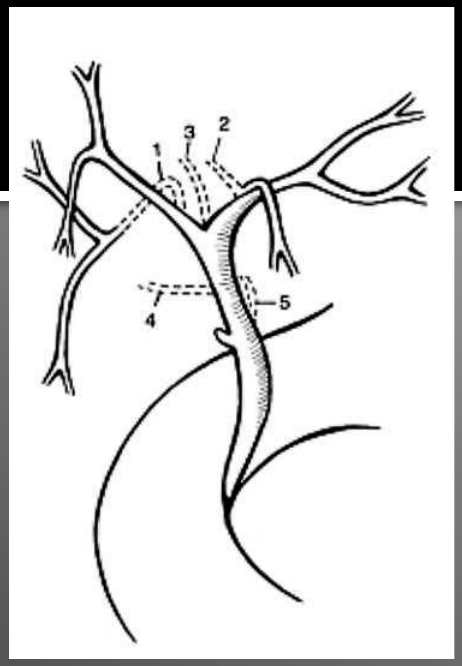


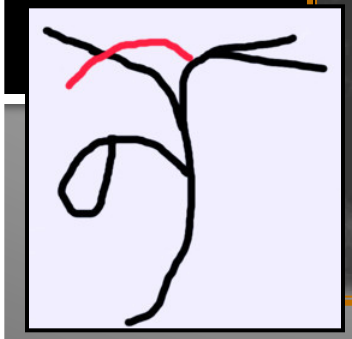
MULTIPLE VARIATIONS ANATOMIQUES …

Glissements branche dorsocaudale
Insertion canal cystique

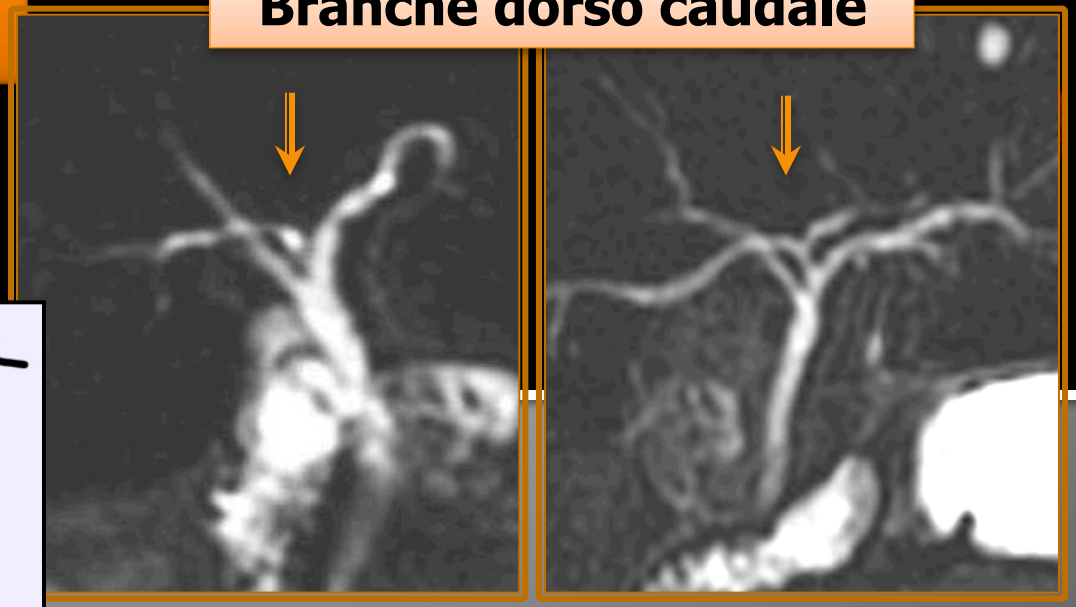
Importance dans le bilan pré opératoire +++

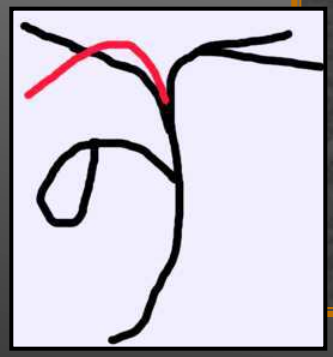
Variante Anatomique



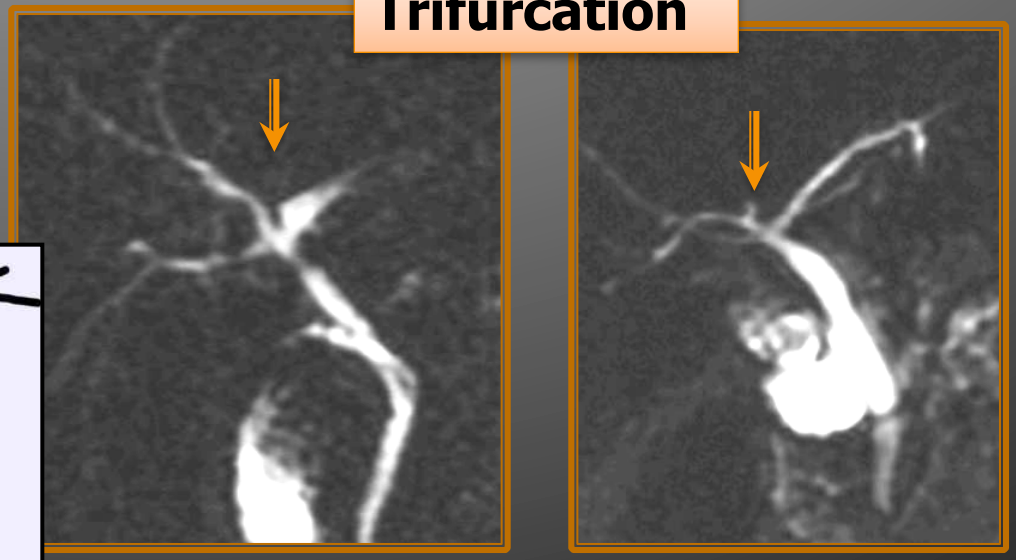


Branche dorso caudale



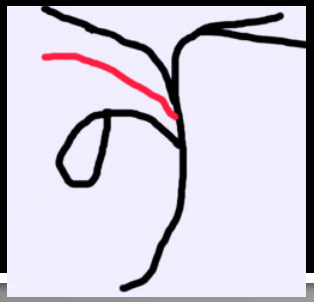


Trifurcation

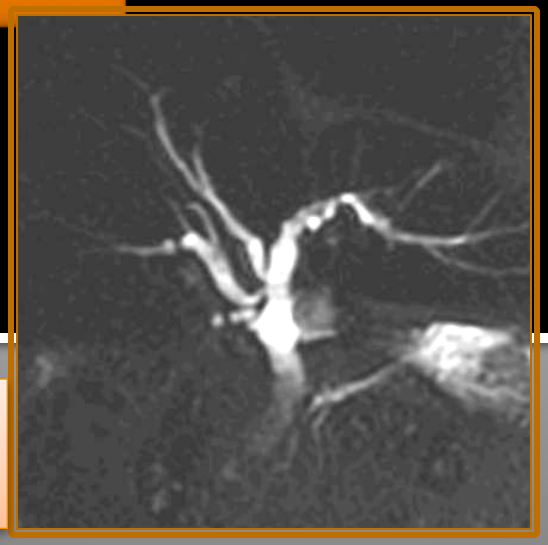


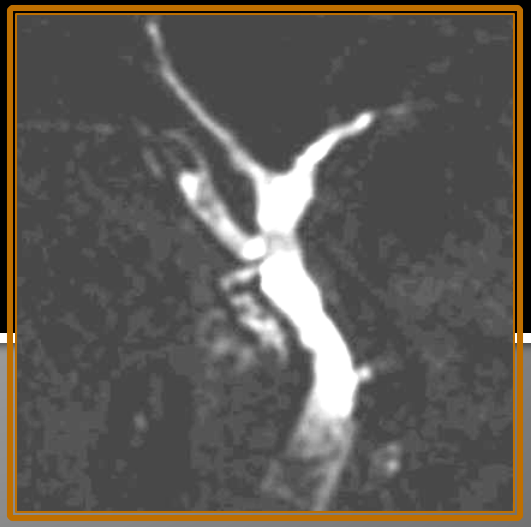
Cas n°14

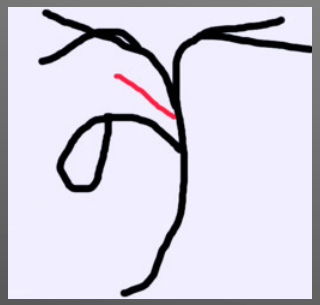
Variante Anatomique



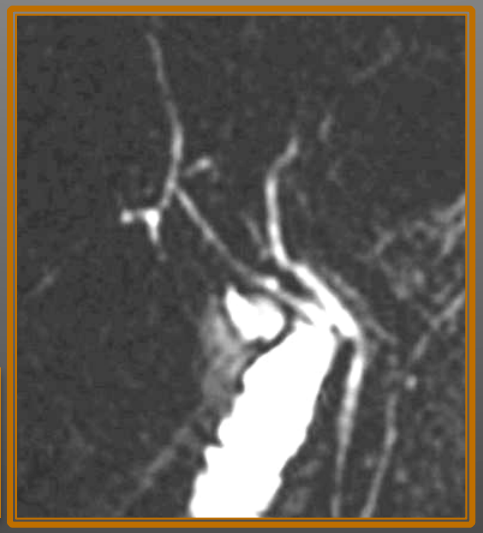
Canal hépatique droit aberrant

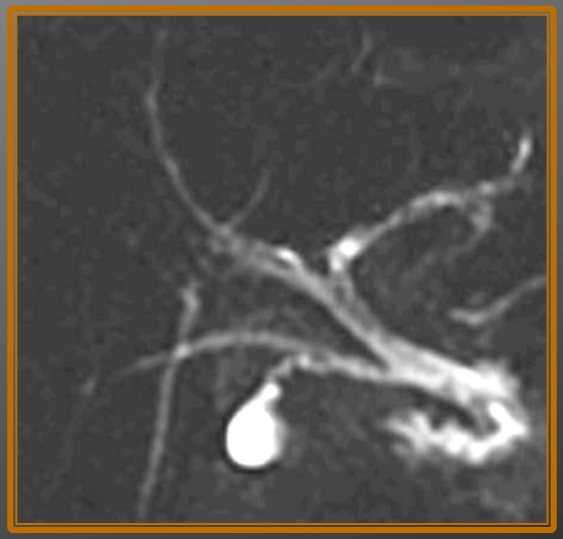




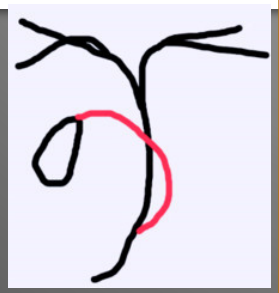


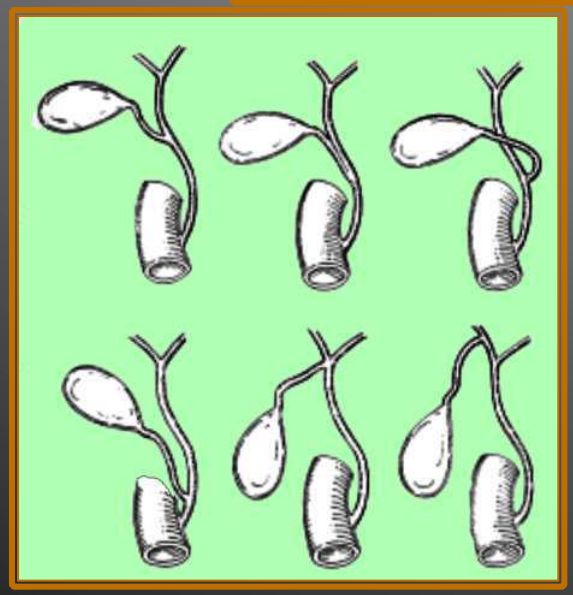
Canal hépatique droit accessoire



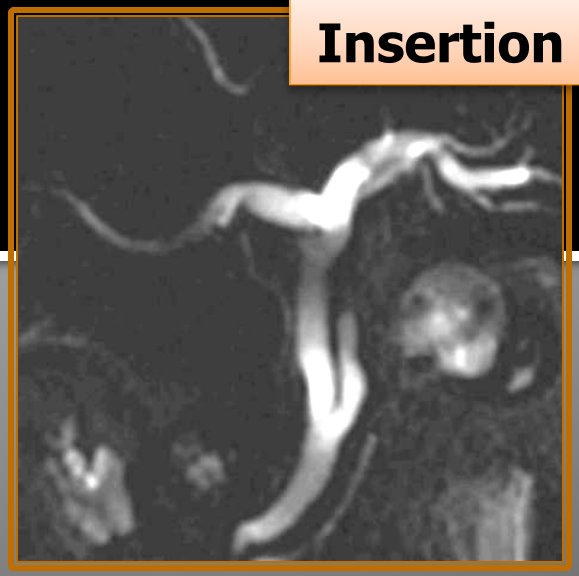


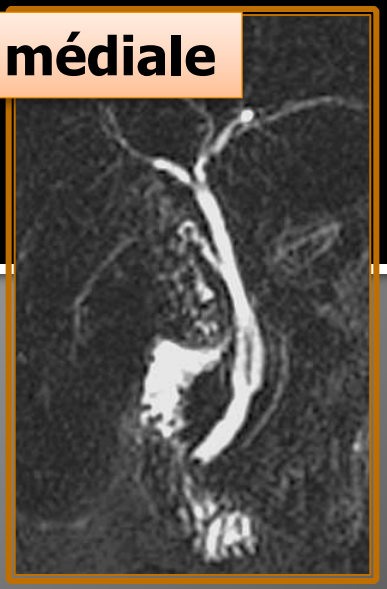
Variante Anatomique d'insertion du canal cystique

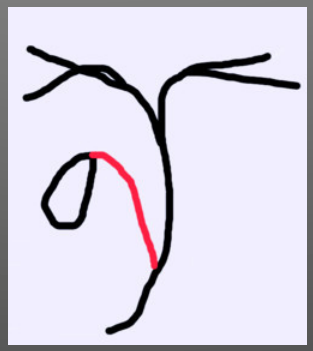




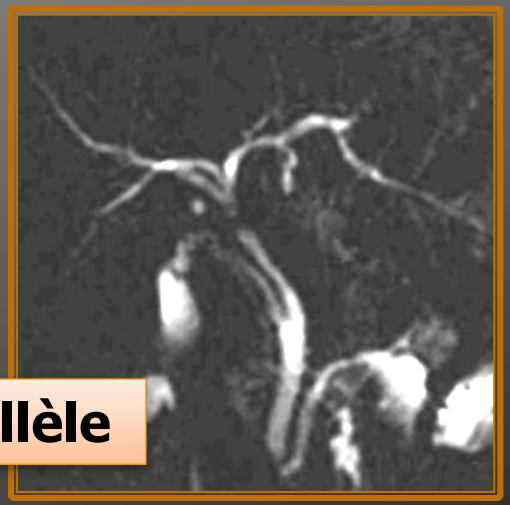
Insertion médiale





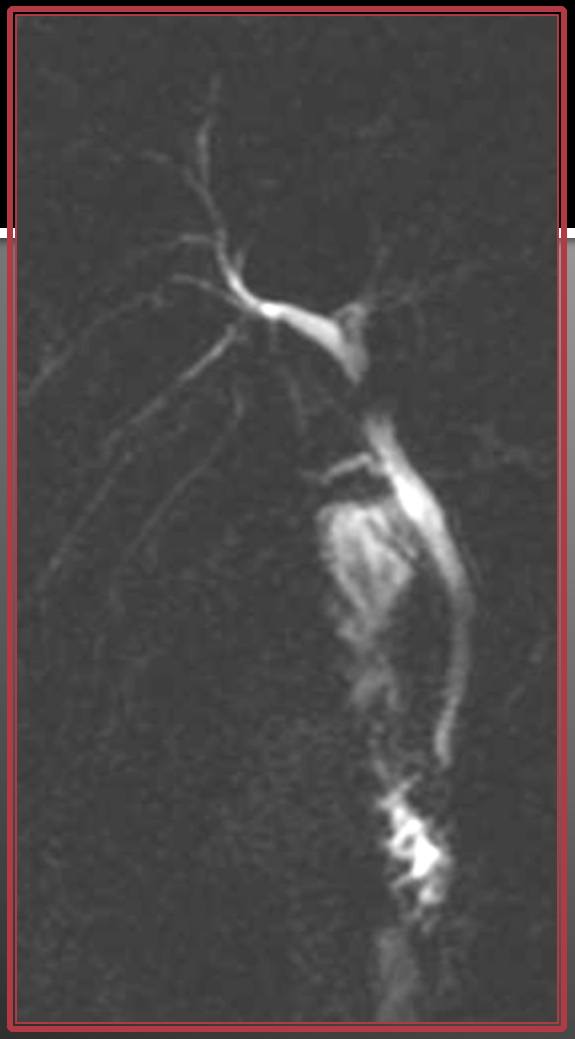


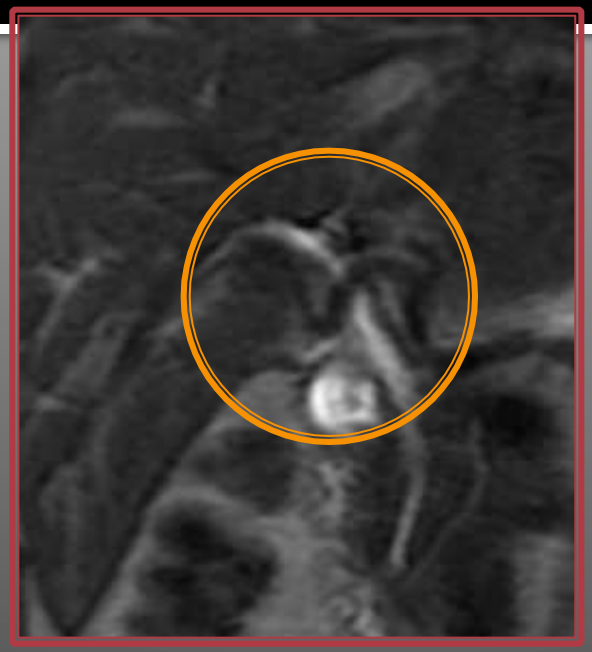
Trajet parallèle



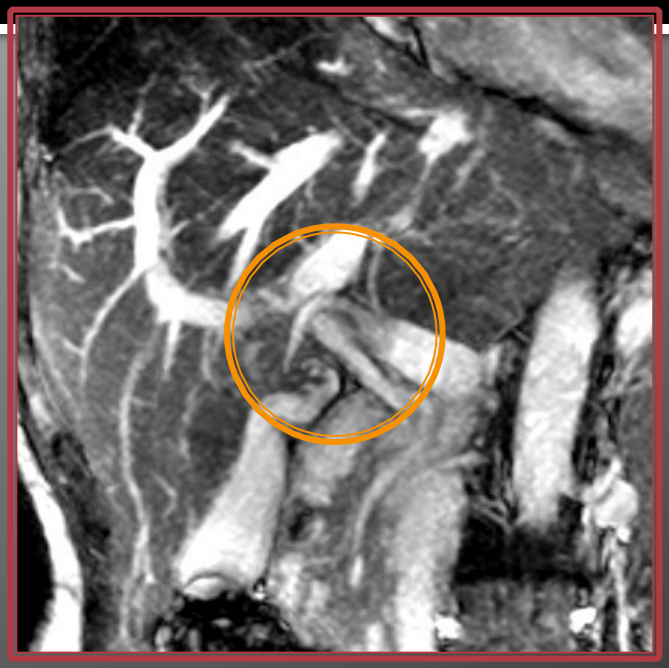
Cas n°15

Bilan pré chirurgie





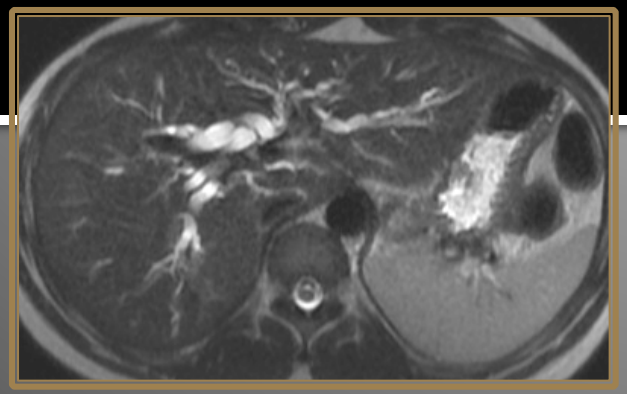
SSFSE Te court

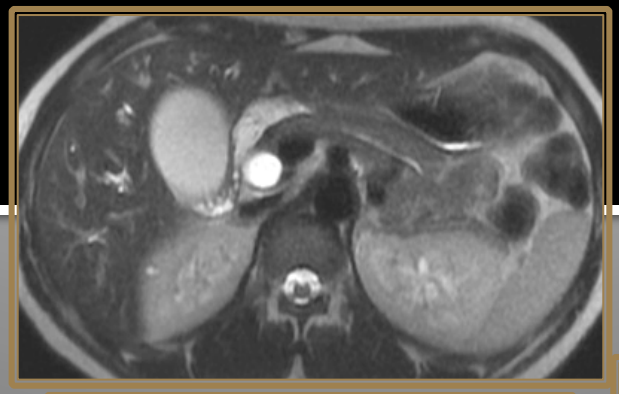


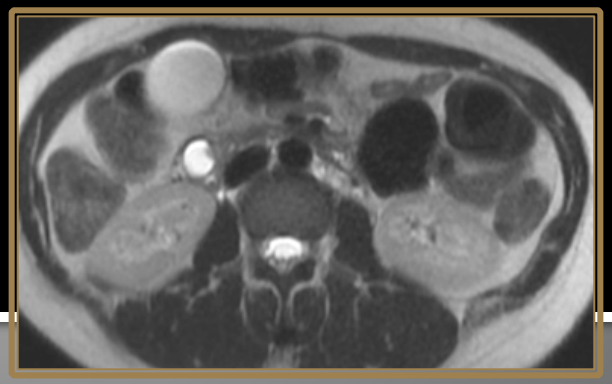
3D FIESTA

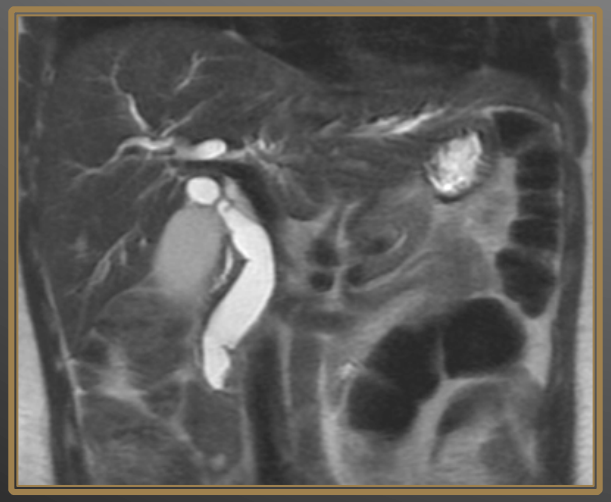
Cas n°16

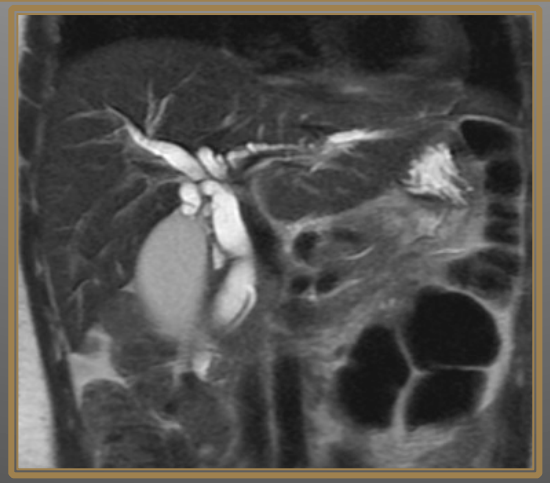
Bilan d'ictère

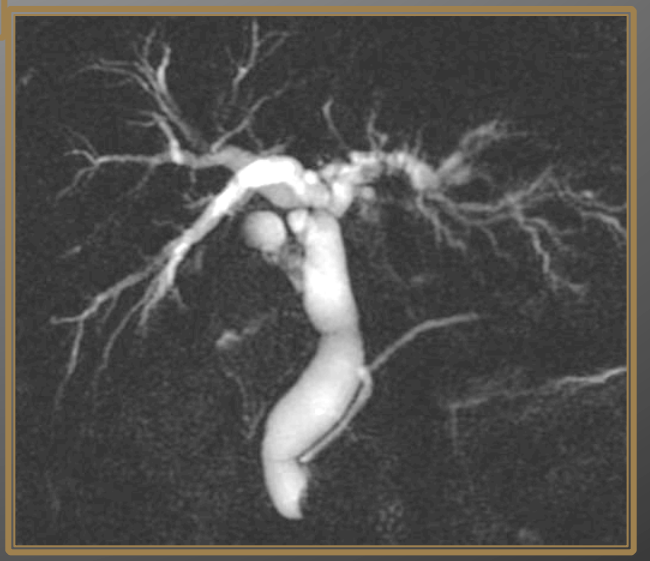






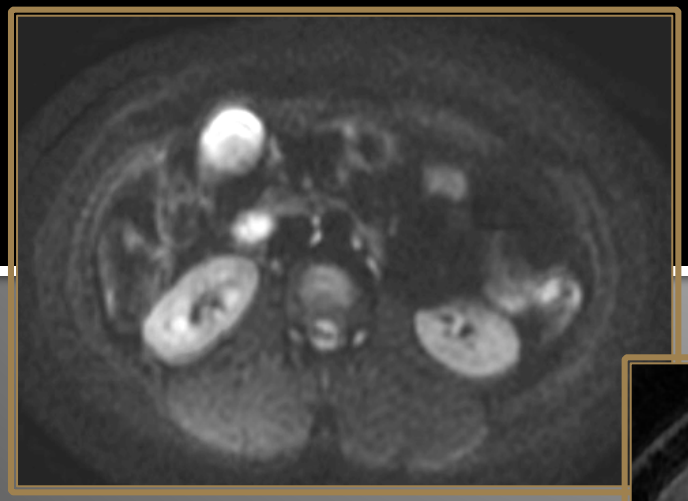


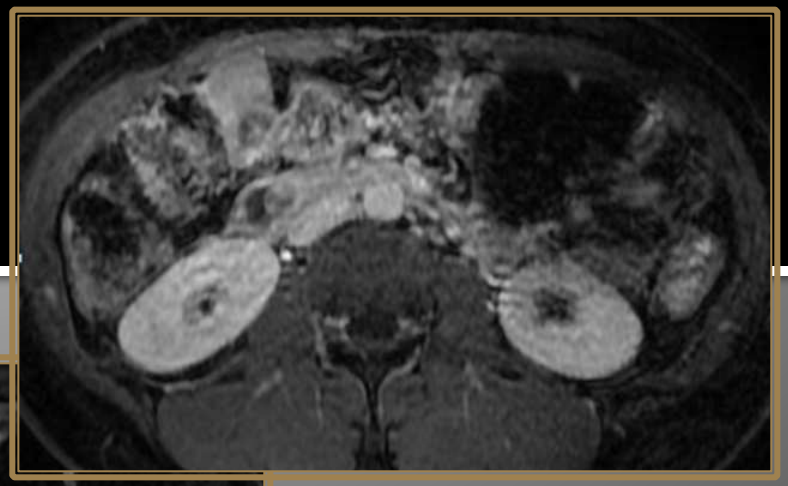


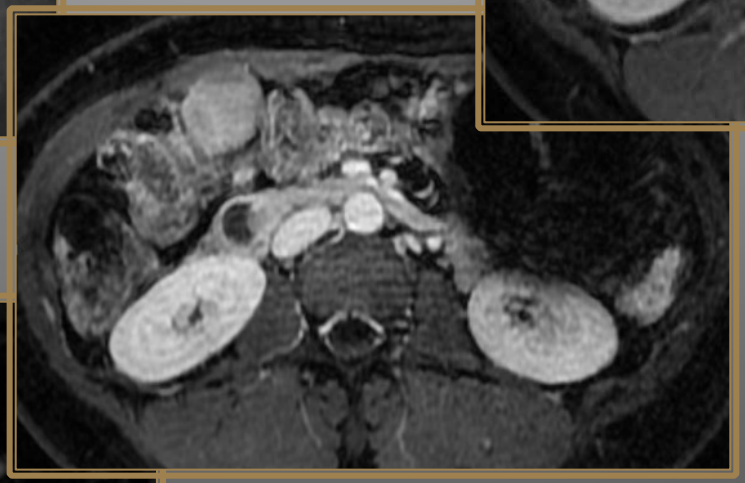


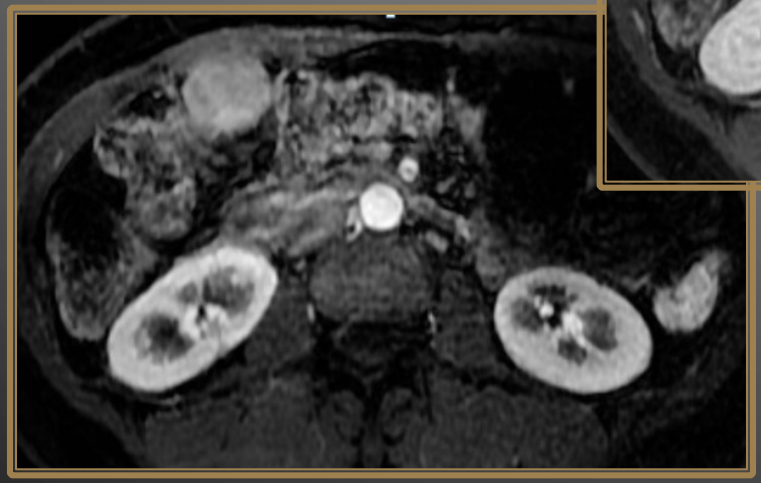
Cas n°16

Bilan d'ictère









Dilatation de la VBP.
Sténose excentrée
Irrégulière

Ampullome

Ampullome

Adénocarcinome (85%) siégeant sur la papille

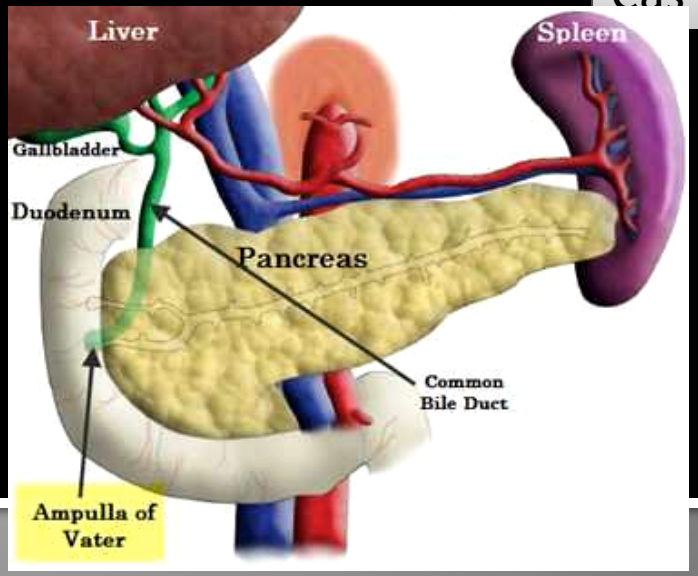
Rares (incidence~3 / 100 000)

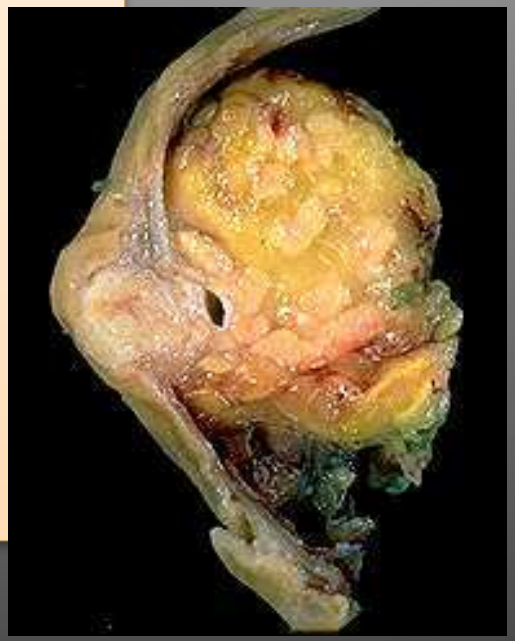
Facteurs de risque :
- polypose adénomateuse familiale
- NF1
- Tabac?

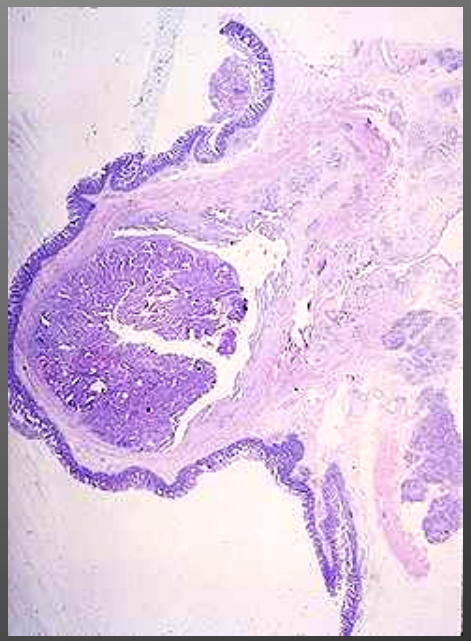
Clinique :
- douleurs de l'HCD
- ictère cholestatique
- saignement digestif
- pancréatite aiguë

Macroscopie :
- lésion végétante/ulcérée/mixte
- développement duodénal

et/ou endo ampullaire

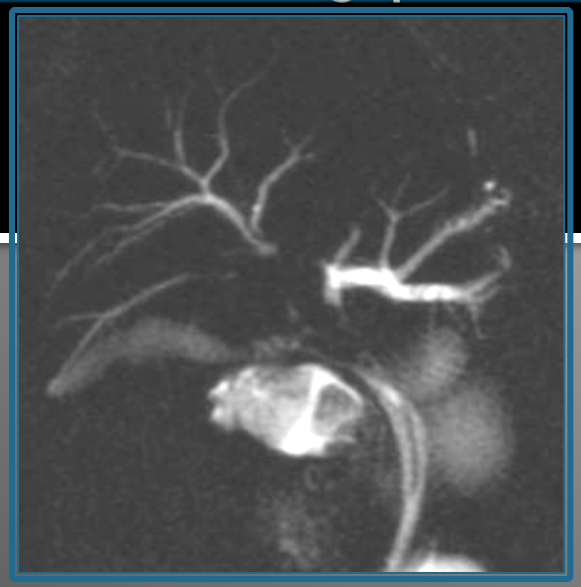
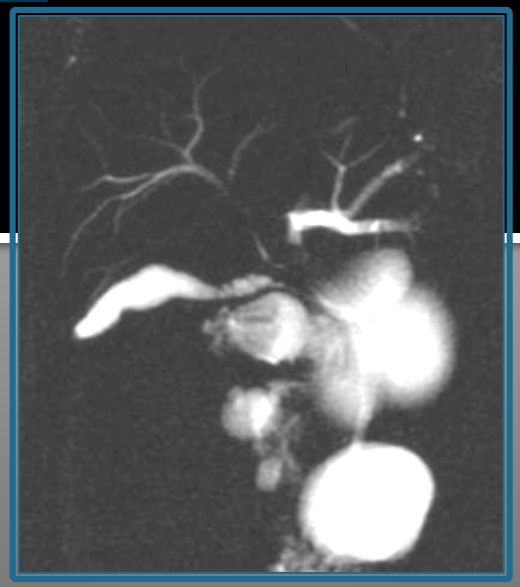
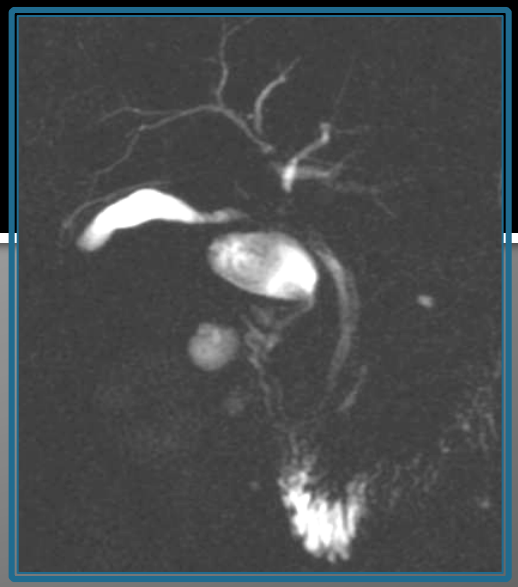
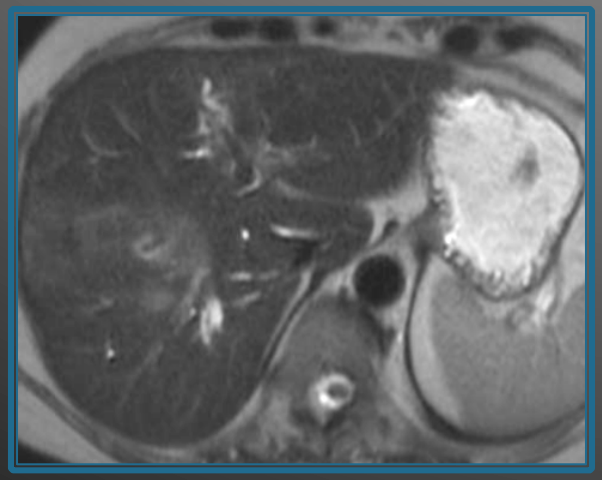
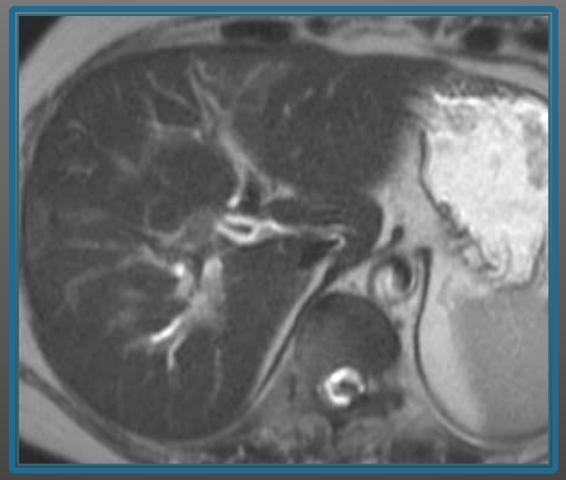
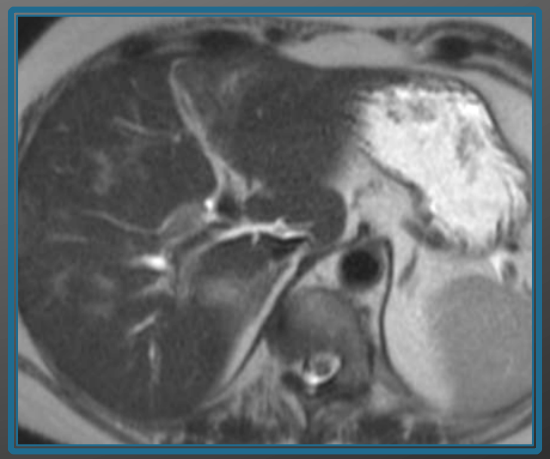


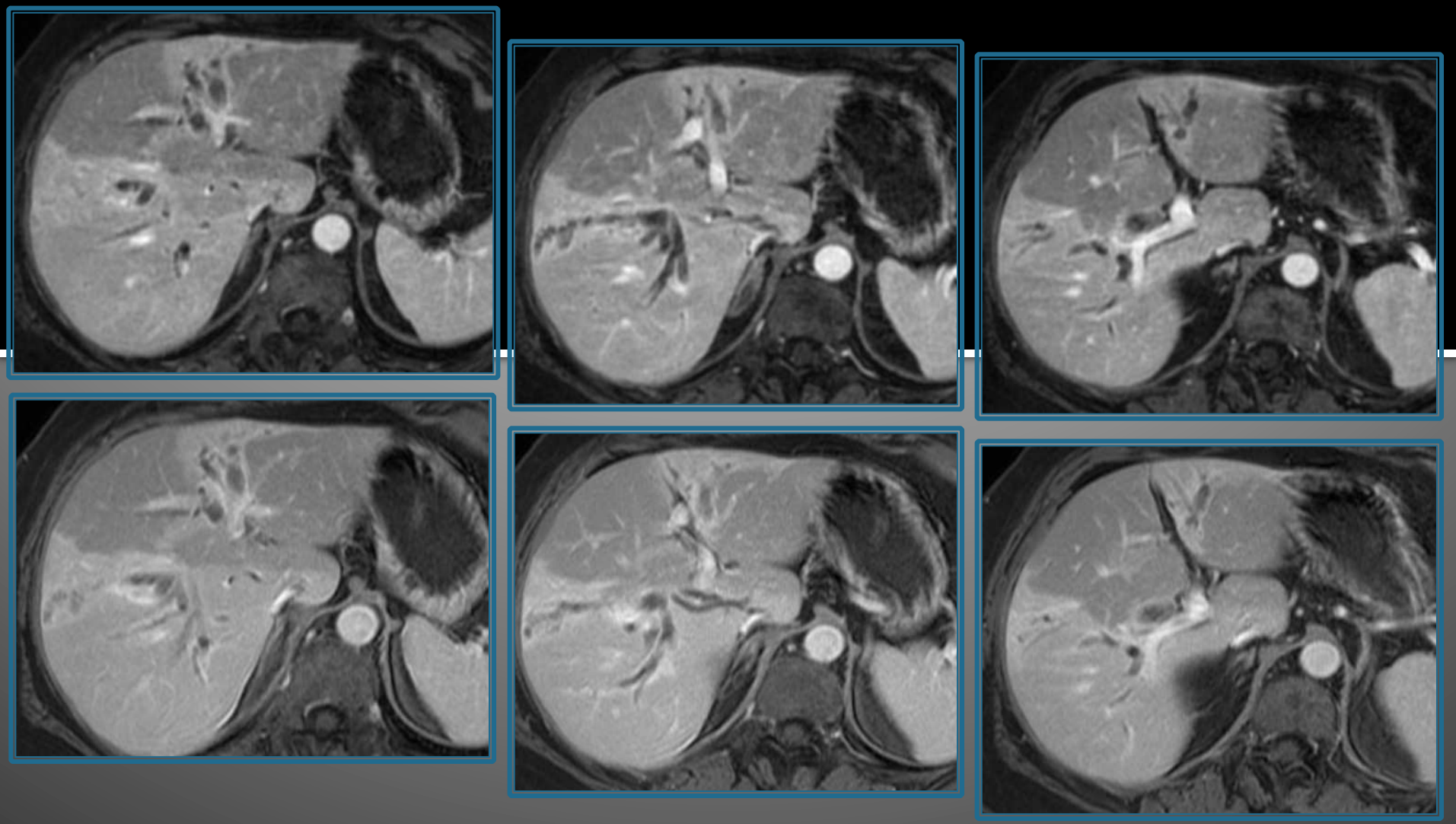




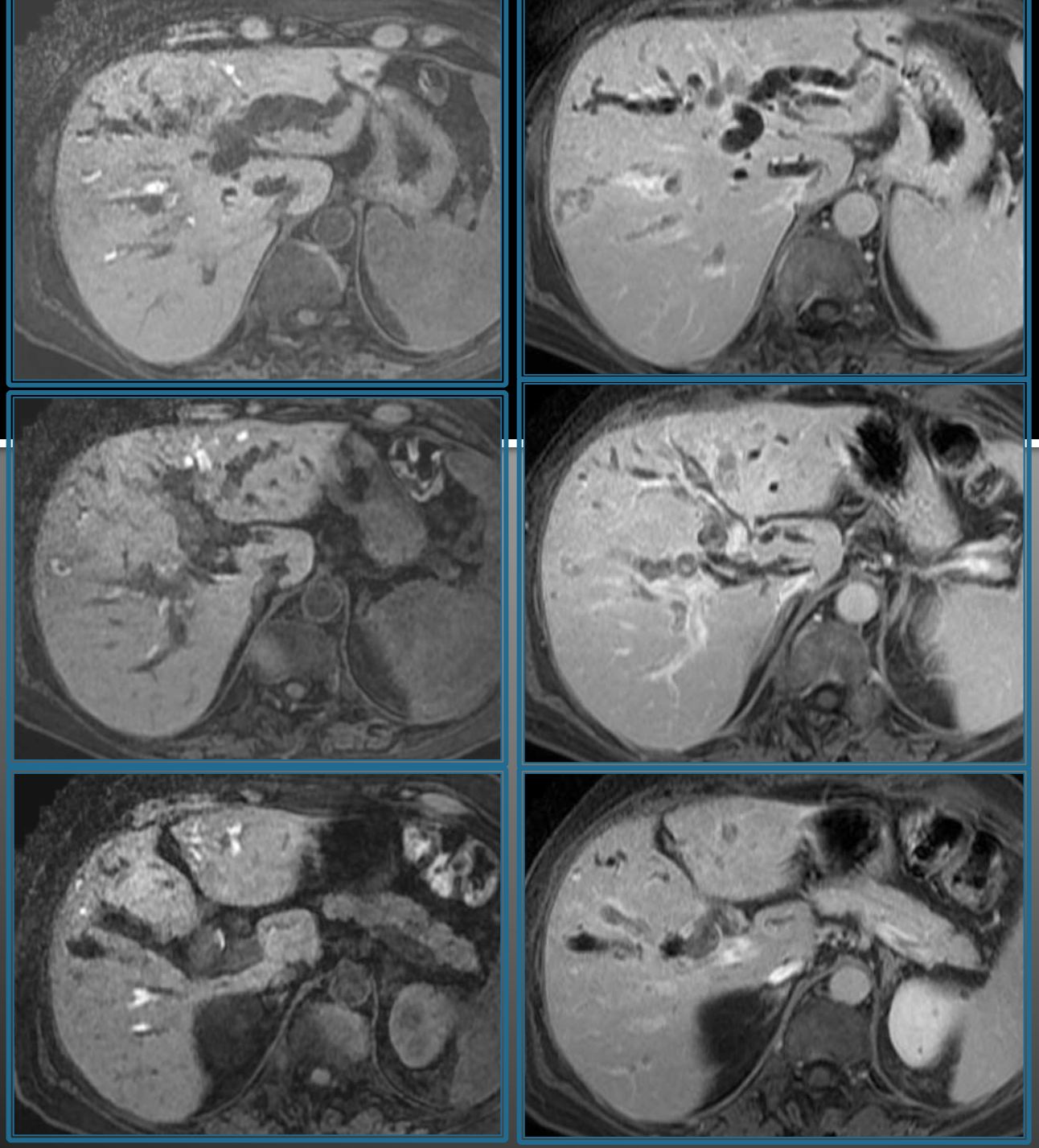
Cas n°16

ATCD ADK colique 4ans
Coloscopie normale
cholestase biologique



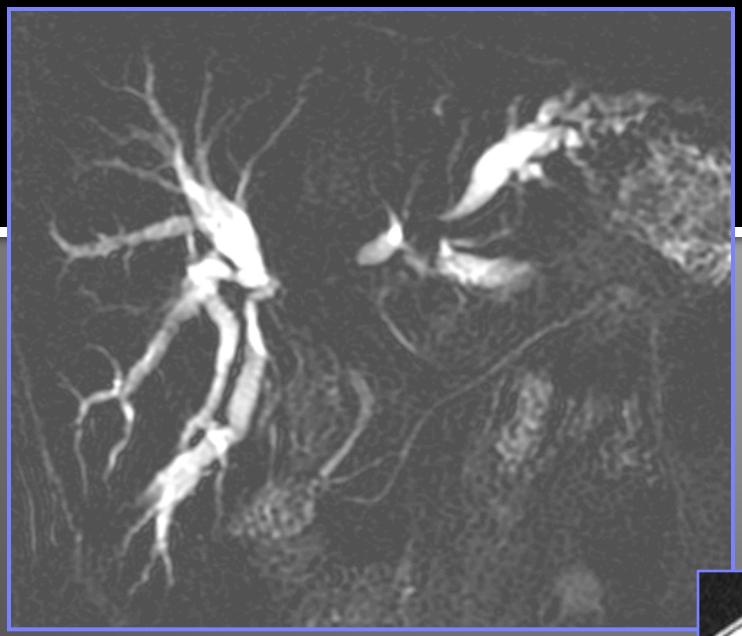
Métastases endo biliaires de l'ADK colique

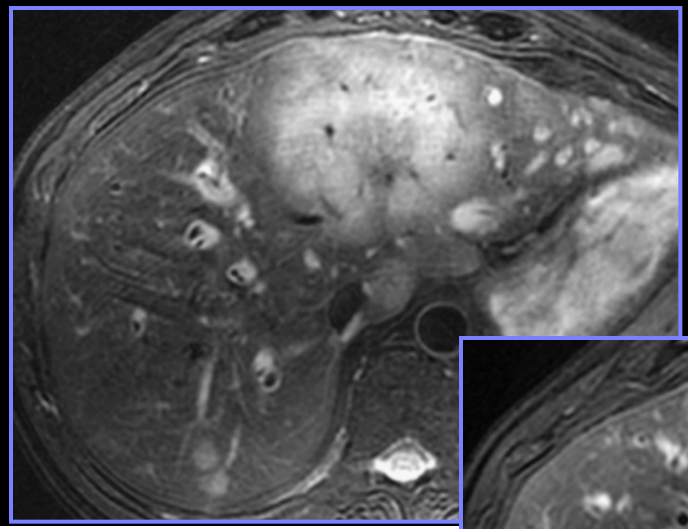


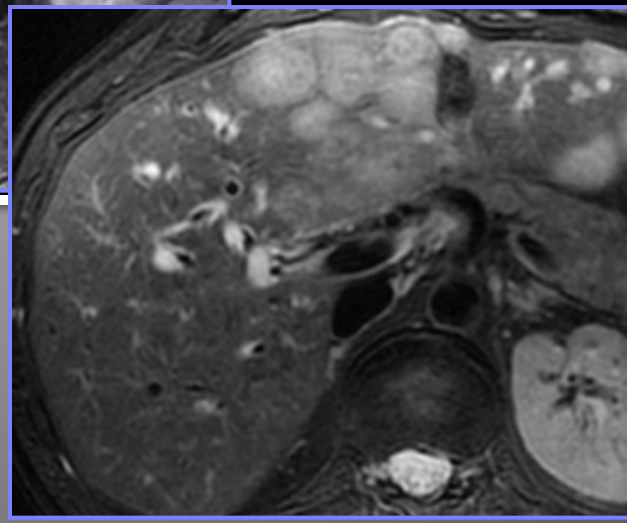
Evolution péjorative
Décès a 4 mois

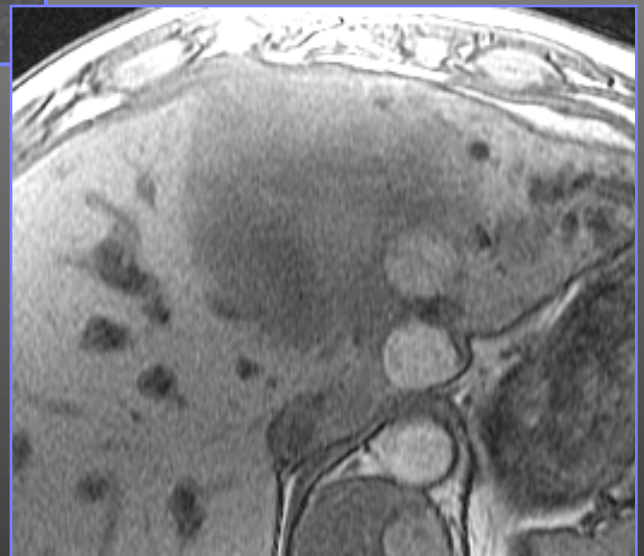
Cas n°17

Femme 70 ans
AEG
Cholestase

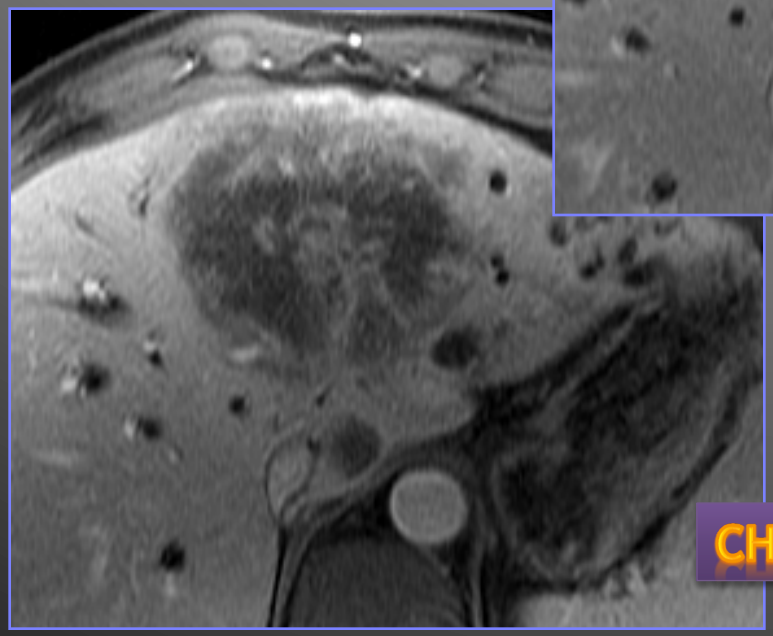


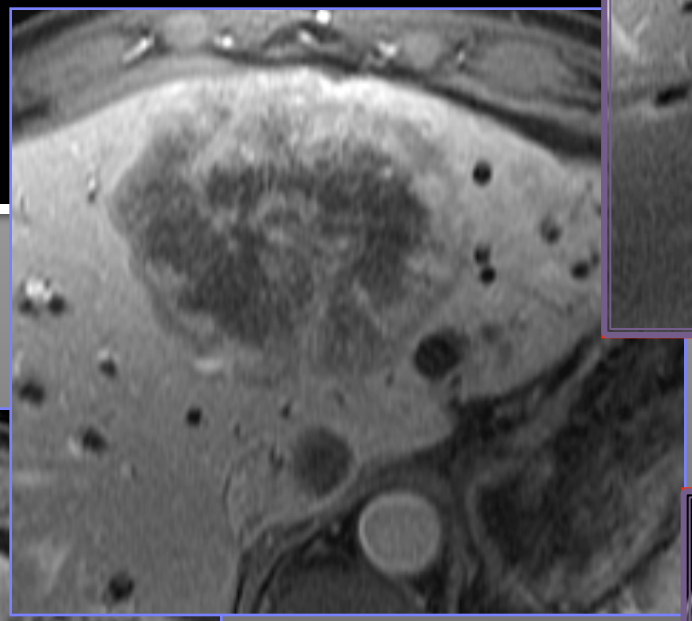


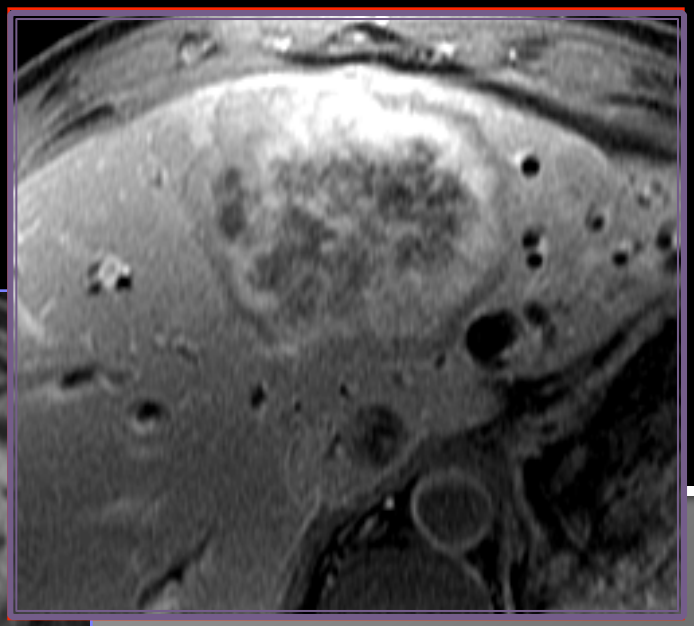


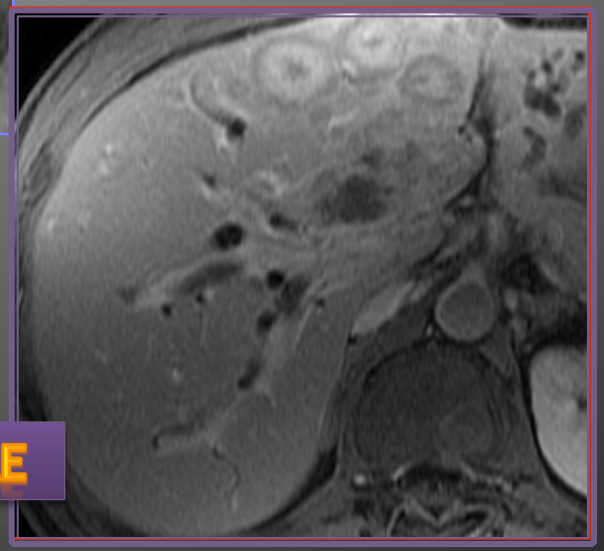


Injection dynamique





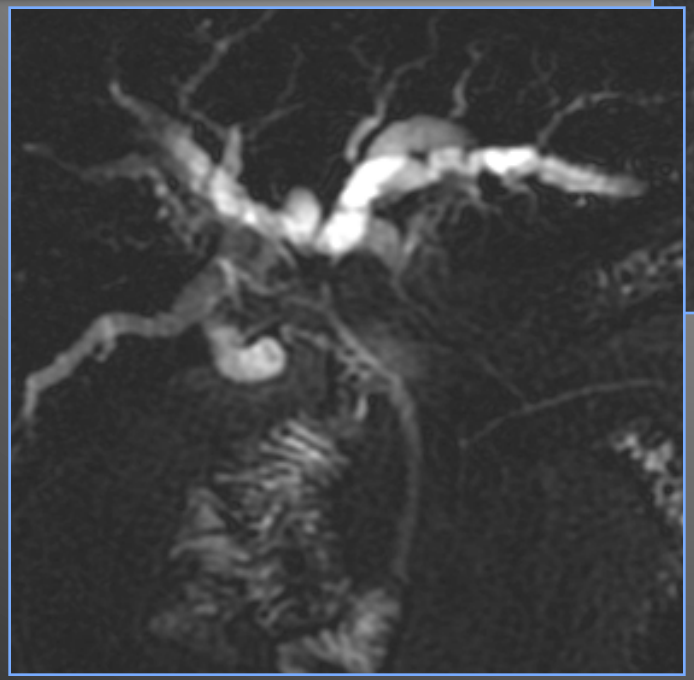


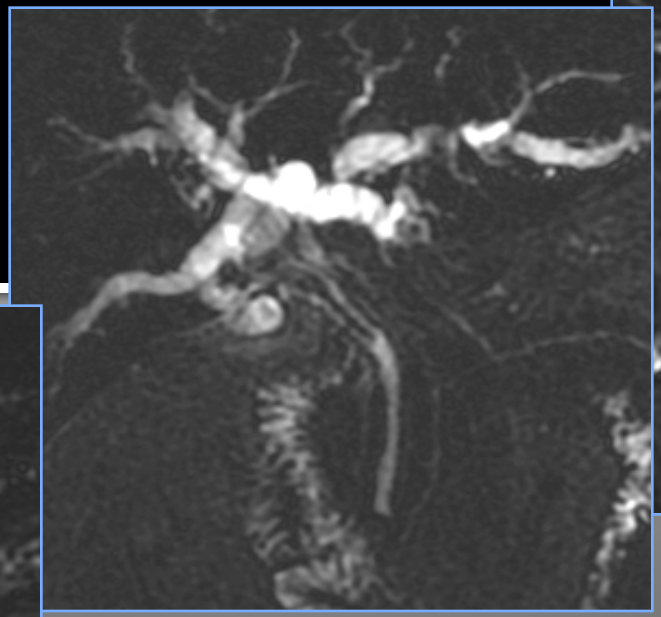


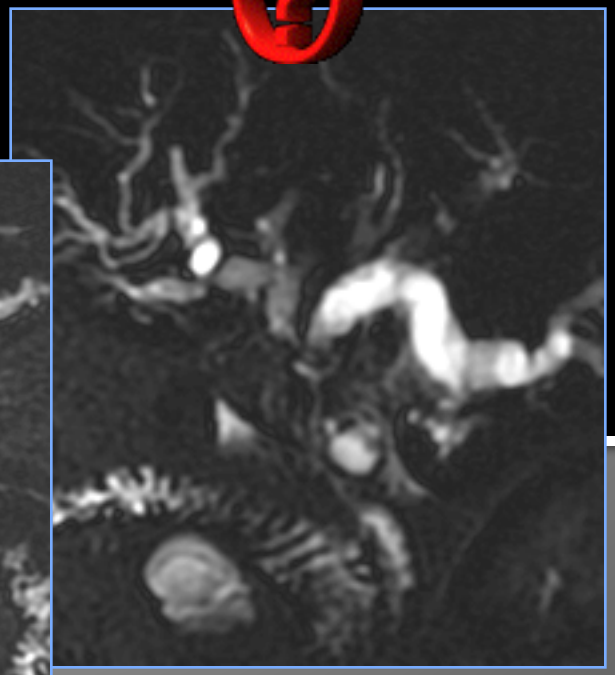
CHOLANGIOCARCINOME

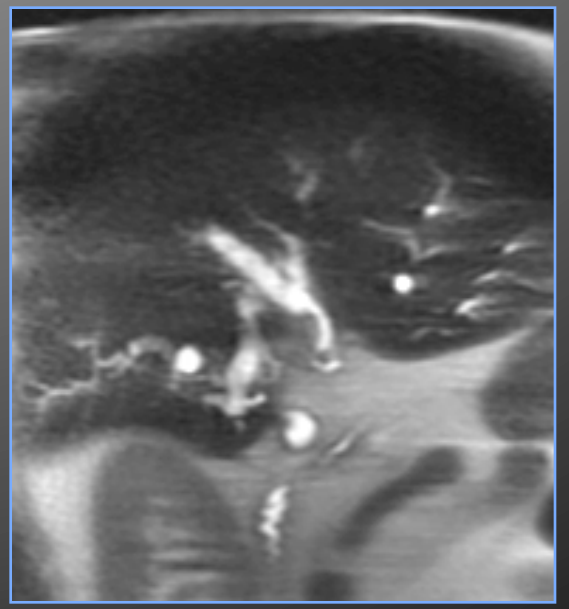
Cas n°18

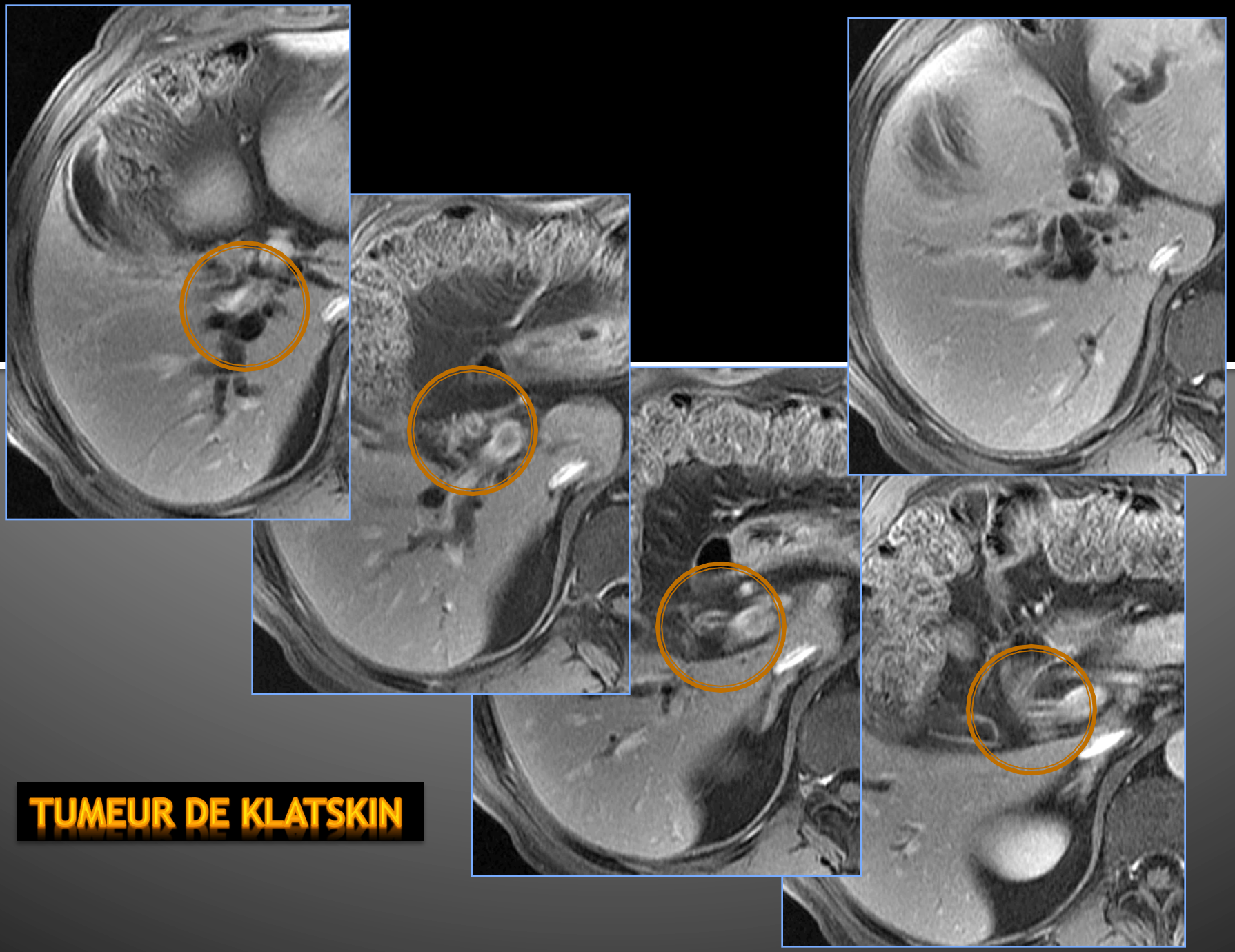
Homme 64 ans
Ictère cholestase



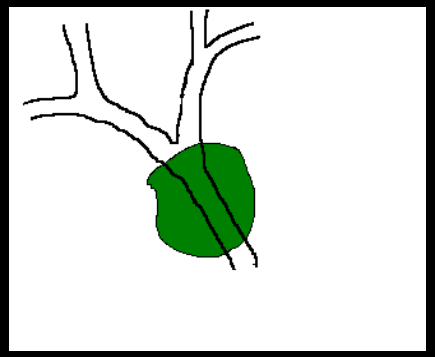




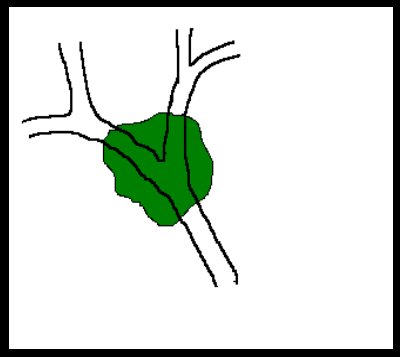




TUMEUR DE KLATSKIN



TYPE I

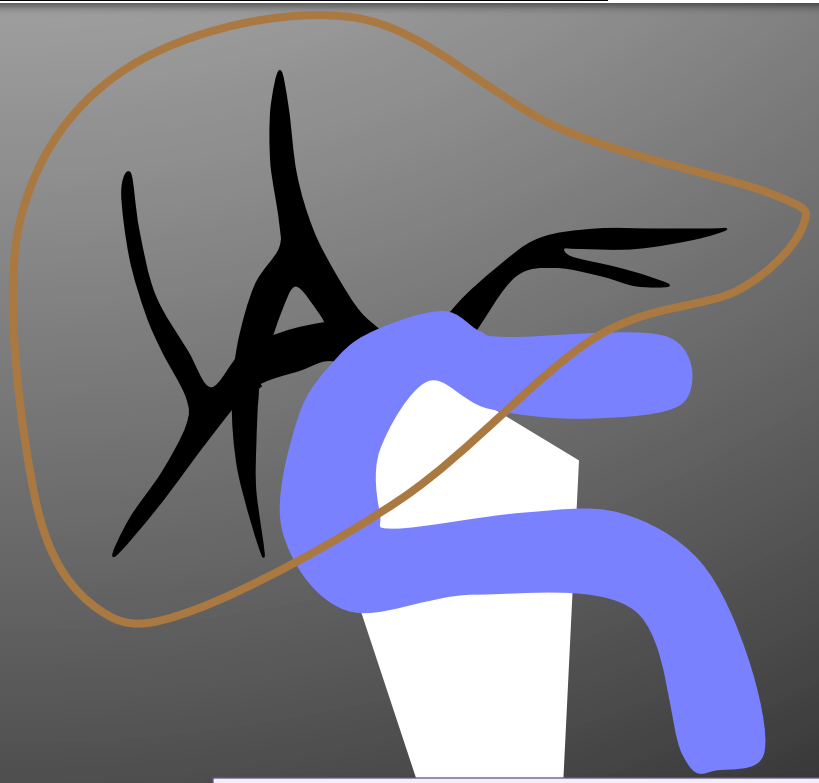


TYPE II

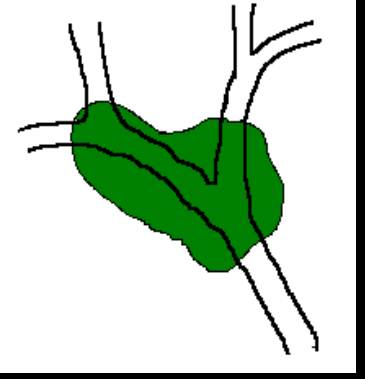
Bismuth

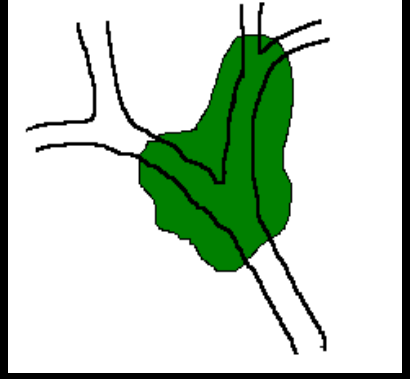
Extension biliaire

Bismuth I ou II : résection hépatocholédoque



Tumeurs de Klatskin





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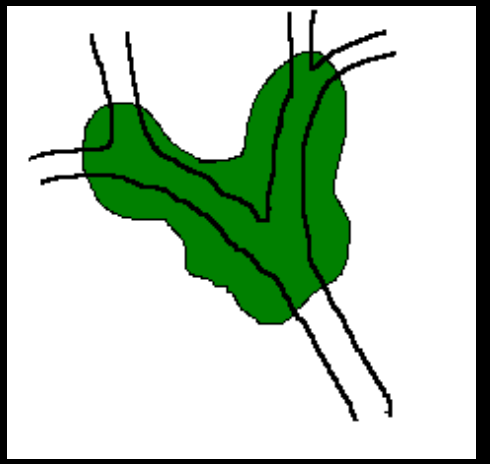
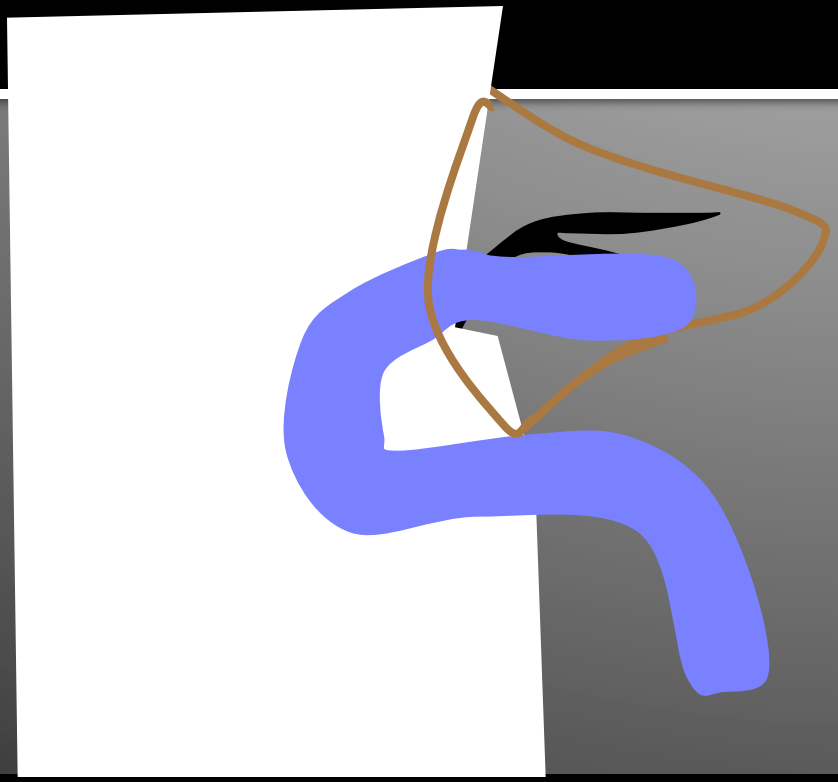
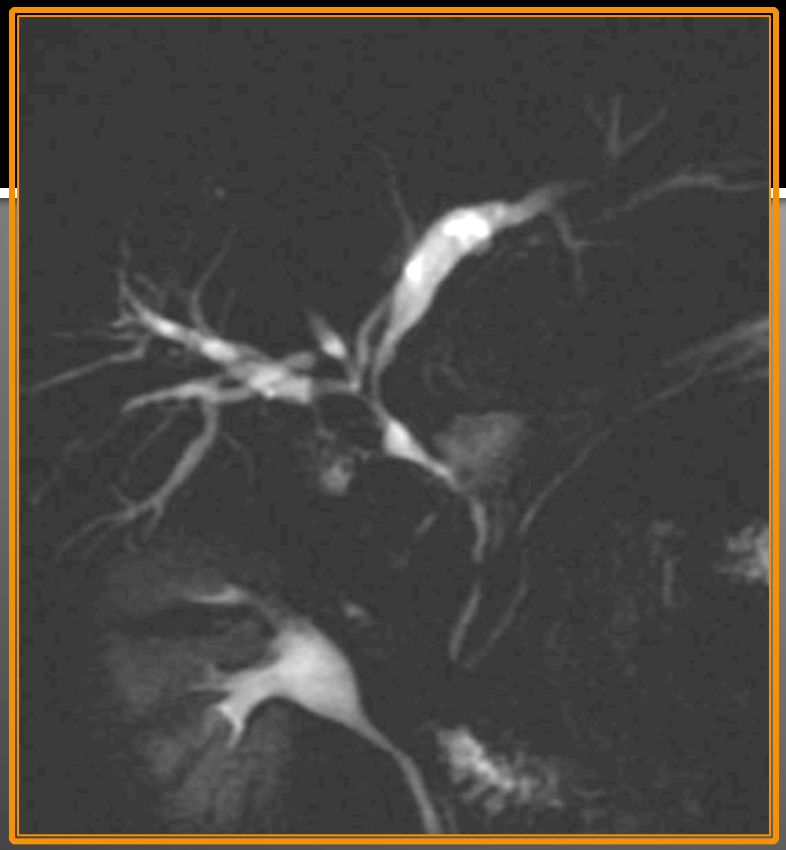


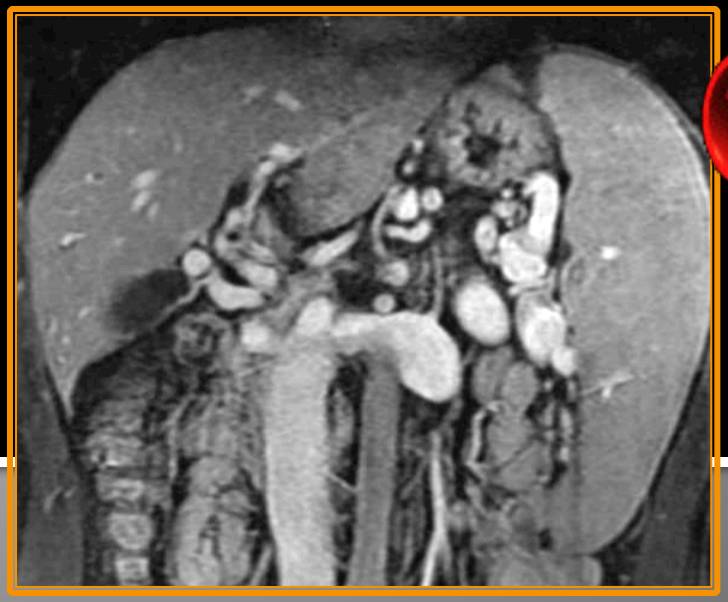
TYPE IV

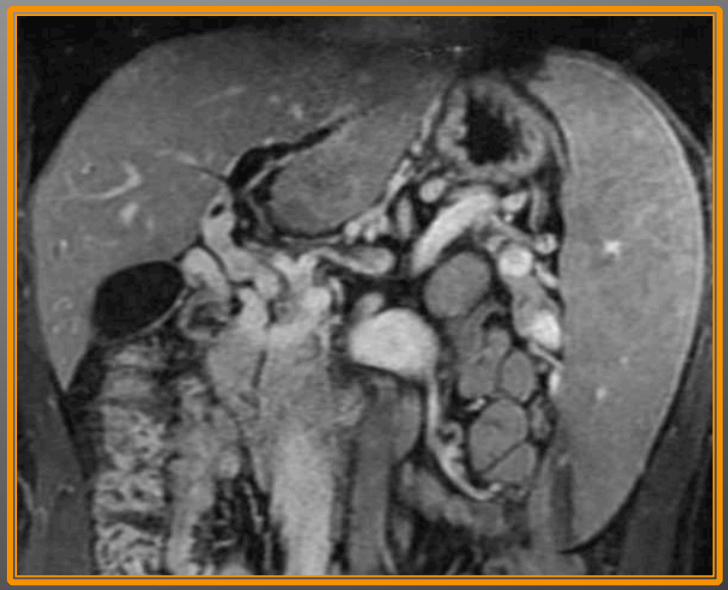


Bismuth III : hépatectomie élargie D ou G
Bismuth IV : non chirurgical (en principe)

Homme 64 ans
Ethylique
Ictère et dilatation VBIH en écho



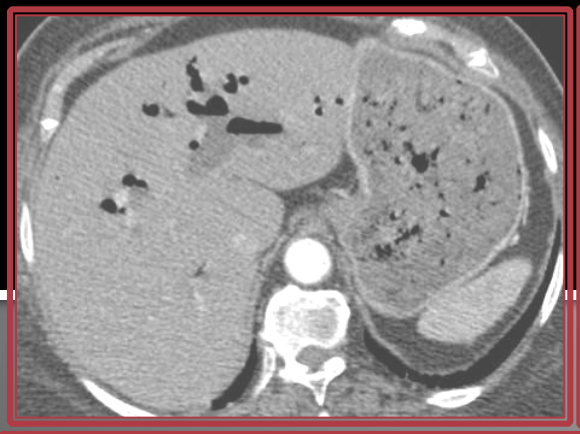
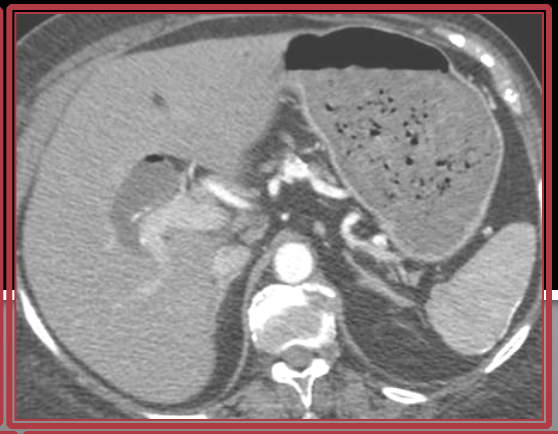
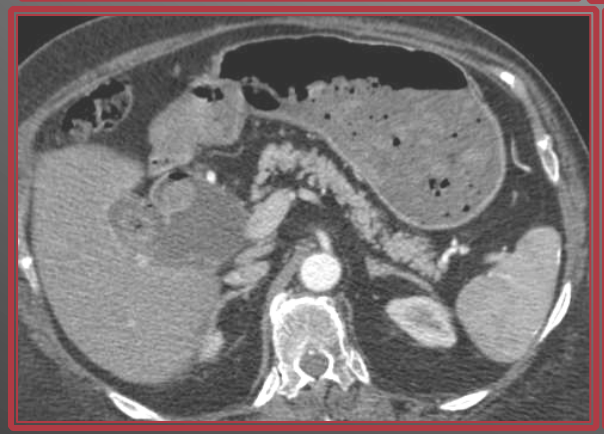
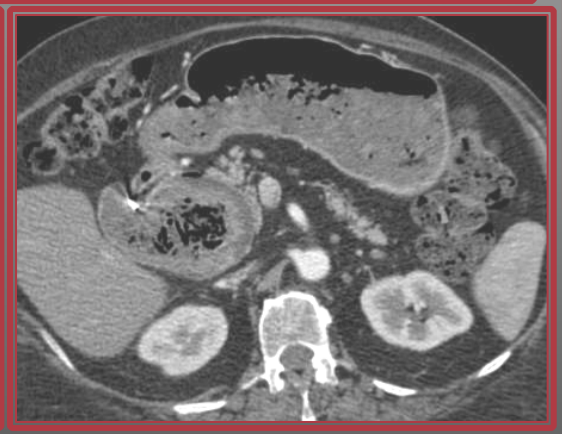
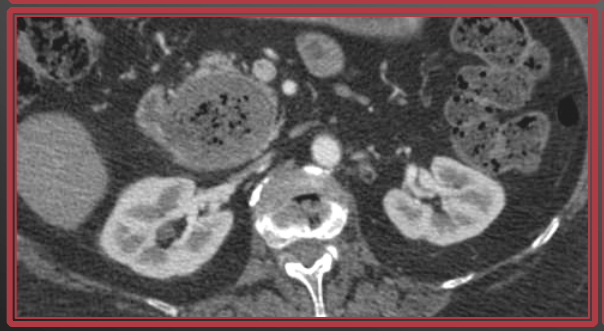
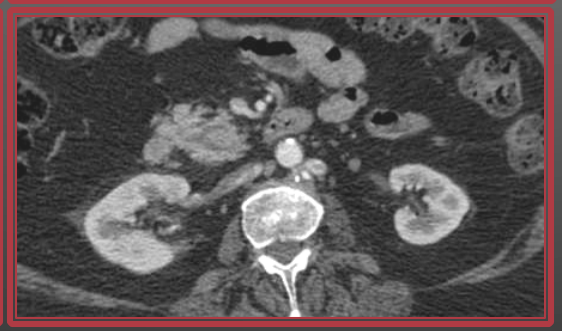
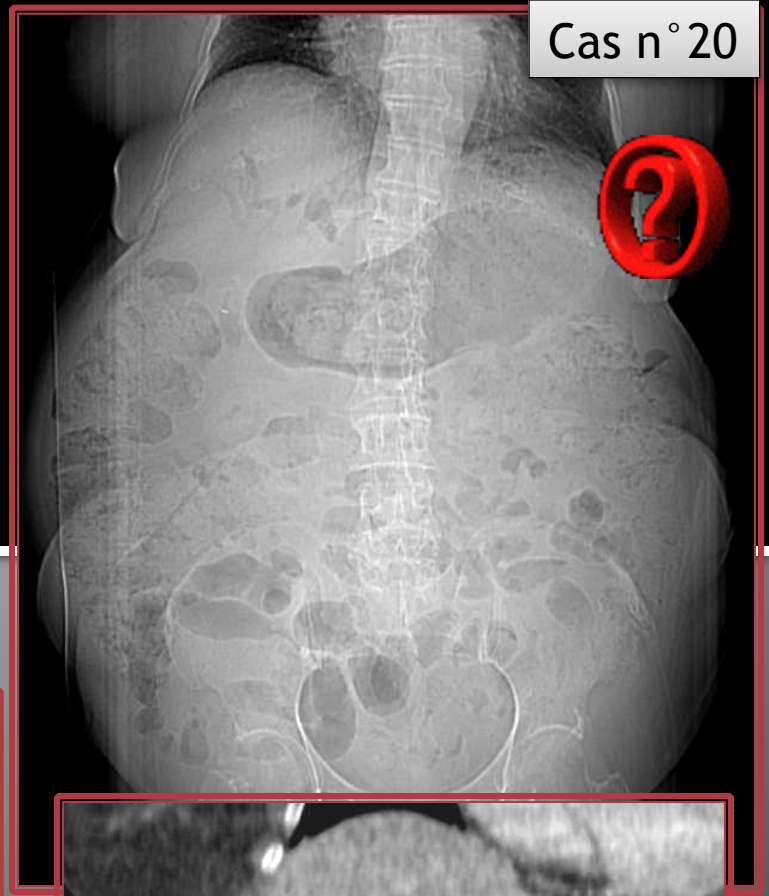
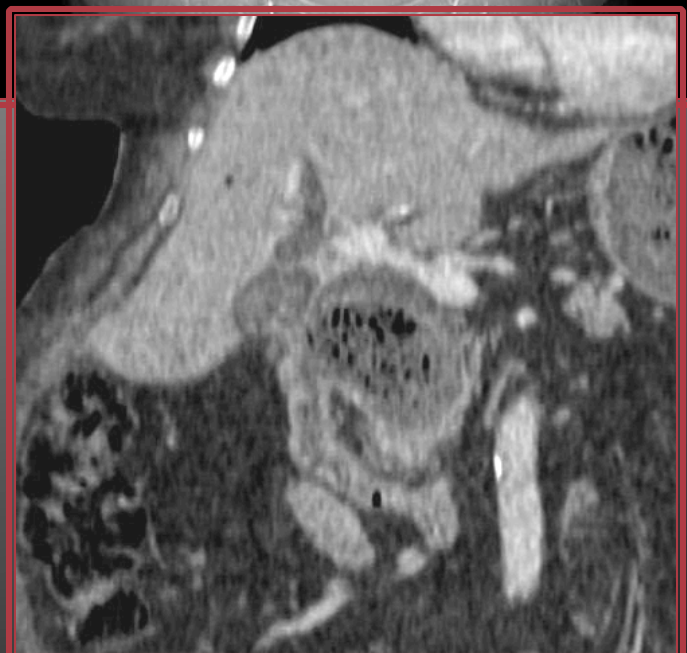


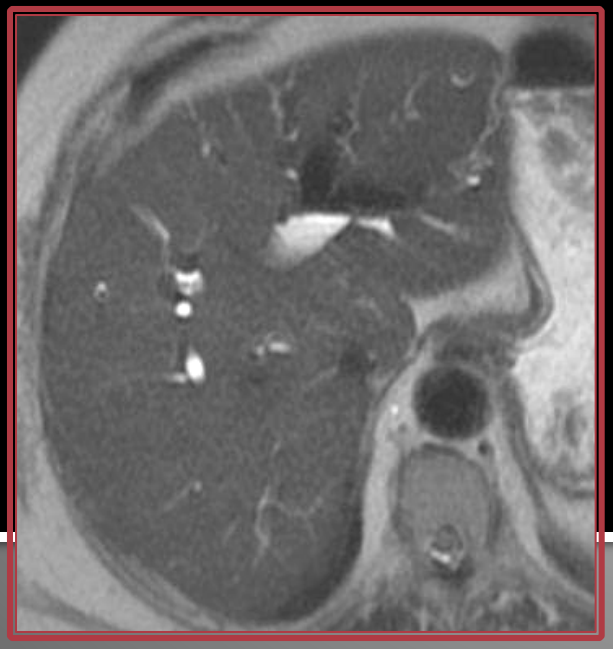
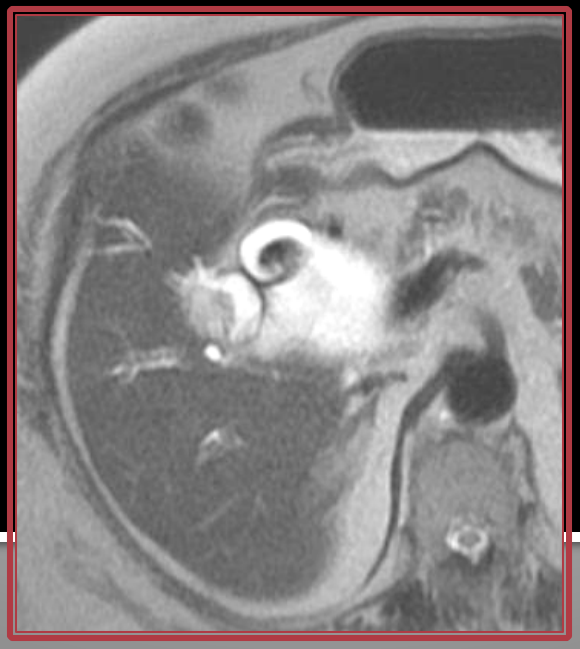
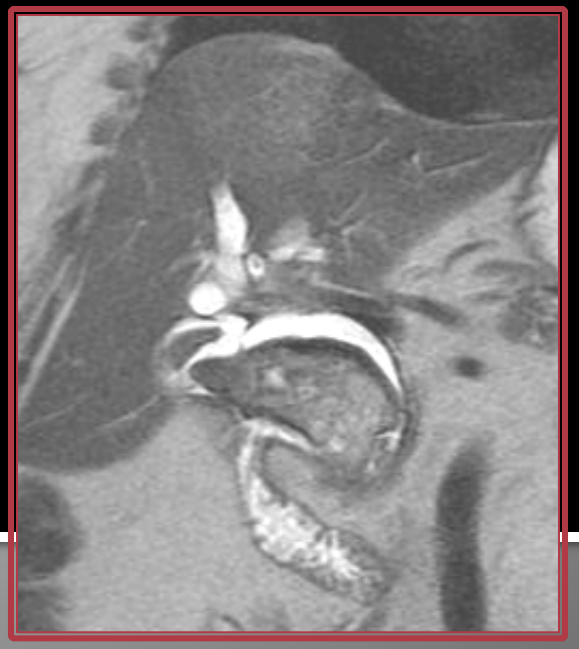
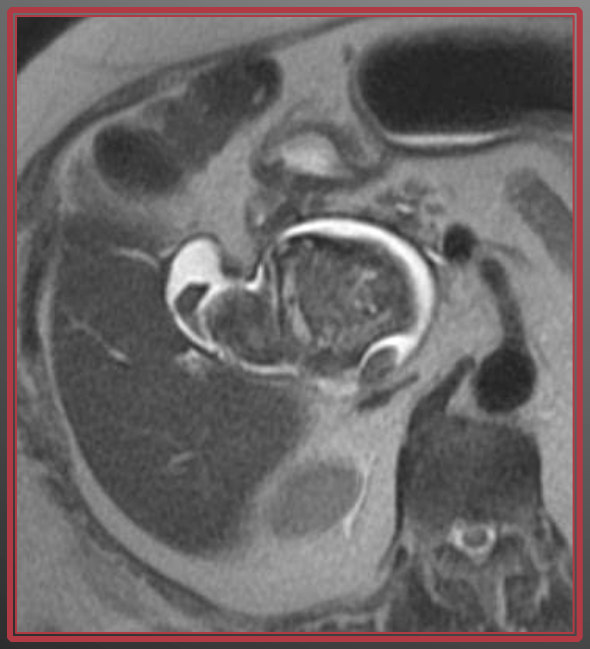
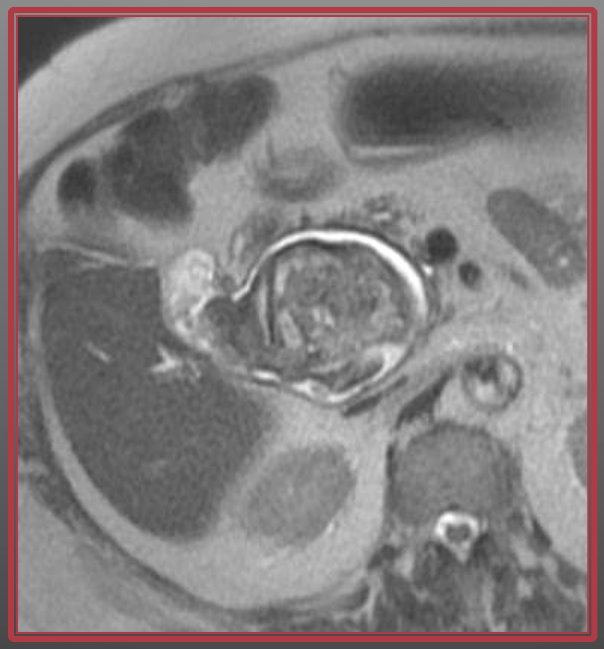
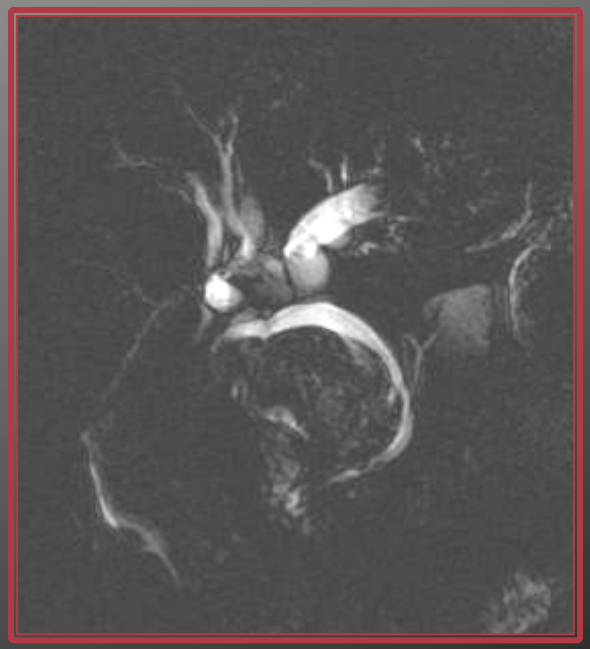


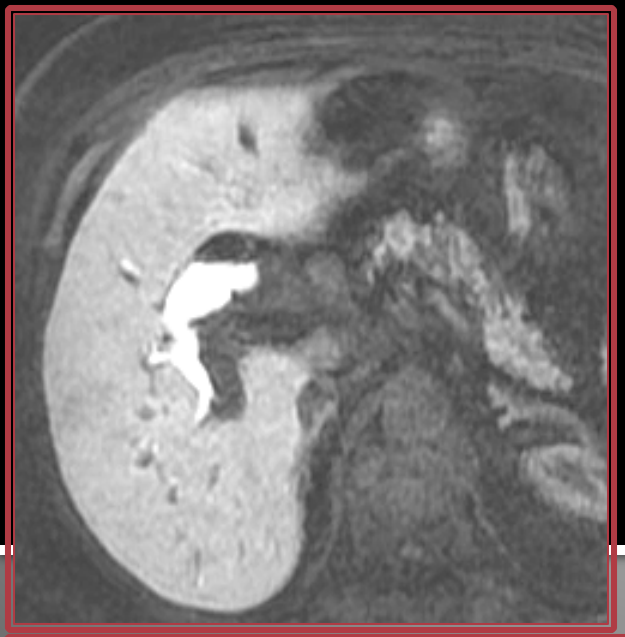
CAVERNOME PORTE

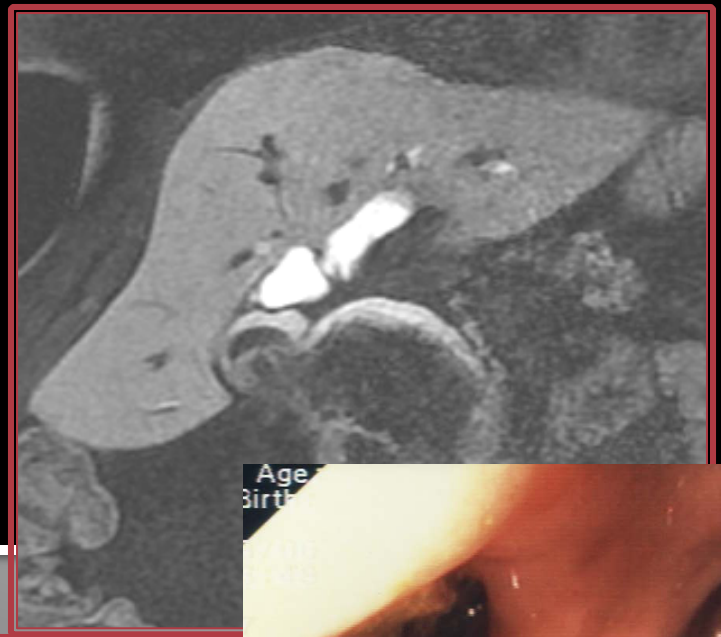
Cas n°20

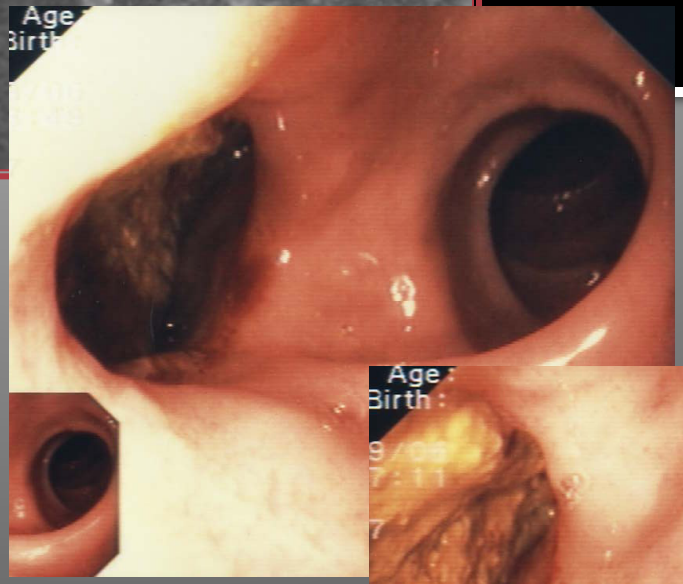
Femme 75 ans
ATCD cholecystectomie

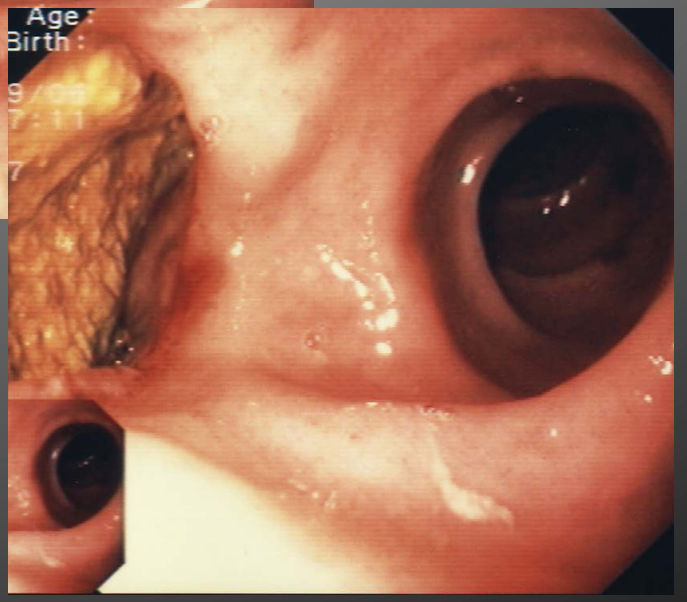









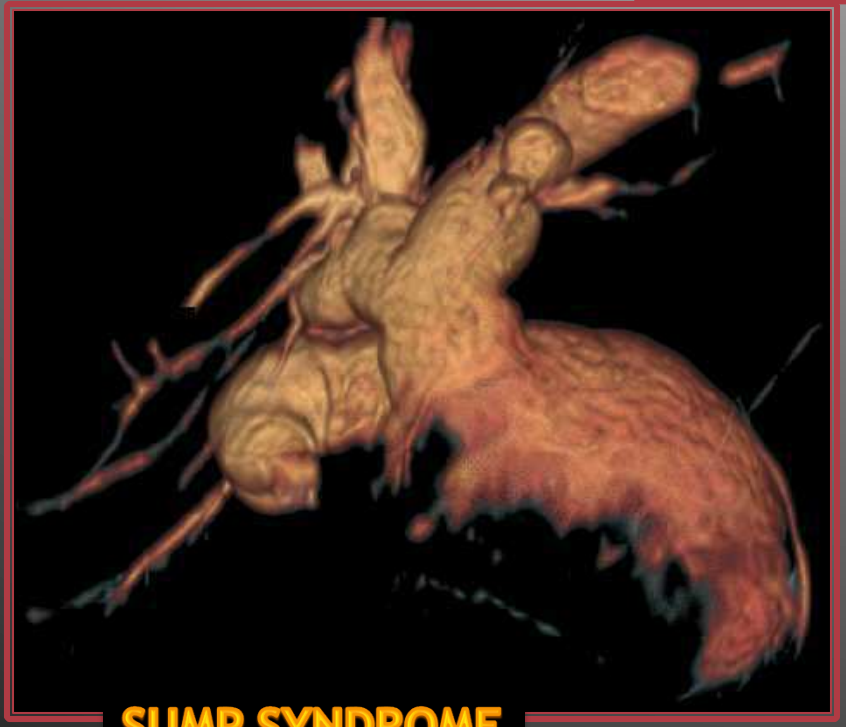











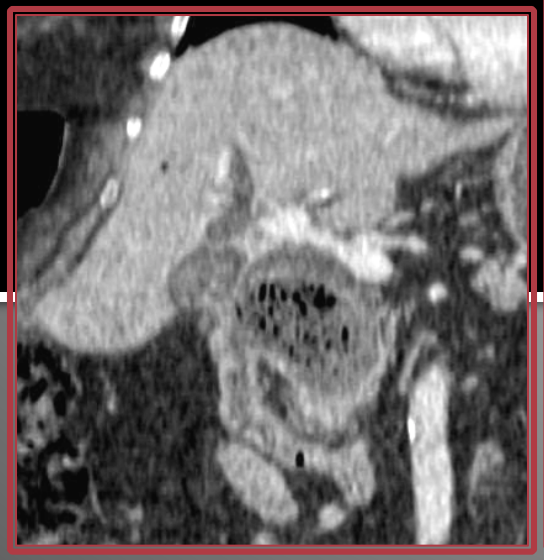


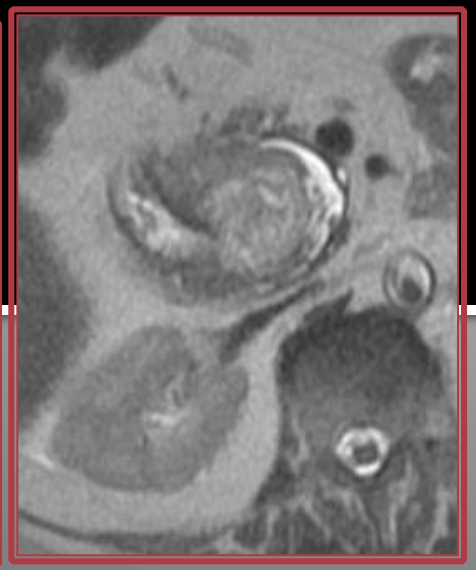


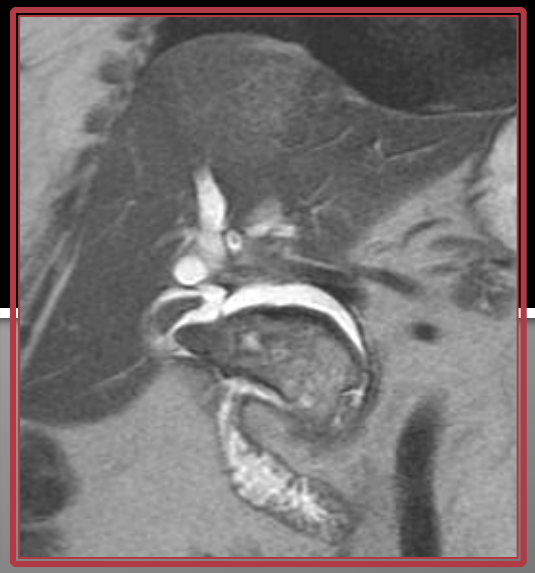


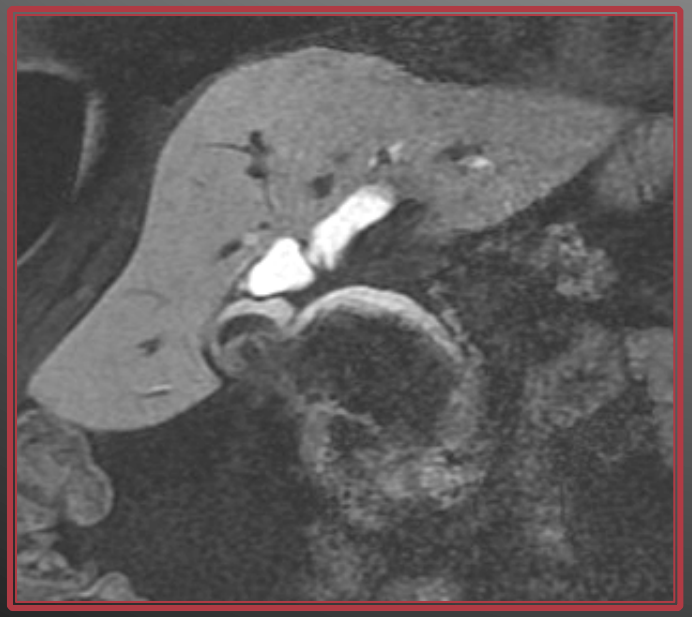
SUMP SYNDROME

SUMP syndrome









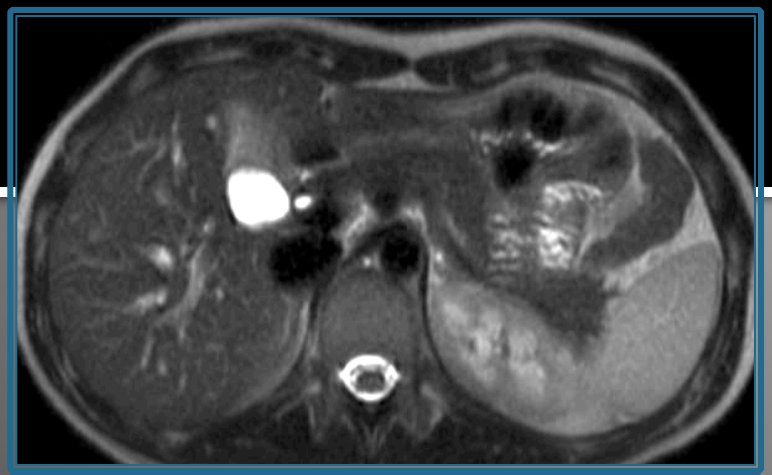
Complication des anastomoses cholédoco-duodénale

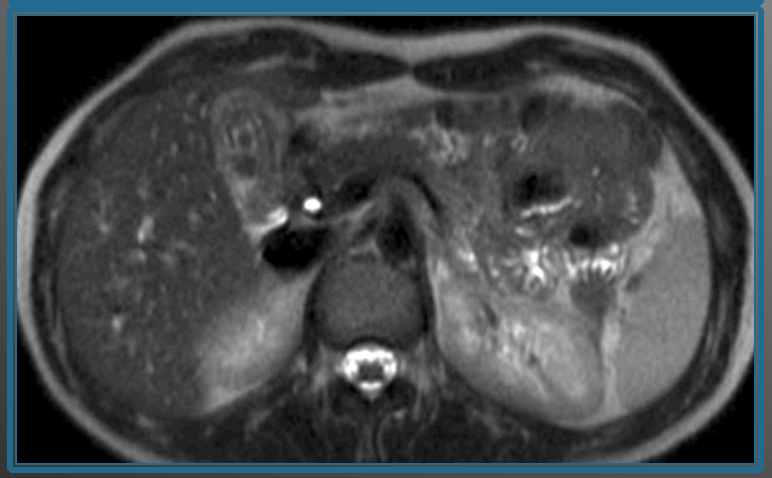
Obstruction biliaire et cholangitique Ilaire à accumulation de débris et de matériel ingéré dans les canaux biliaires par reflux

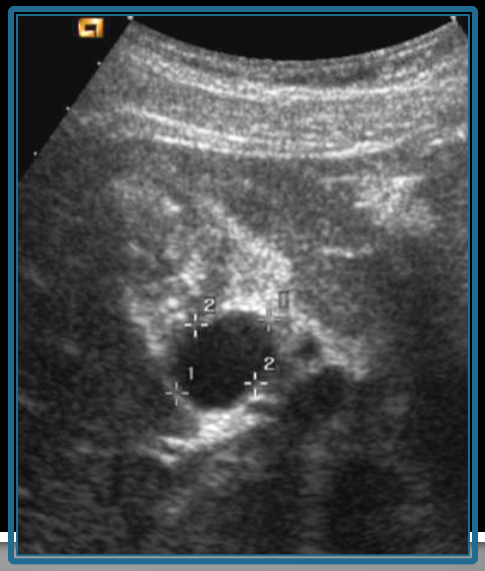
- 0.14 à 1.3%

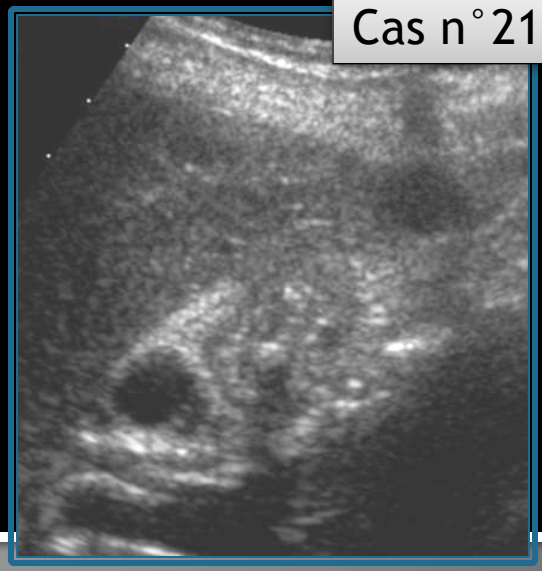
Cas n°21

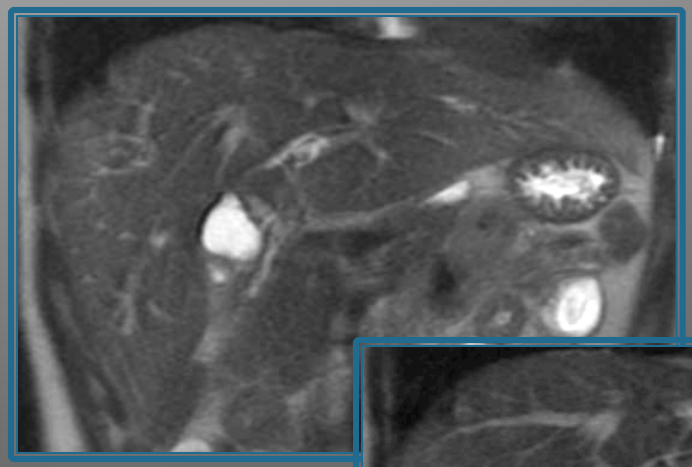
Femme 21 ans
Cholecystites à répétition

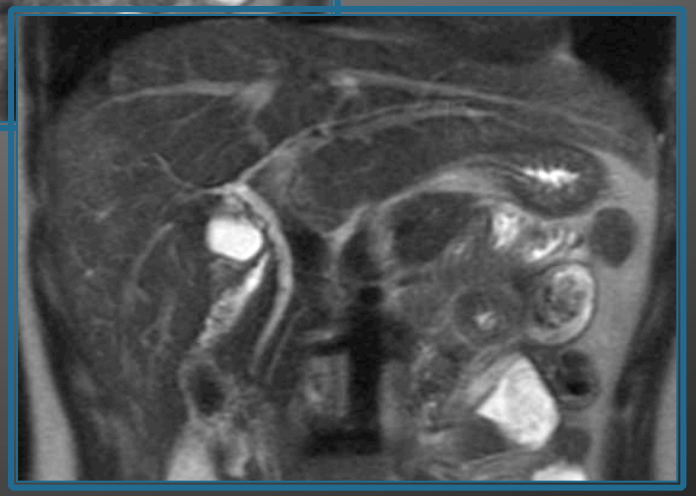


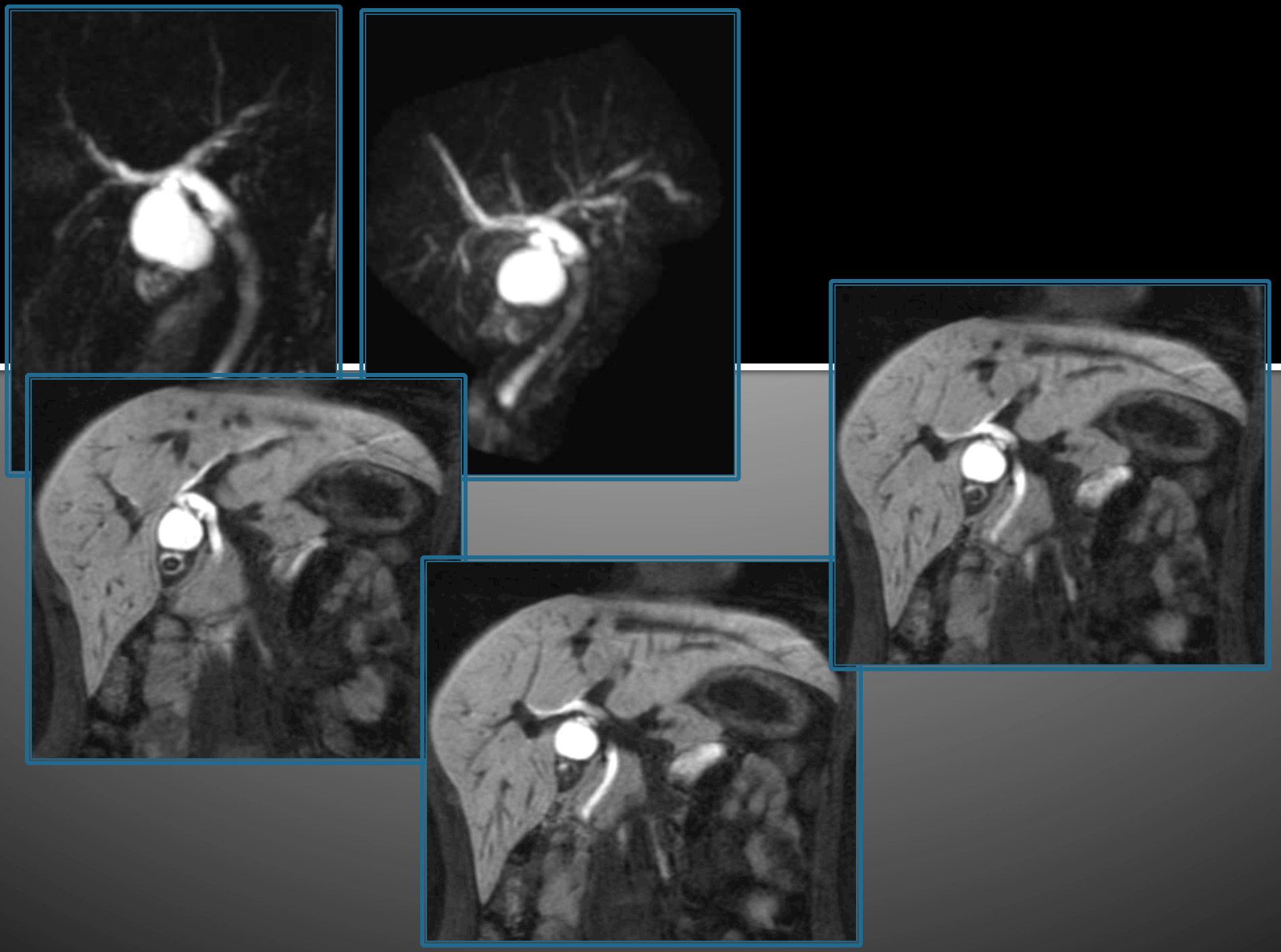


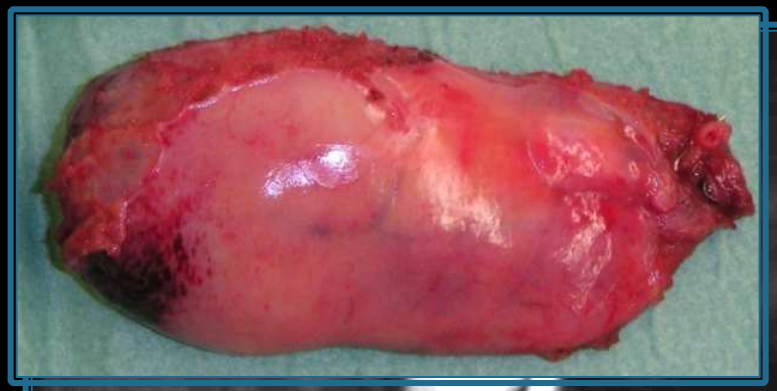


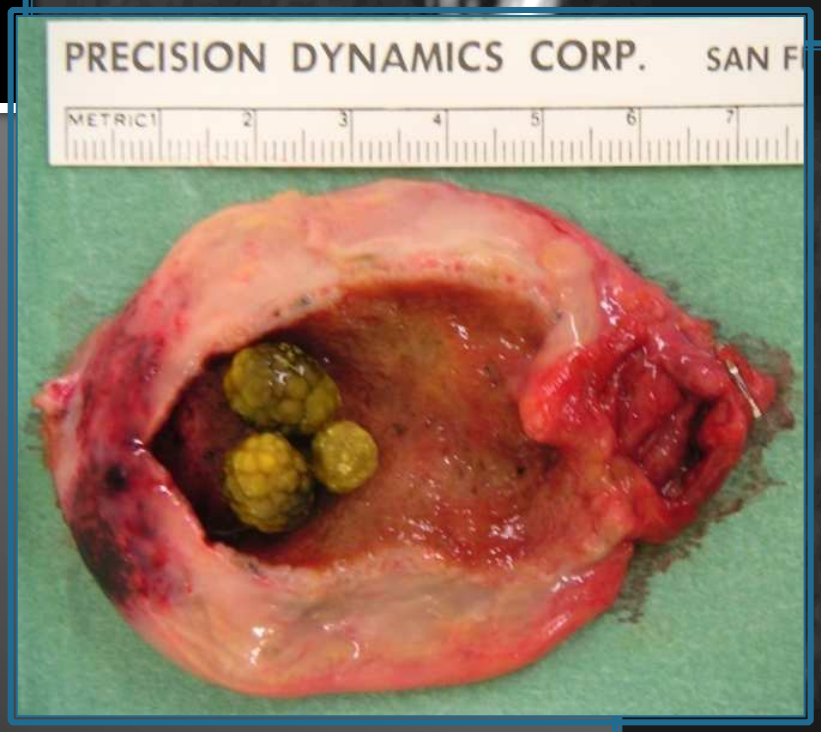


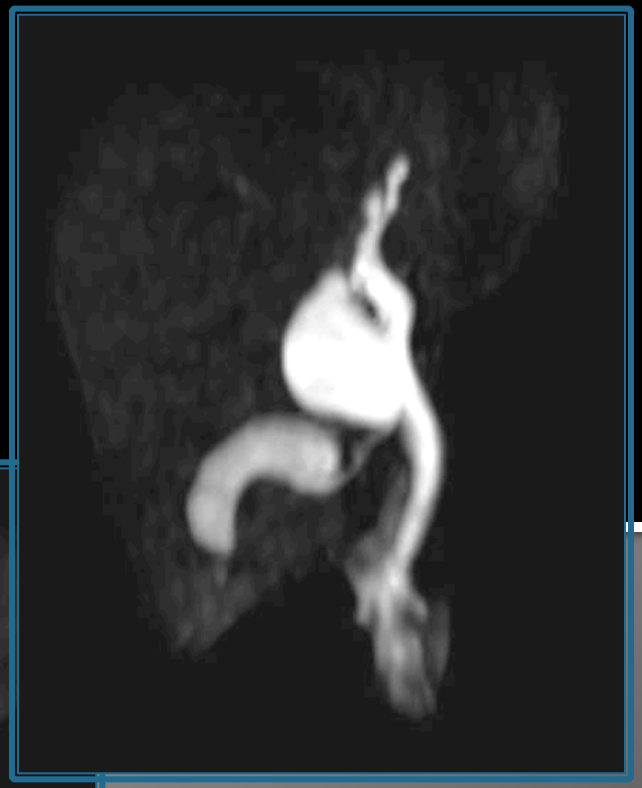


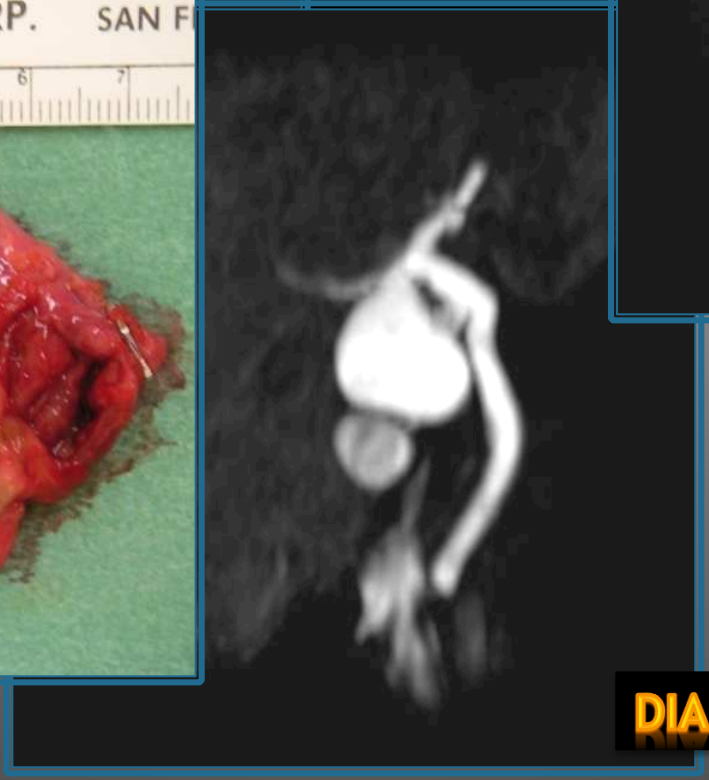








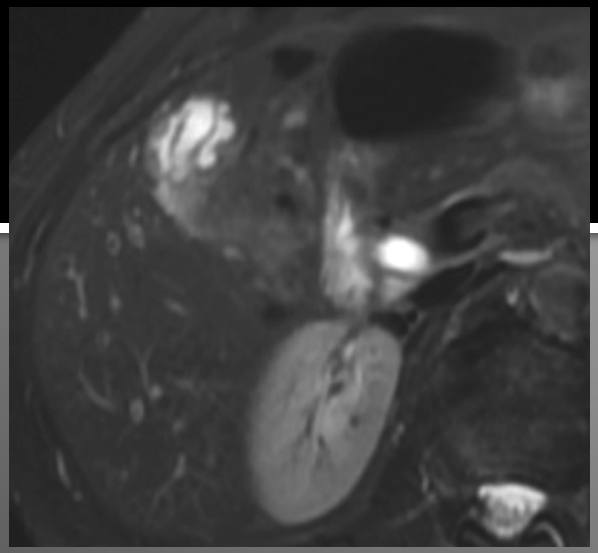
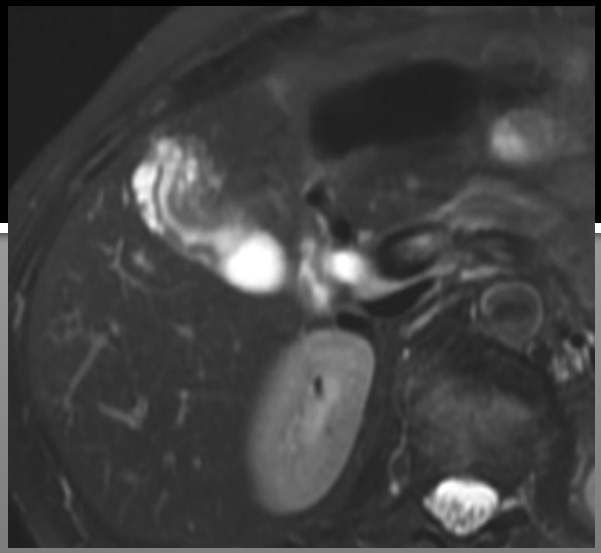
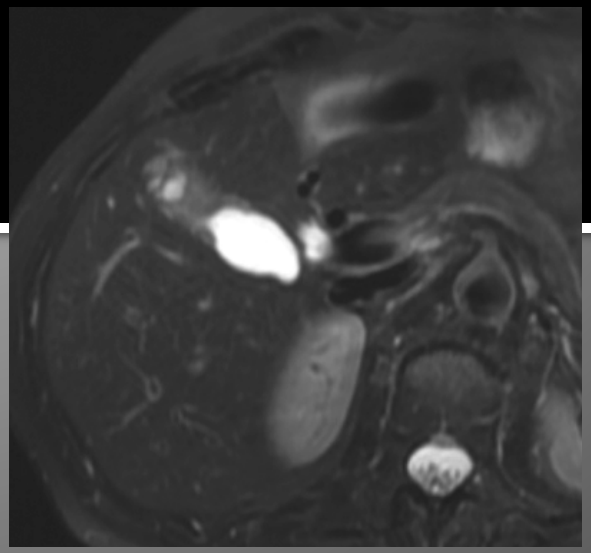
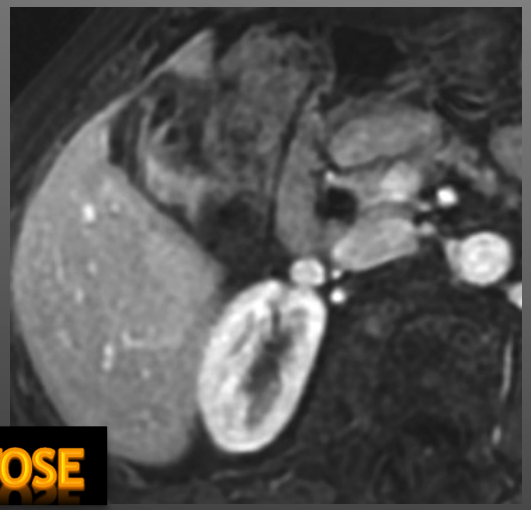
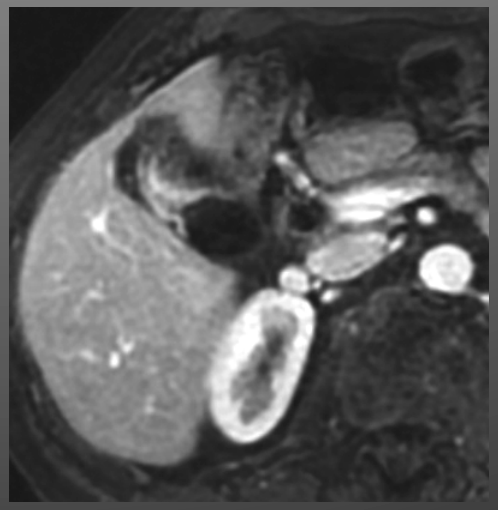




DIAPHRAGME VÉSICULAIRE

Cas n°22

Suspicion de migration lithiasique

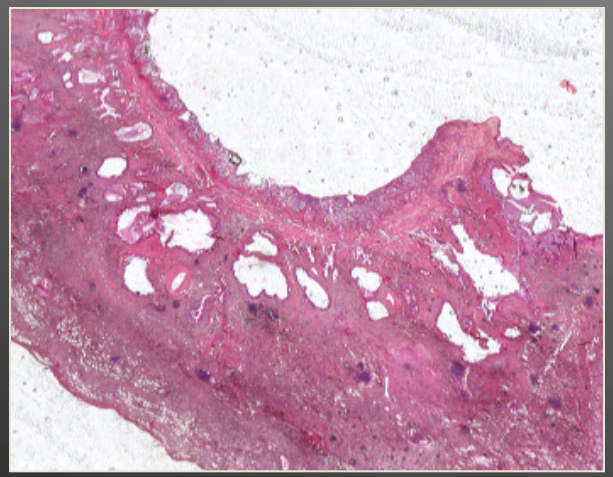






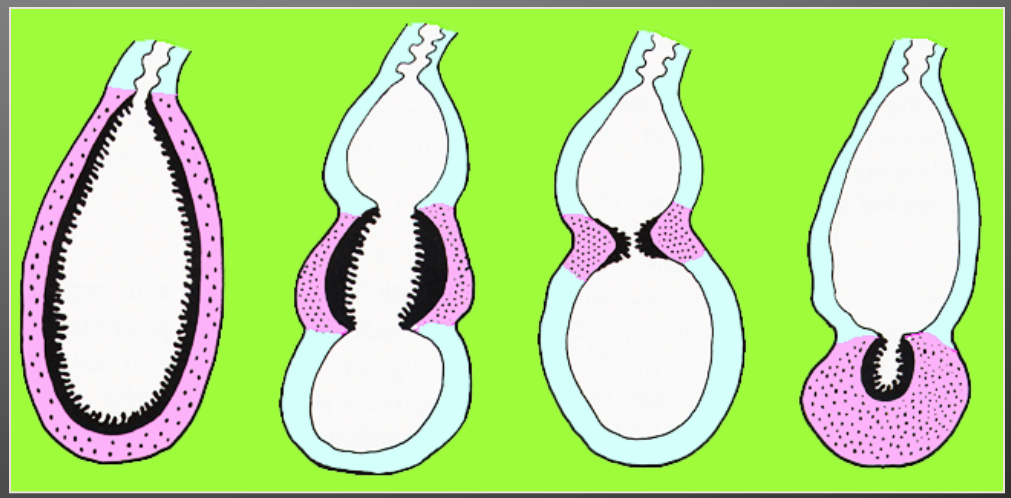
ADÉNOMYOMATOSE

Adénomyomatose

- **Fréquence :** 2 à 5 % des cholécystectomies
- **Asymptomatique,** maladie bénigne et non inflammatoire
- **Diagnostic :** Diverticules de ROKITANSKY-ASCHOFF
- 3F / 1H

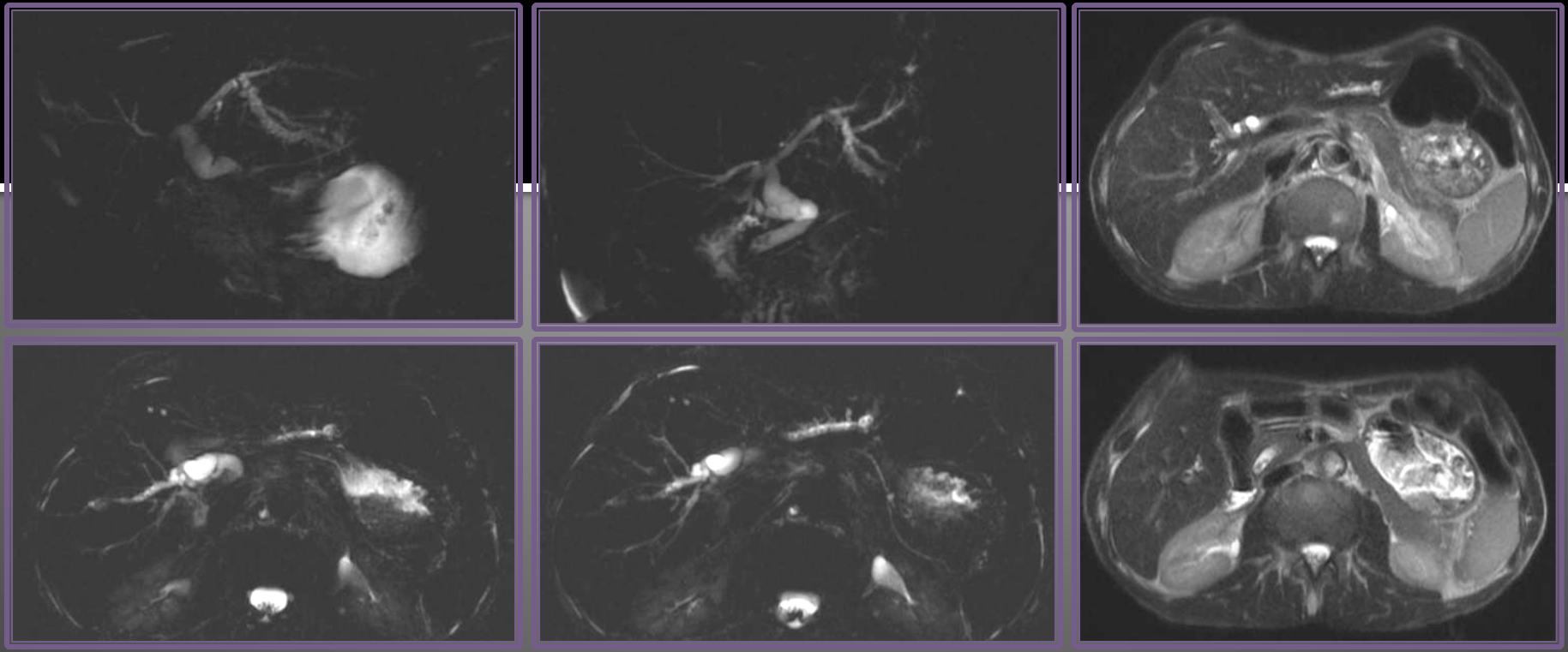
- **3 formes :**
  - diffuse
  - segmentaire : annulaire
  - localisée : fundus





Cas n°23

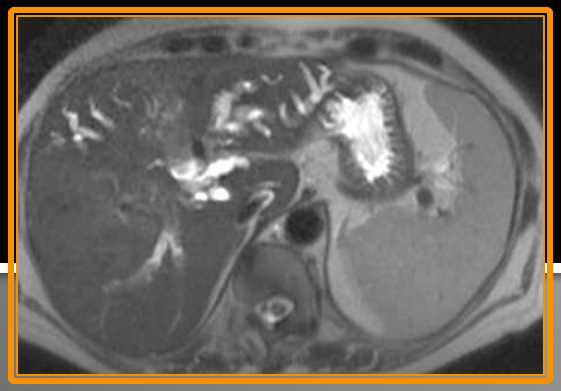
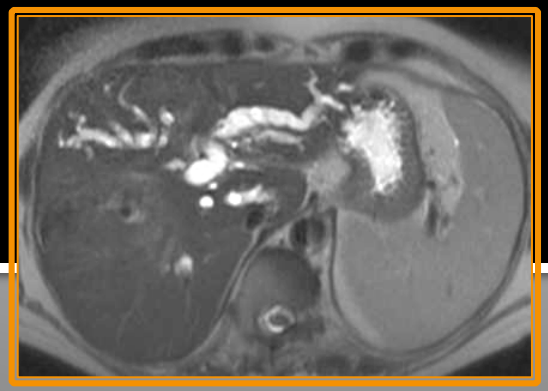
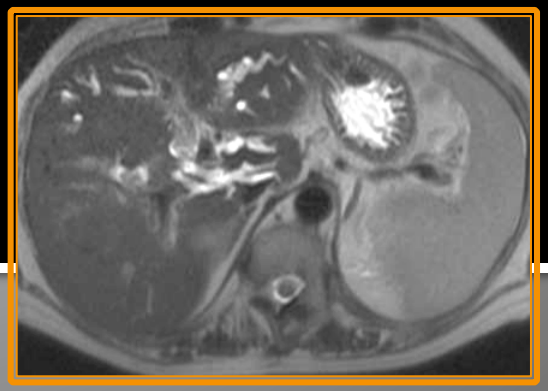
Femme 65 ans
ATCD de cholecystectomie
Douleurs abdo

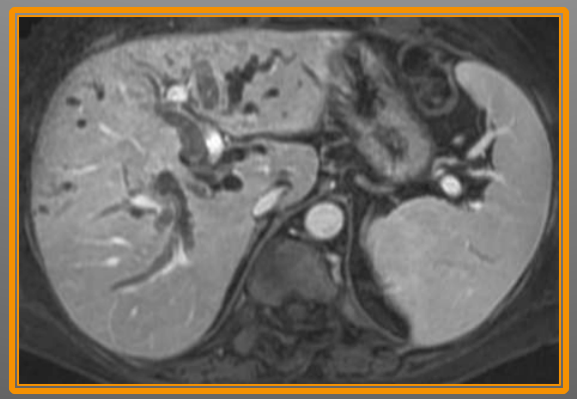
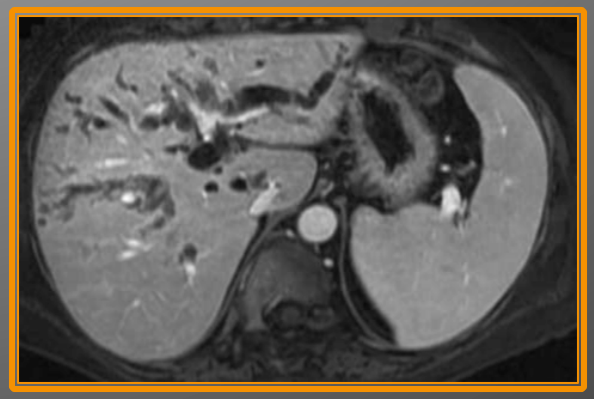


CALCULS DES VBIH

Cas n°24

Femme 51 ans
AEG, Ictère

MÉTASTASES ENDO BILIAIRES