- Tumeurs malignes

Lésions kystiques

II. Cirrhose et nodules

III. Surcharge en graisse et en fer

- **Lésions focales hépatiques**

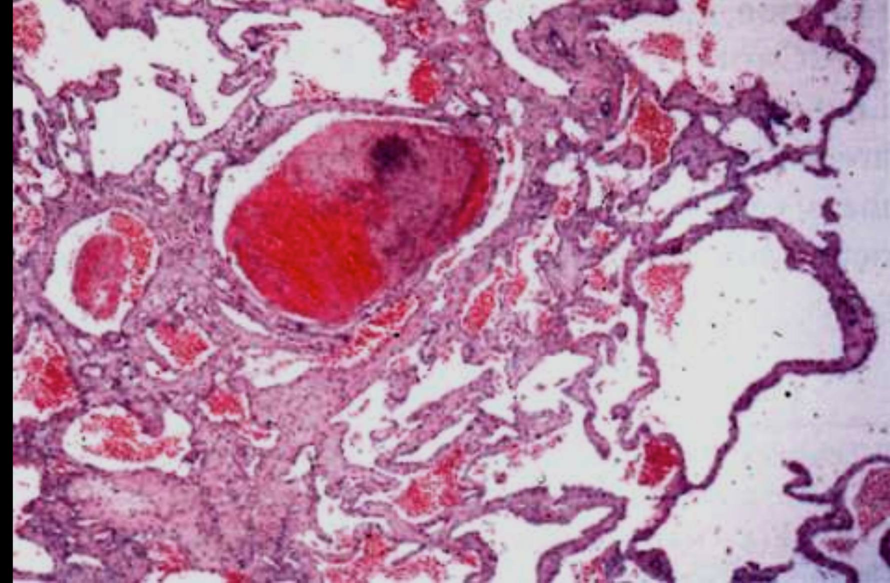
  - Tumeurs bénignes

    - Angiomes
    - Hyperplasie nodulaire focale
    - Adénomes

Angiomes

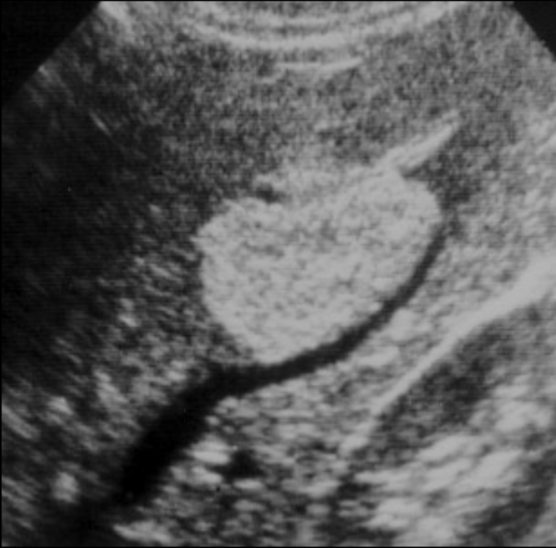
- Lésion bénigne la plus fréquente
- S' observe à tout âge
- Asymptomatique
- Pas de dégénérescence
- Diagnostic par imagerie : arrêt
  - pas de biopsie
  - pas de surveillance)
- Attention : contexte de cancérologie , à ne pas porter la diagnostic d' angiome par excès ou par défaut , nécessité d' une certitude diagnostique grâce aux données de l' imagerie

Angiomes

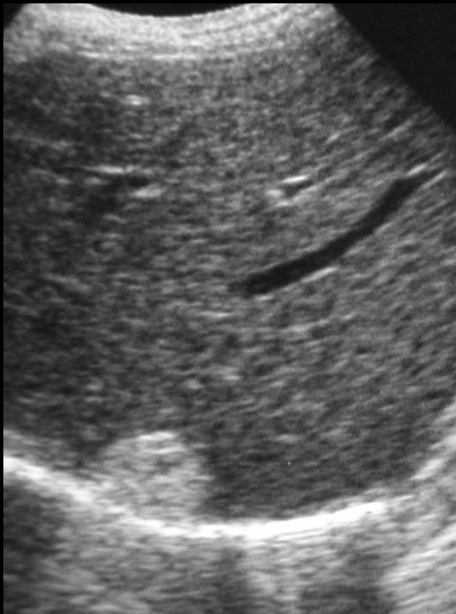


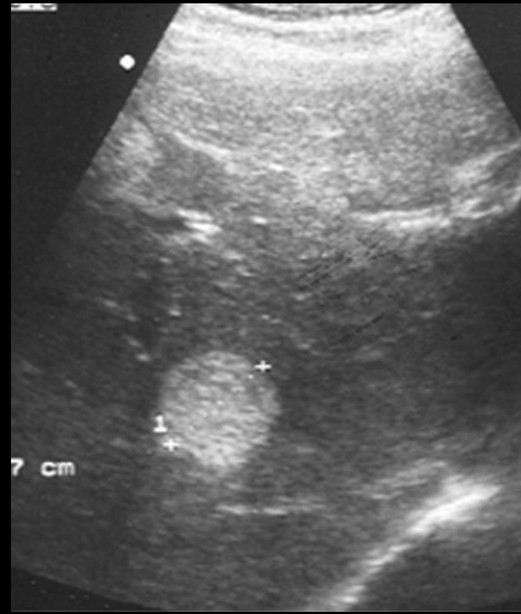
- Macroscopie : lésion unique de couleur rouge foncée
- Micro : lacs sanguins de taille et de forme variable

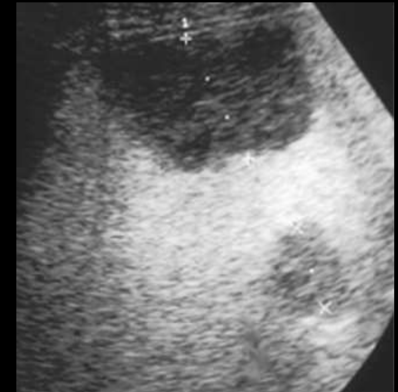
Angiomes : échographie



- Lésion hyperéchogène
- Limites nettes
- Renforcement acoustique postérieur
- Qd lésion volumineuse : hétérogène
- Si doute : Echo de contraste

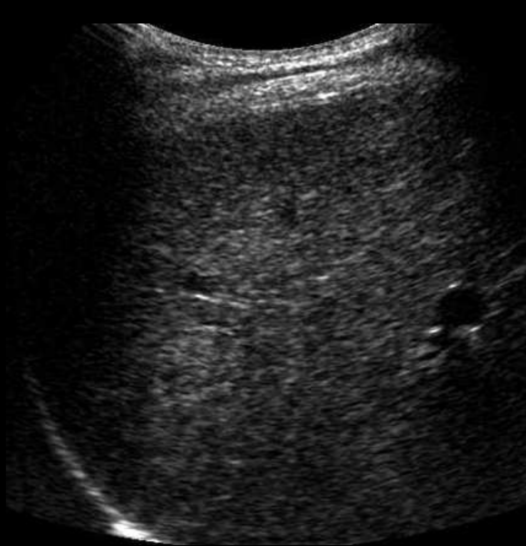
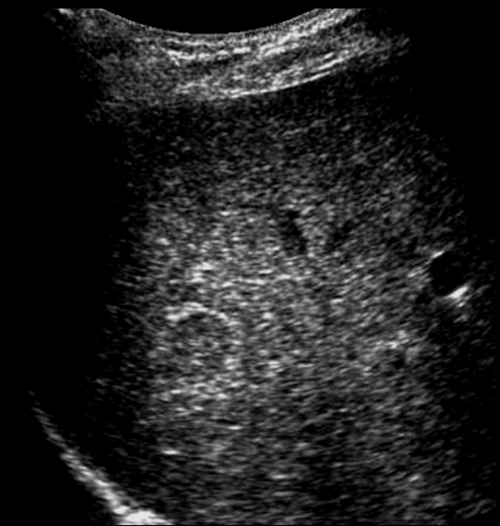
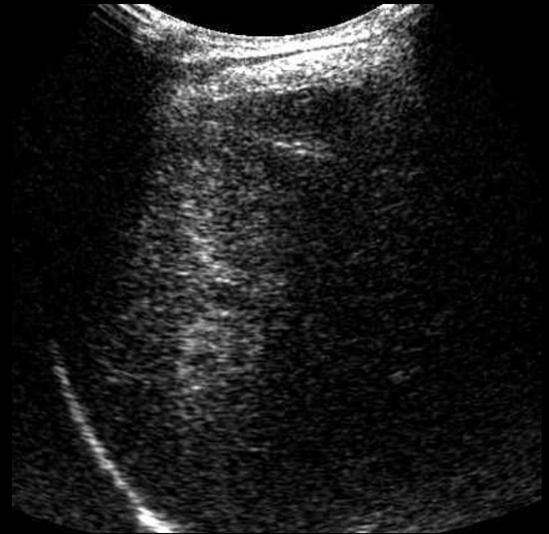
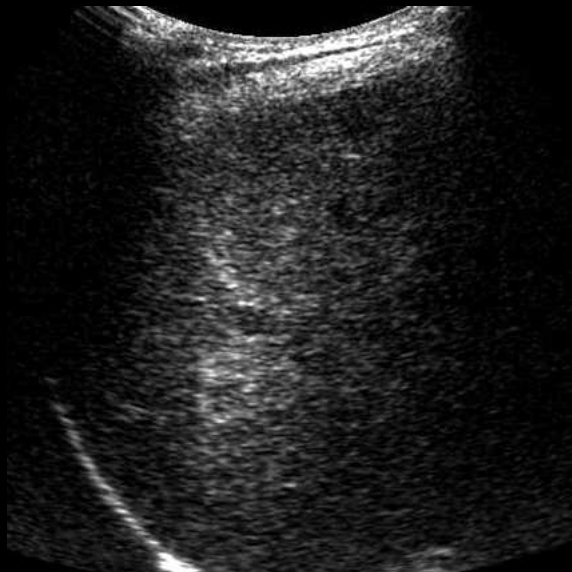
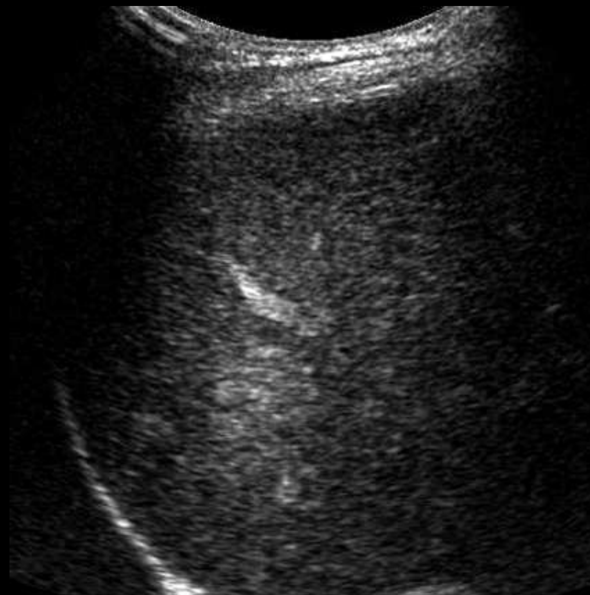
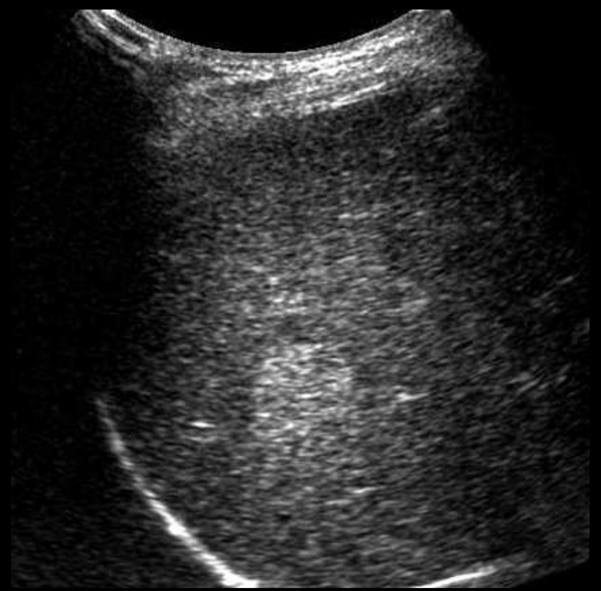




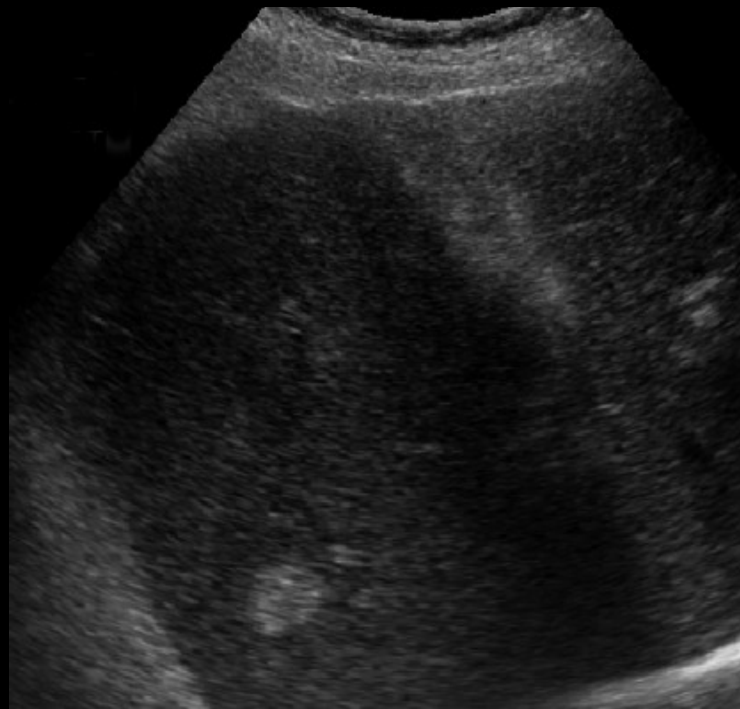


- Attention foie stéatosique
  - Lésion **hypoéchogène**

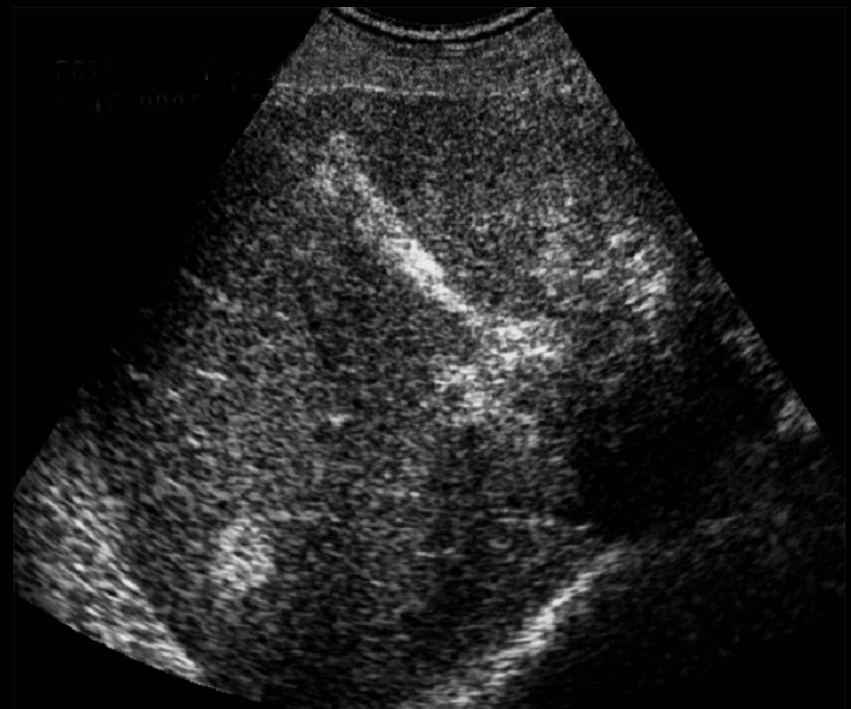
Angiomes: échographie avec injection de produit de contraste

Angiomes: échographie avec injection de produit de contraste



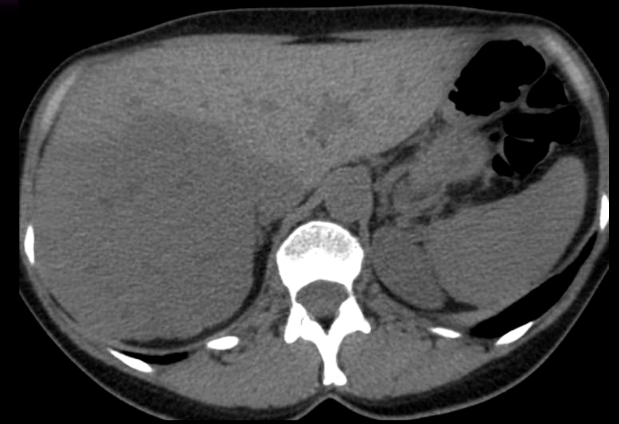
Sans injection

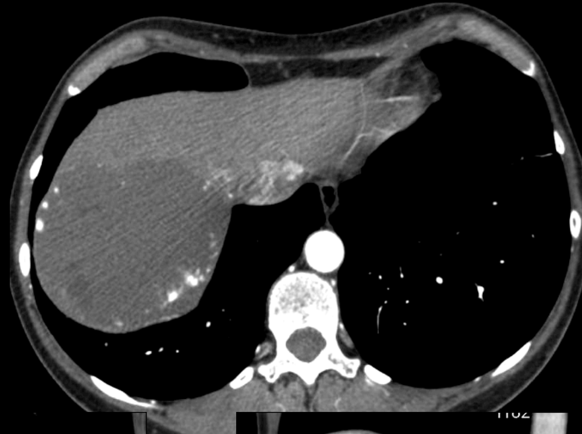


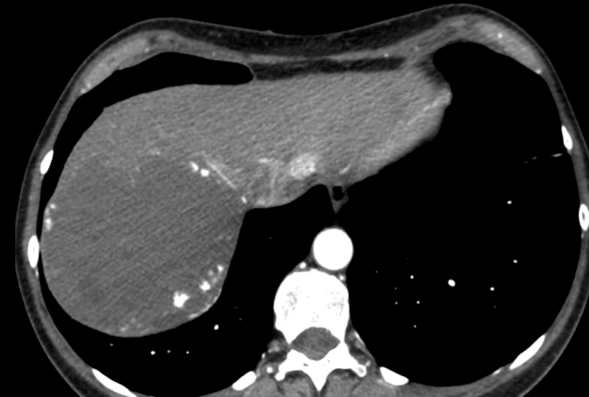
60 secondes

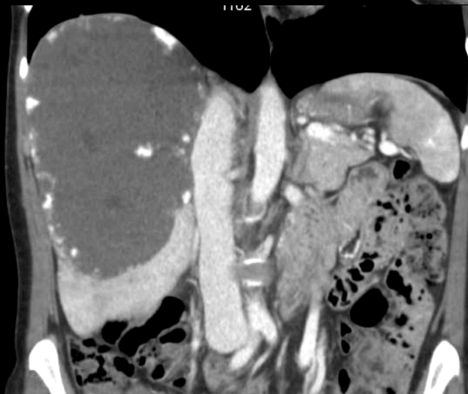
Angiomes : aspects scanographiques

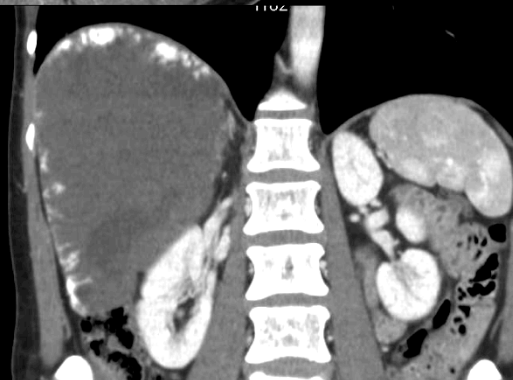
- Lésion hypodense avant injection
- Prise de contraste périphérique en flaques (mottes) et remplissage centripète
- Persistance de rehaussement au temps tardif
- Parallélisme de rehaussement entre l'angiome et structures artérielles

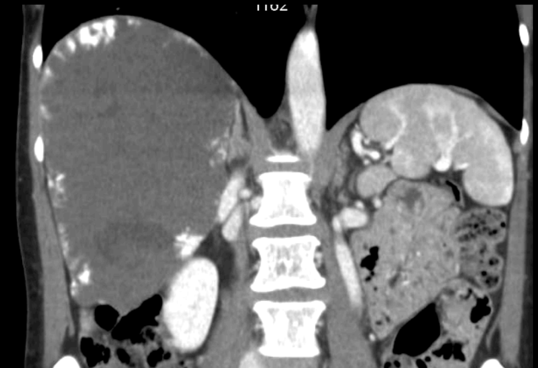




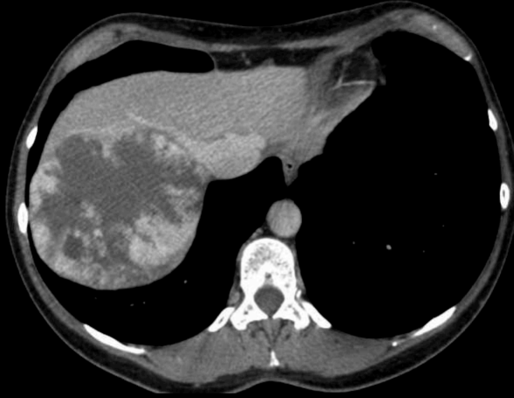
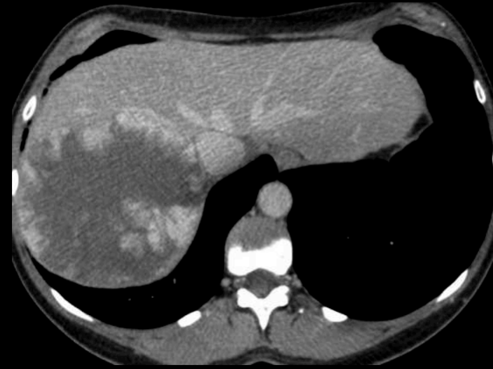
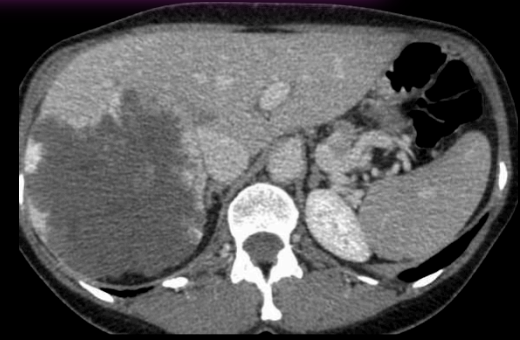
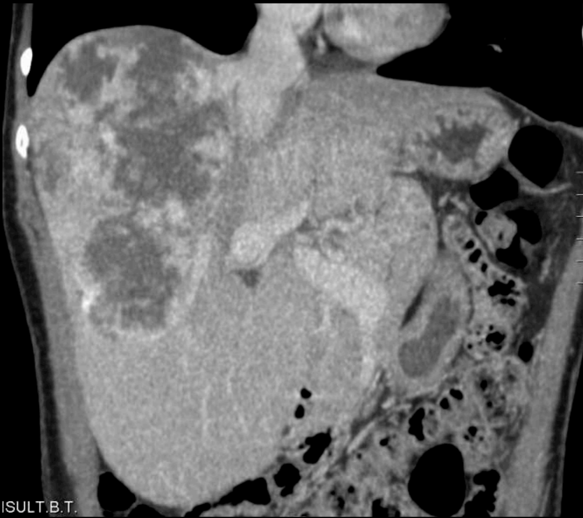


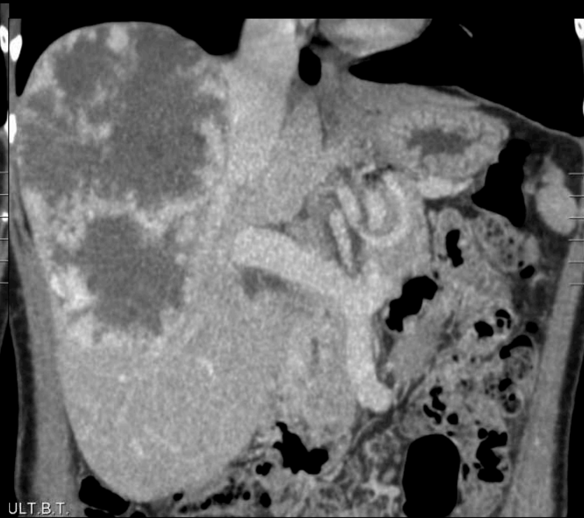


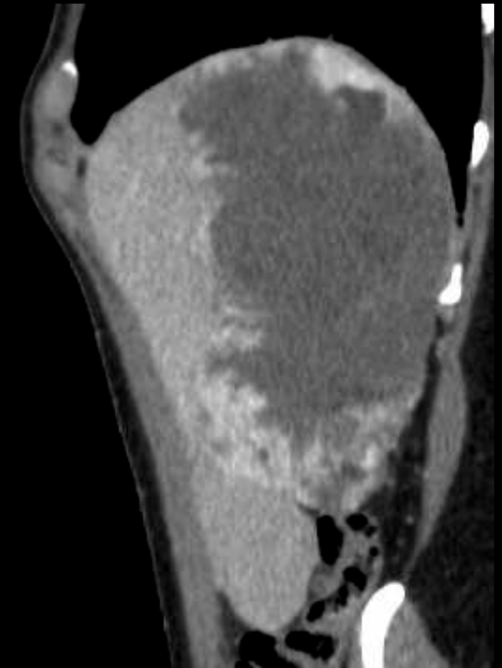




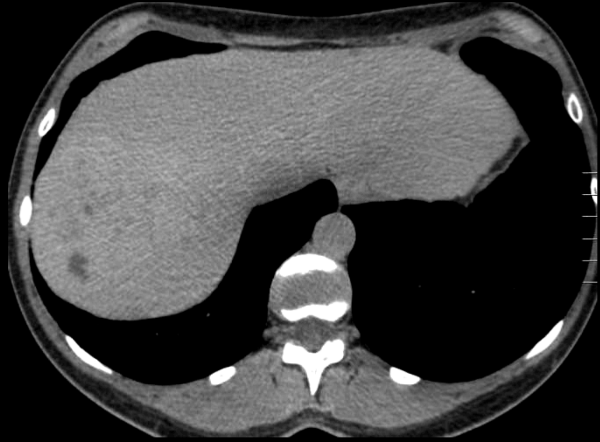
Angiomes : aspects scanographiques

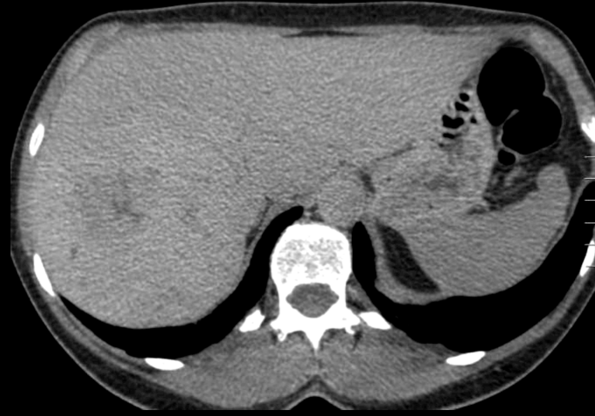





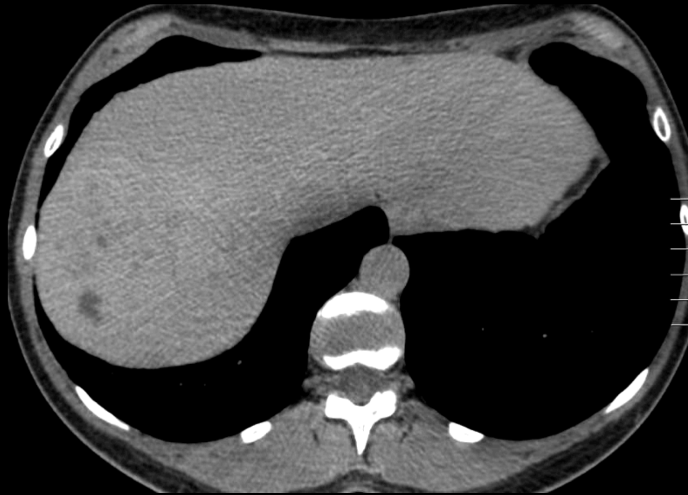


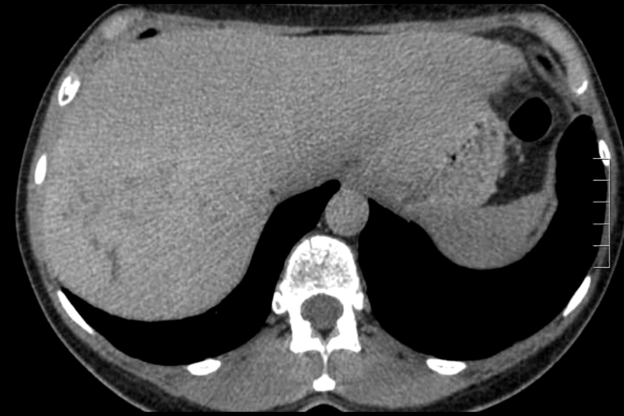


Angiomes : aspects scanographiques



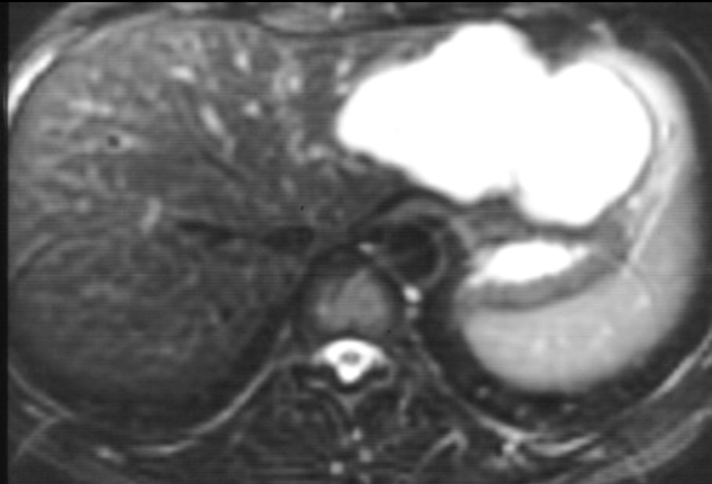


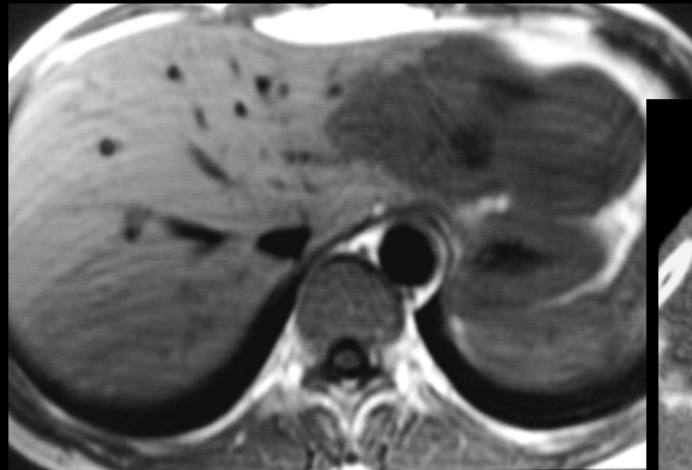


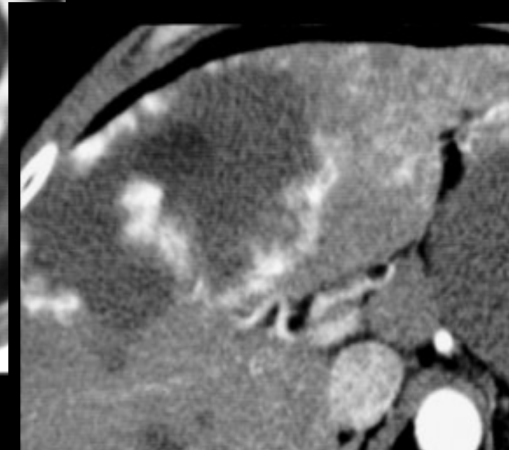


Angiomes : aspects en IRM

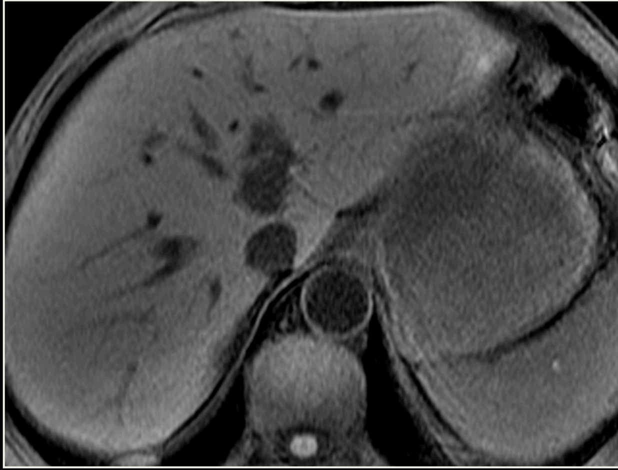
- HYpointense en pondération T1
- Hyperintense en pondération T2 (signal équivalent à celui du LCR)
- Prise de contraste périphérique en flaques (mottes) et remplissage centripète
- Persistance de rehaussement au temps tardif
- Parallélisme de rehaussement entre l'angiome et structures artérielles

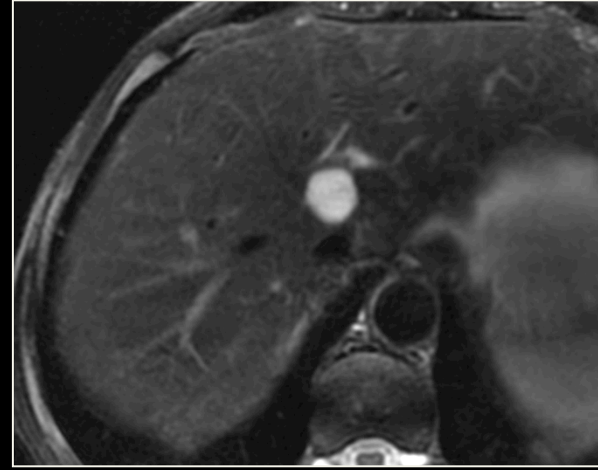


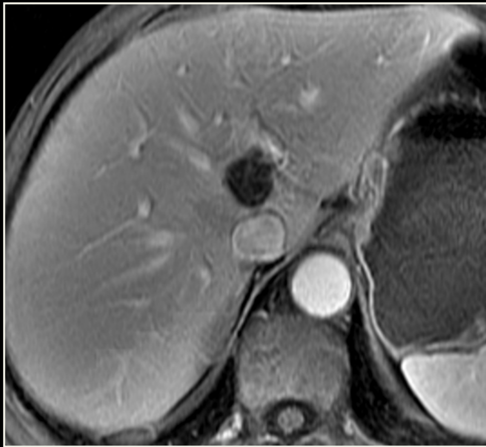


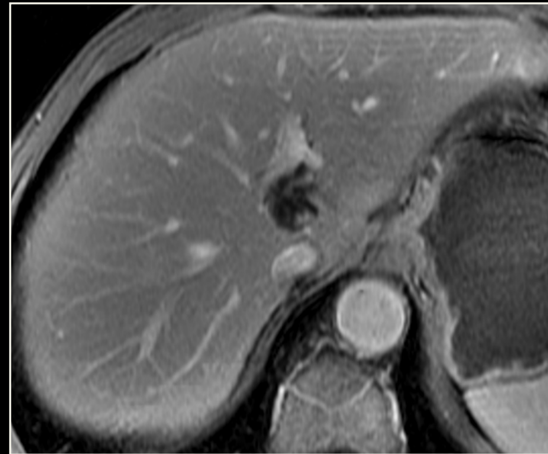


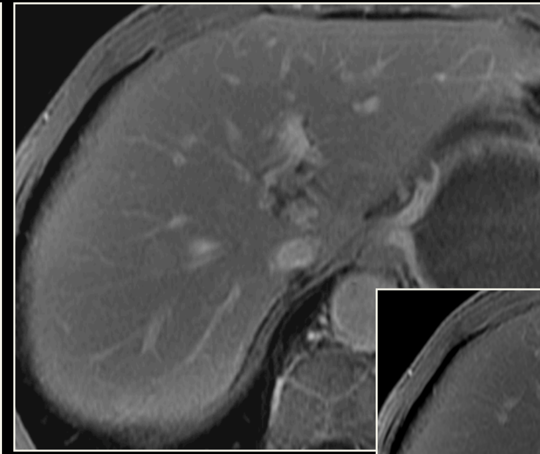
Angiomes : aspects en IRM

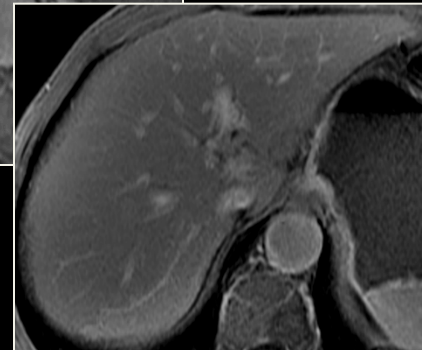




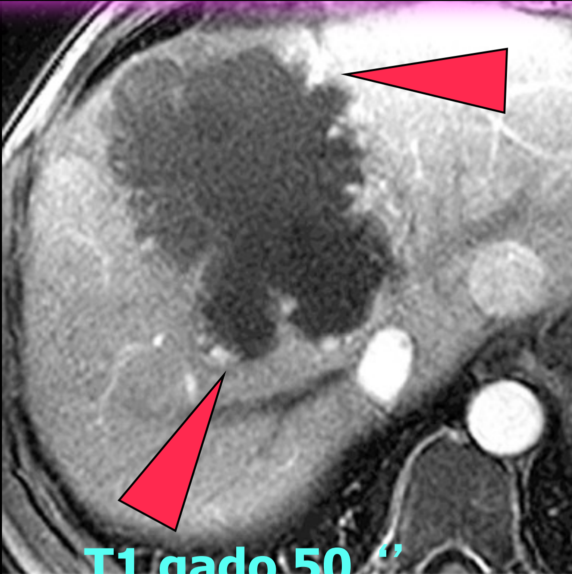


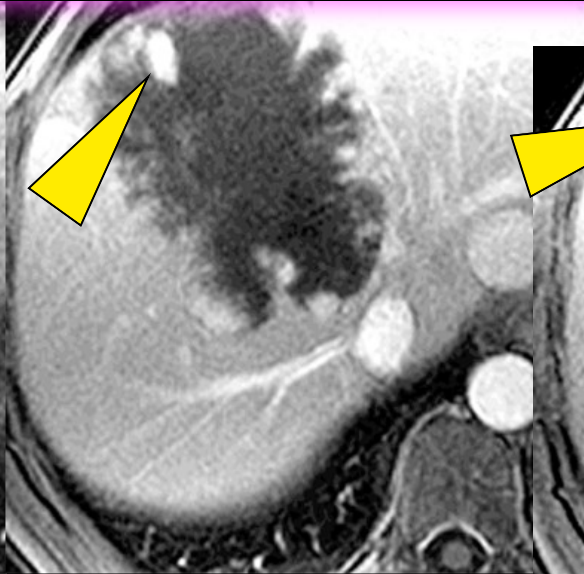


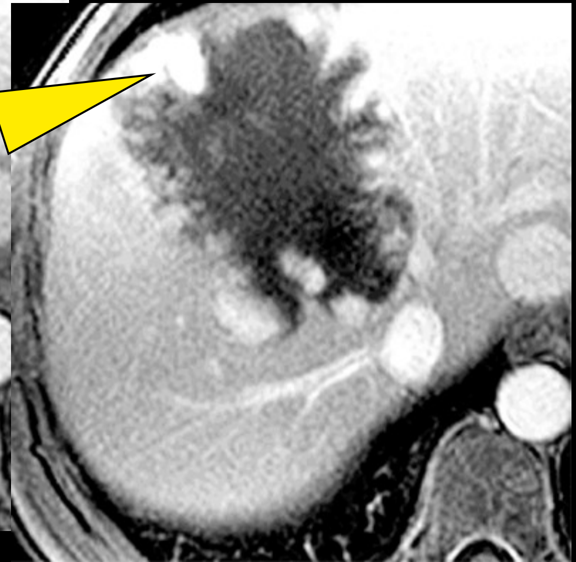


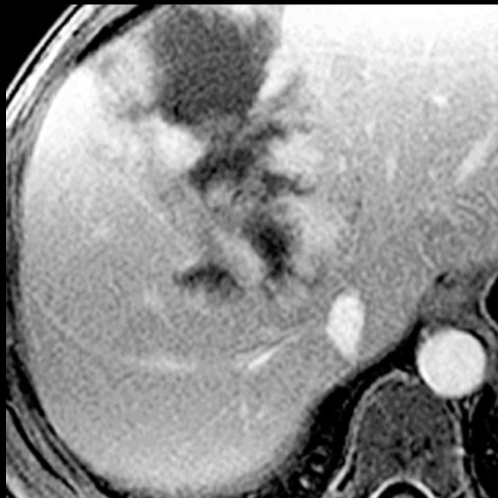


Angiomes : aspects en IRM

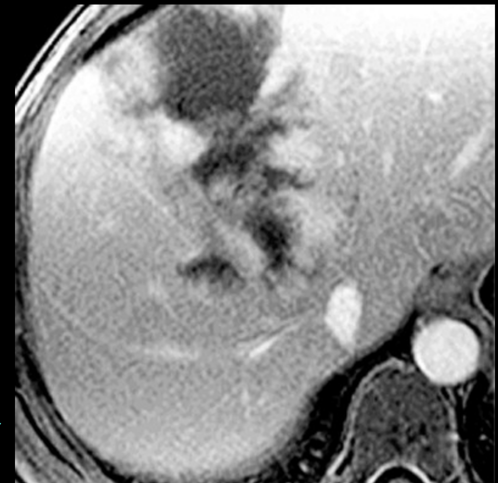

T1 gado 50 ''


T1 gado 1' 30


T1 gado 1' 30


T1 gado 3 '

angiome géant


T1 gado 30 '

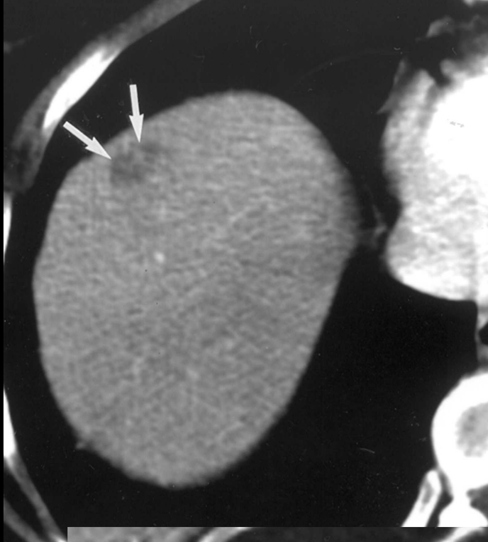
Angiomes : Difficultés diagnostiques

- **Angiome de petite taille (10-20 mm)** :
  - délicat de mettre en évidence le rehaussement en flaques
  - Contexte de bilan d'extension cancer, attention à ne pas confondre angiome de petite taille et métastase (compléter par autres examens echo et ou IRM)

- **Angiome à circulation rapide :**
  - Lésions de petite taille inférieure à 20 mm
  - Prise de contraste intense et homogène à la phase artérielle
  - **Critères diagnostiques**
    - Rehaussement parallèle à celui des structures artérielles
    - Persistance au temps tardif (pooling)
    - Hypersignal T2 franc +++

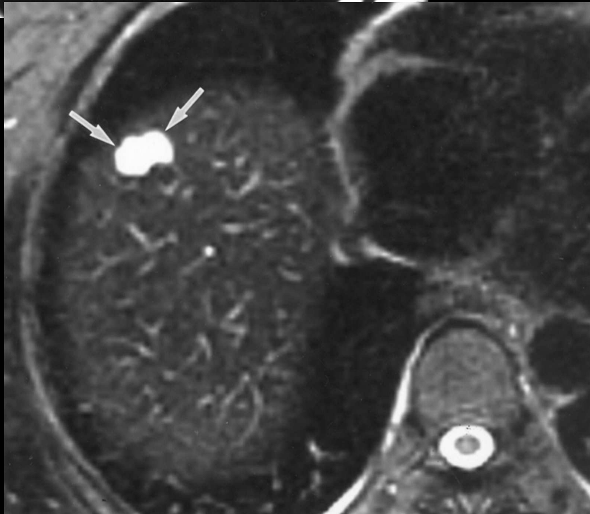
Angiomes : Difficultés diagnostiques

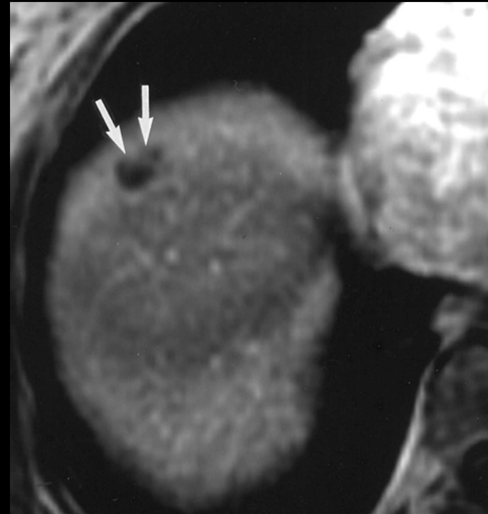
Homme 56 ans, surveillance post chirurgicale d'un K sigmoïdien

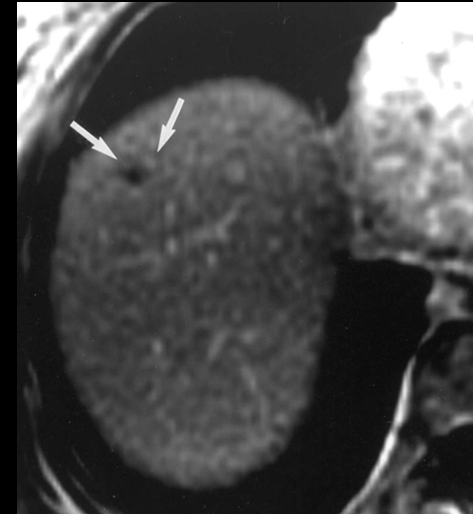


Difficultés diagnostiques

Contextes néoplasiques





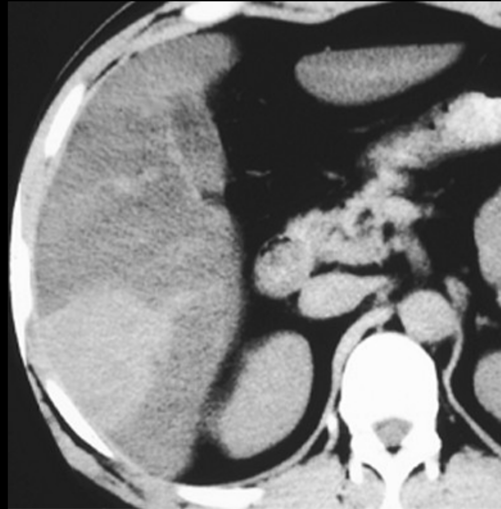


Angiomes : Difficultés diagnostiques

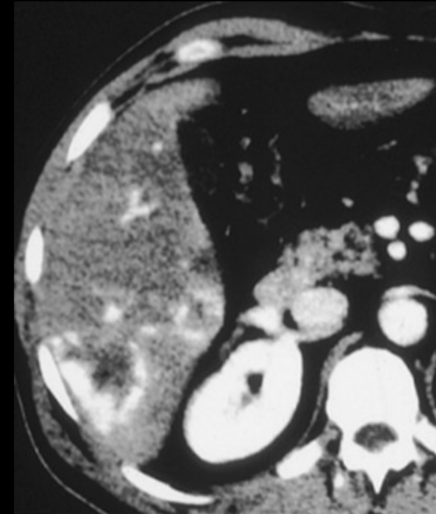
- **Angiome avec shuunt artério veineux**
  - Plus fréquent pour les angiomes à flux rapide
  - Rehaussement artériel en périphérie de la lésion
- **Angiomes géants**
  - Aspect hétérogène en pondération T2
  - Signal T2 pas complètement homogène
- **Angiomes à flux lents**
  - Rehaussement très tardif
  - Absence de rehaussement au temps précoce
- **Angiomes scléreux**
  - Tissu fibreux prépondérant ++++
- **Angiomes sur stéatose**
  - Hyperdense en scanner : analyse du rehaussement
  - Aspect en hypersignal T2 +++++++

Angiomes : Difficultés diagnostiques

CT avt inj

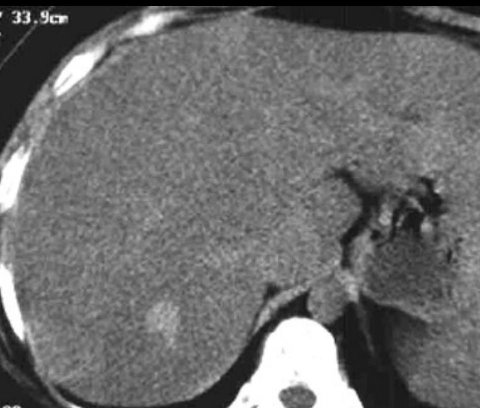


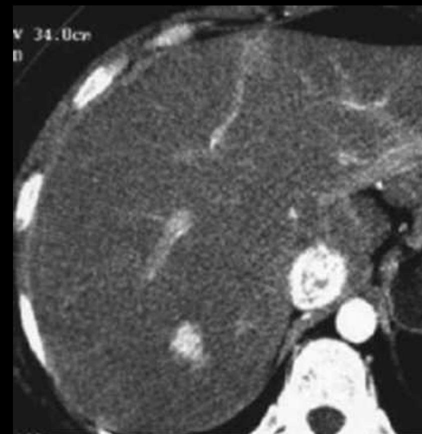
CT 1 ' 30

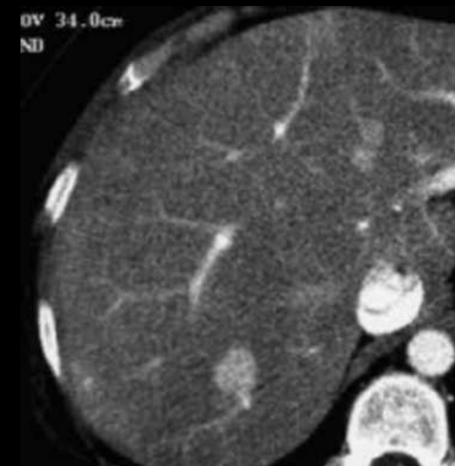


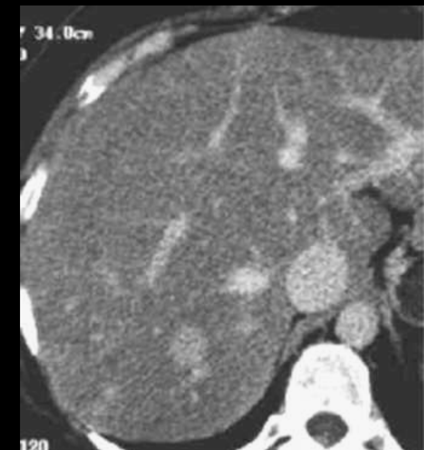
angiomes sur foie stéatosique ! !

CT avt inj



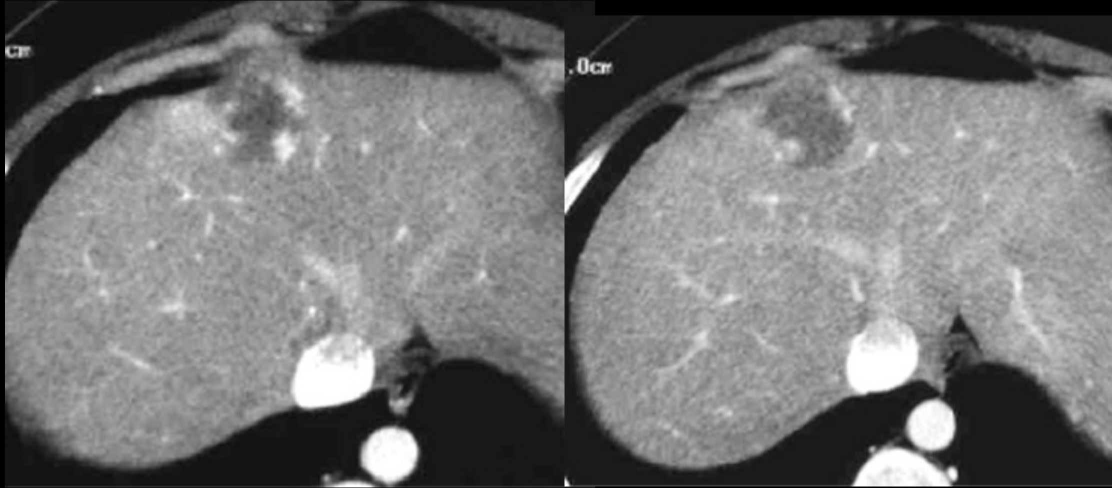






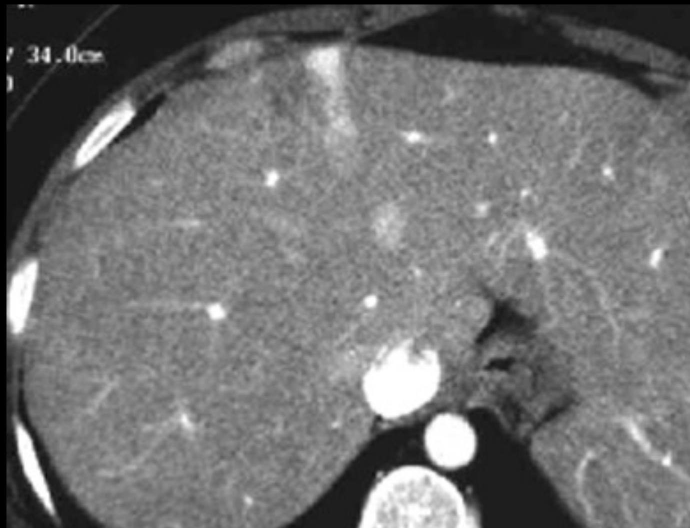
Angiomes : Difficultés diagnostiques

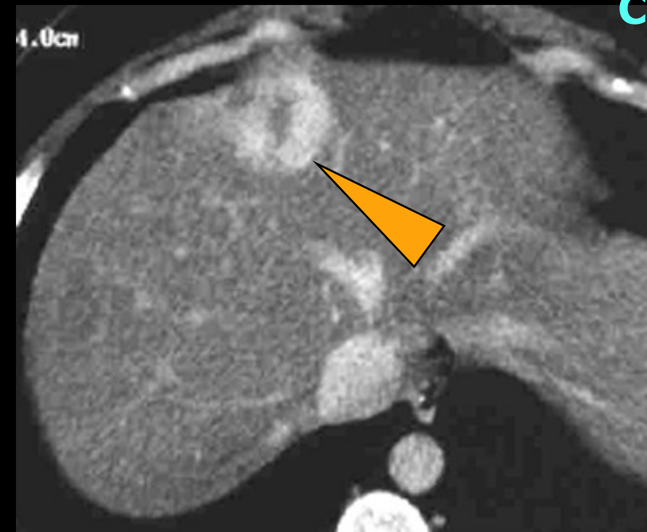
Angiomes avec shuunt artério veineux



CT 50 ‘’

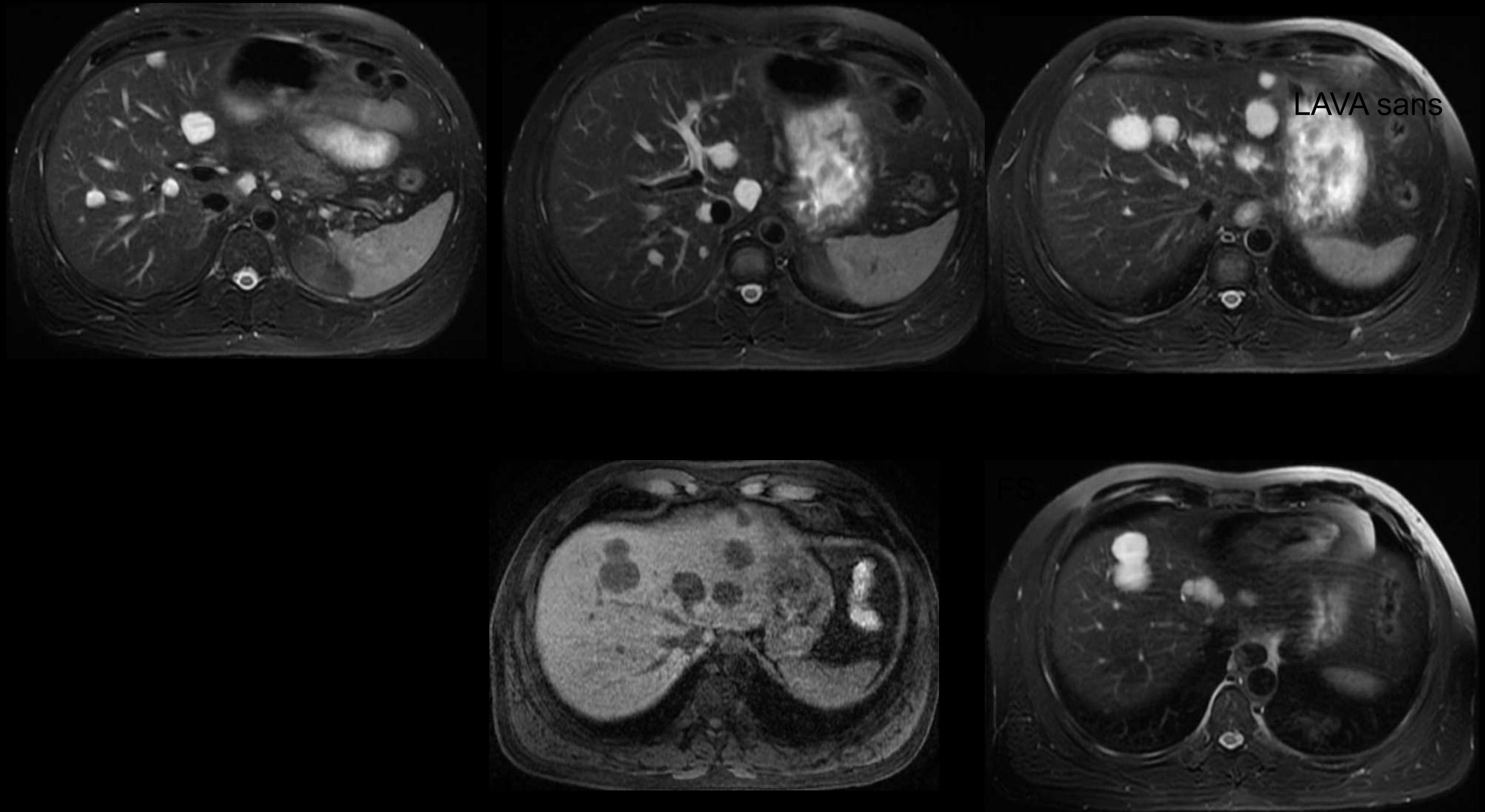
CT 3 ‘





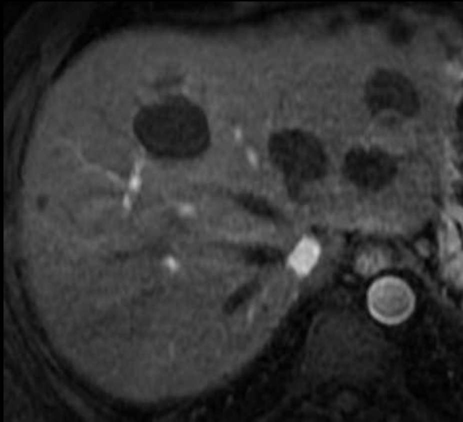
Angiomes : Difficultés diagnostiques

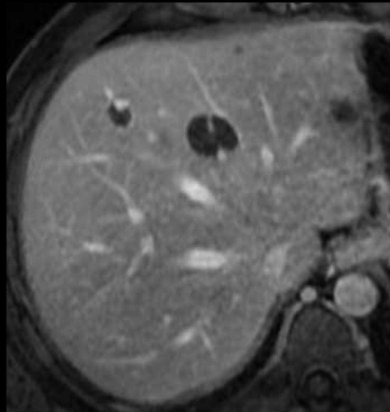
Angiomes à flux lent

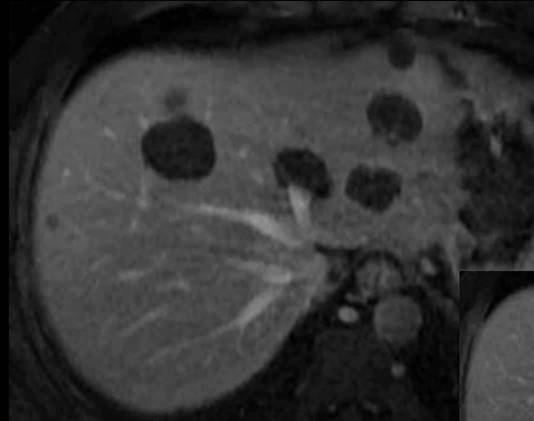


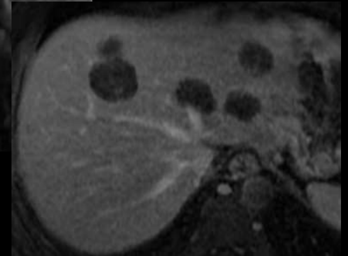
Angiomes : Difficultés diagnostiques

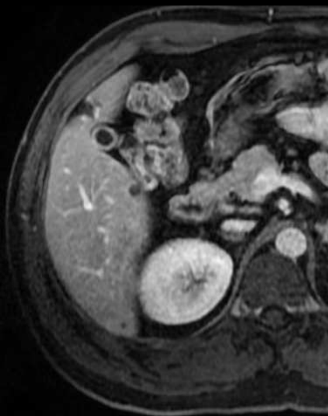
Angiomes à flux lent

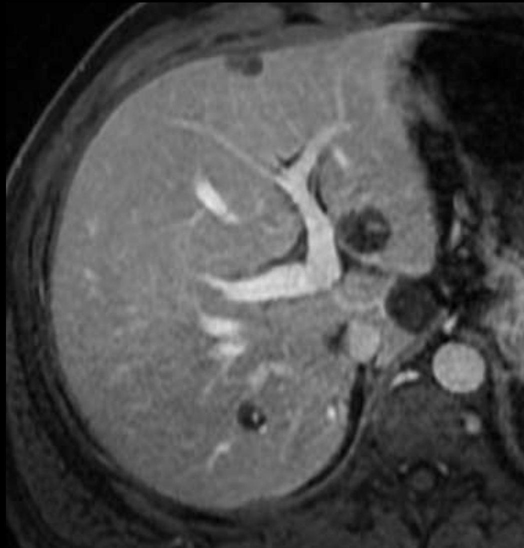


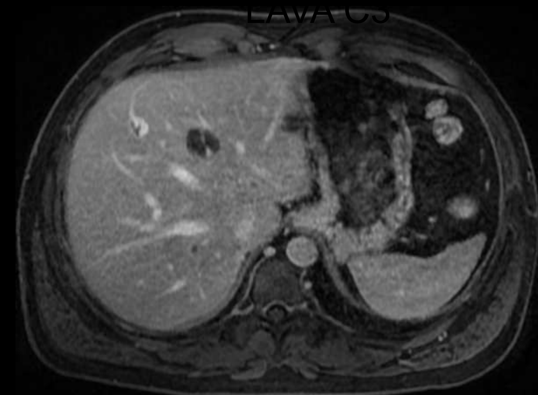




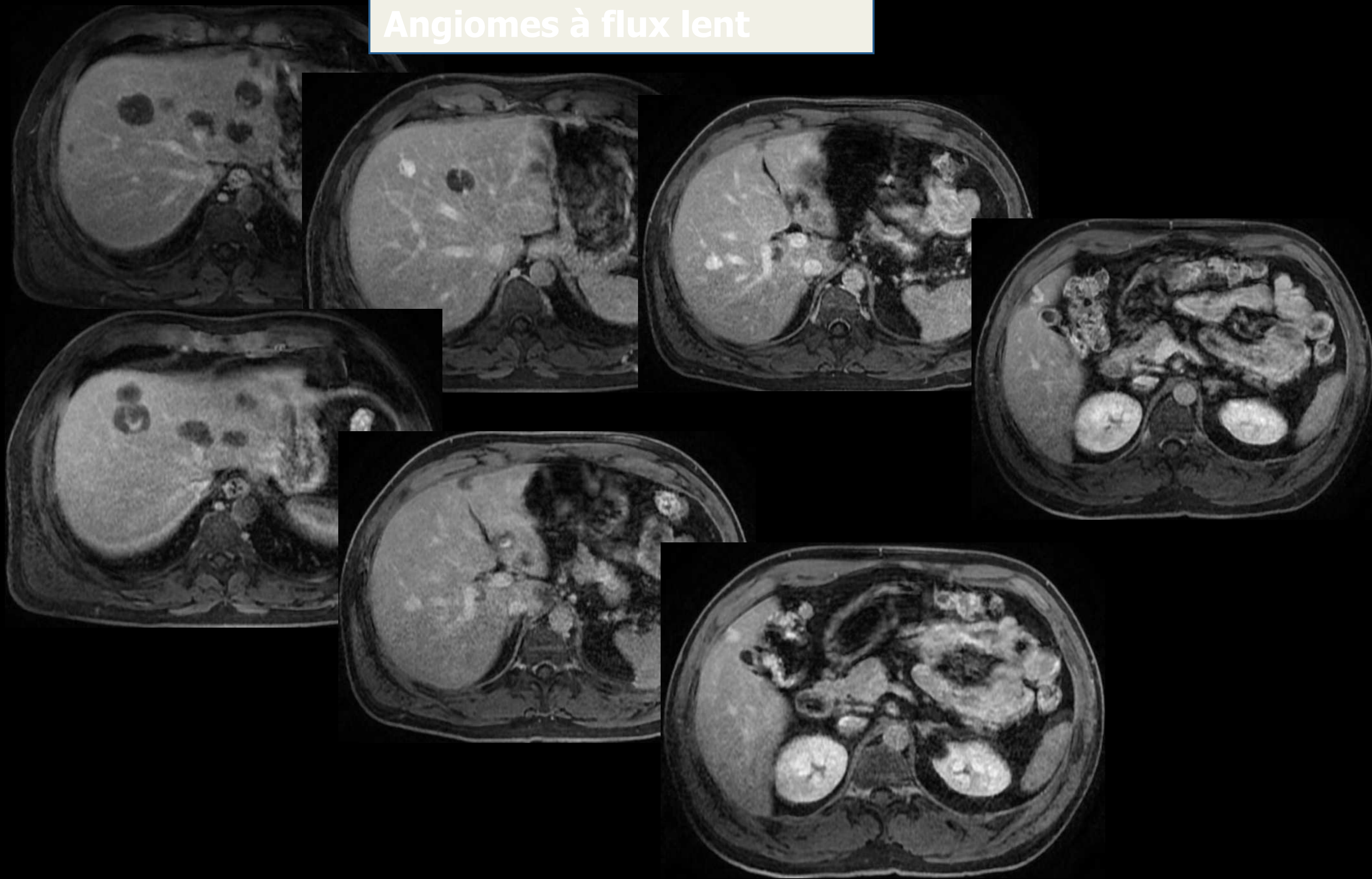




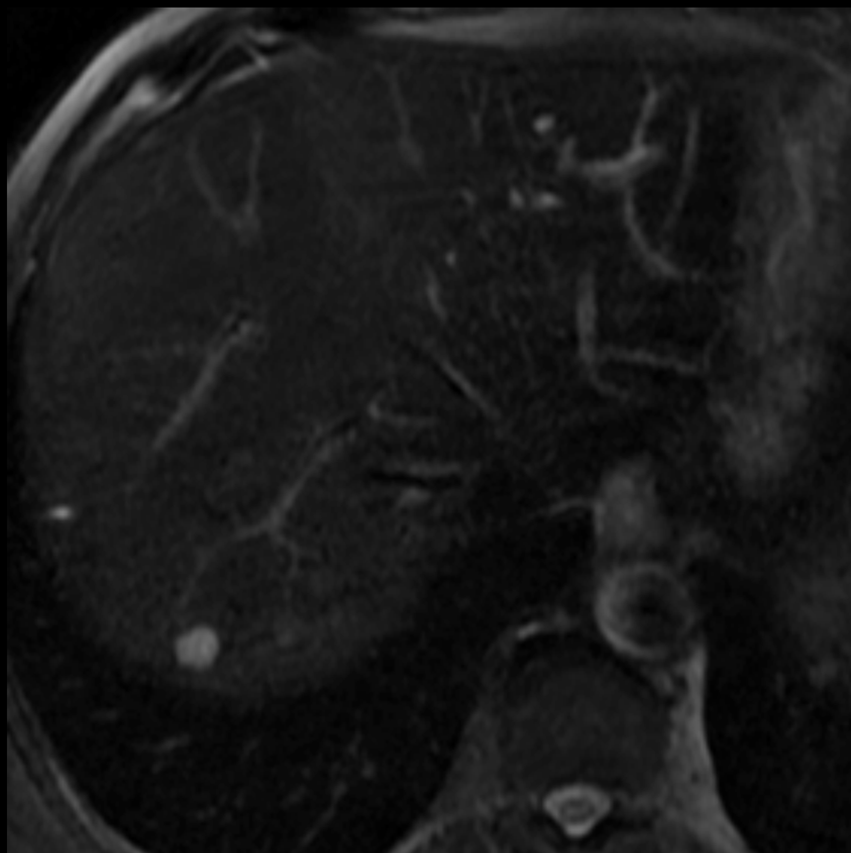




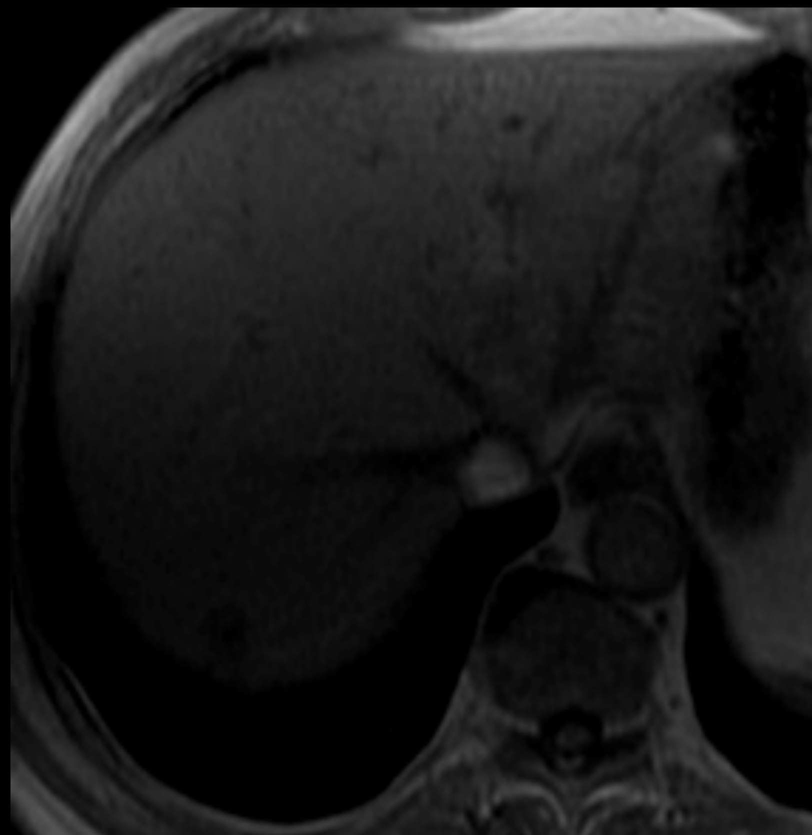
Angiomes : Difficultés diagnostiques



Angiomes de petite taille



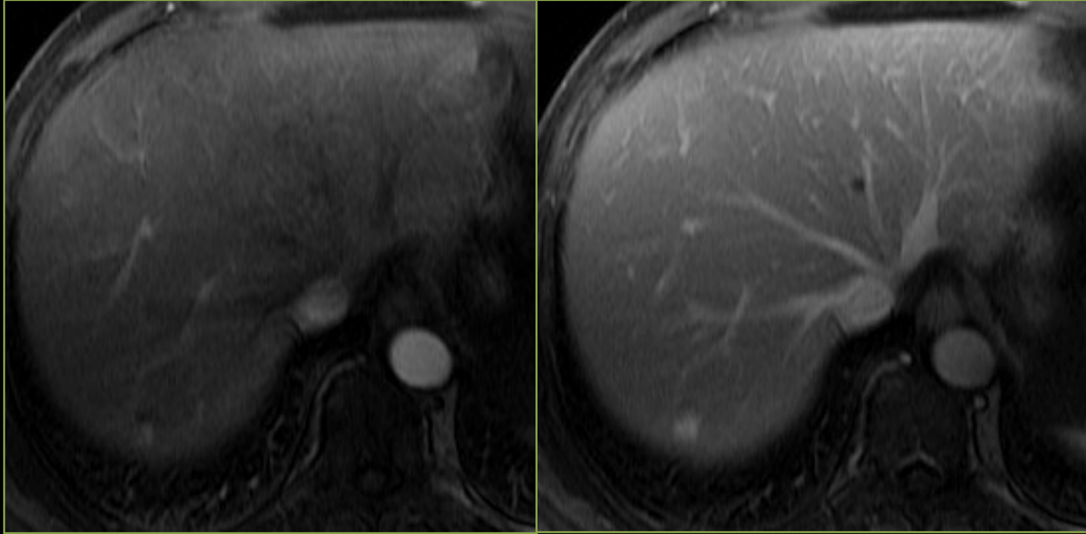
T2

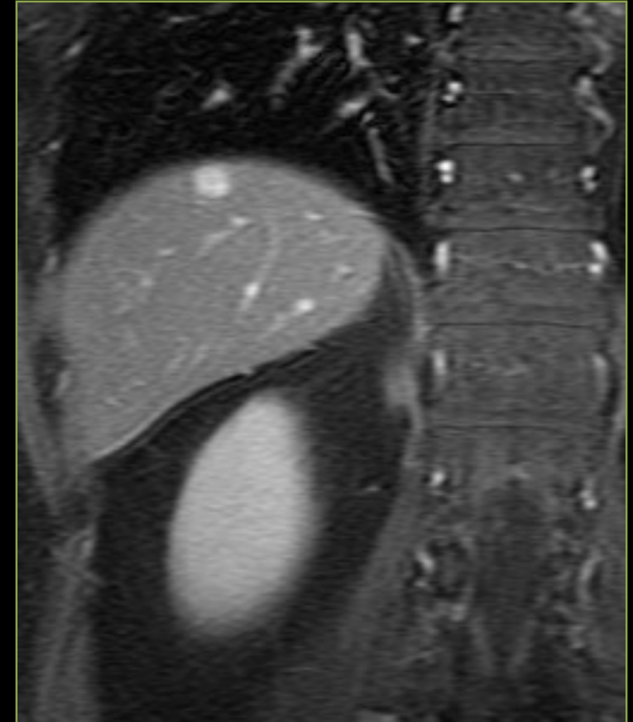


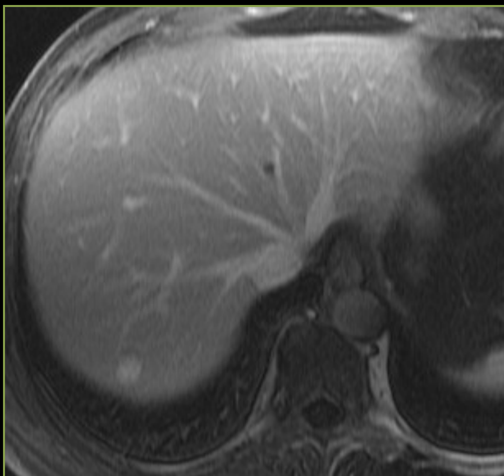
T1

Angiomes de petite taille

Dynamiques
ap. injection

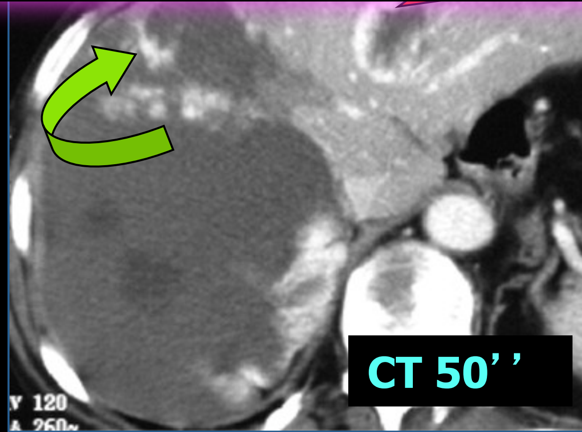


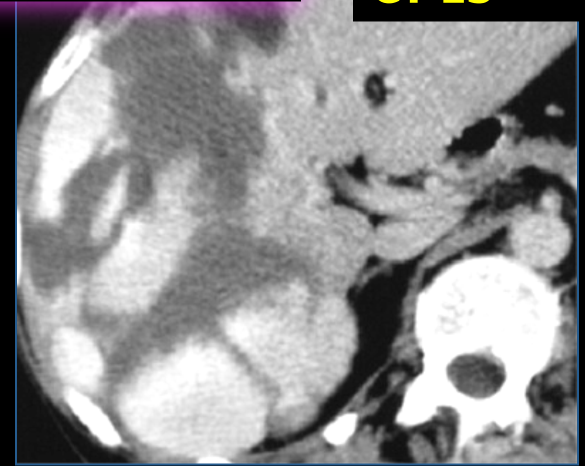


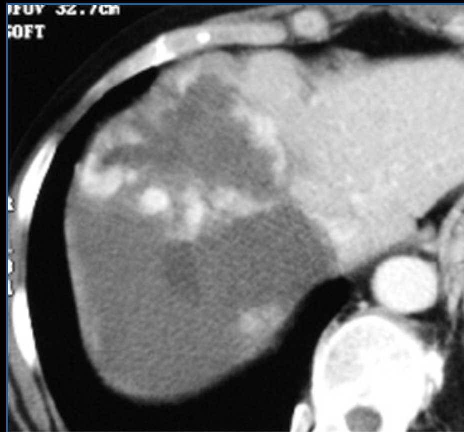


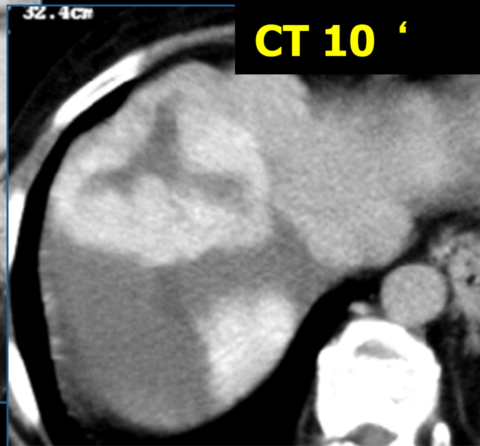
Tardives

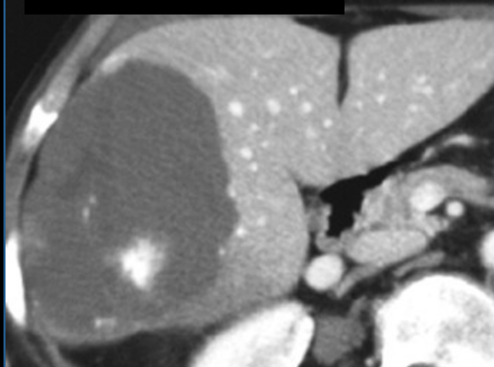
Angiomes : Difficultés diagnostiques

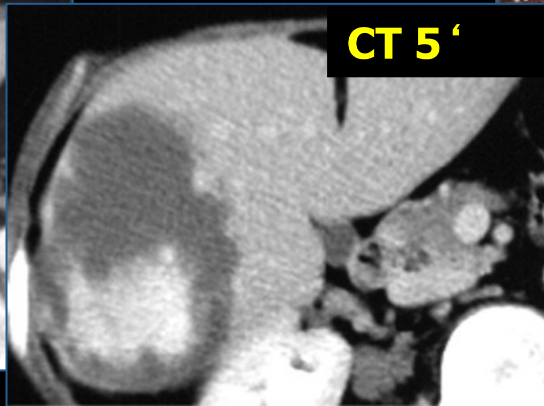






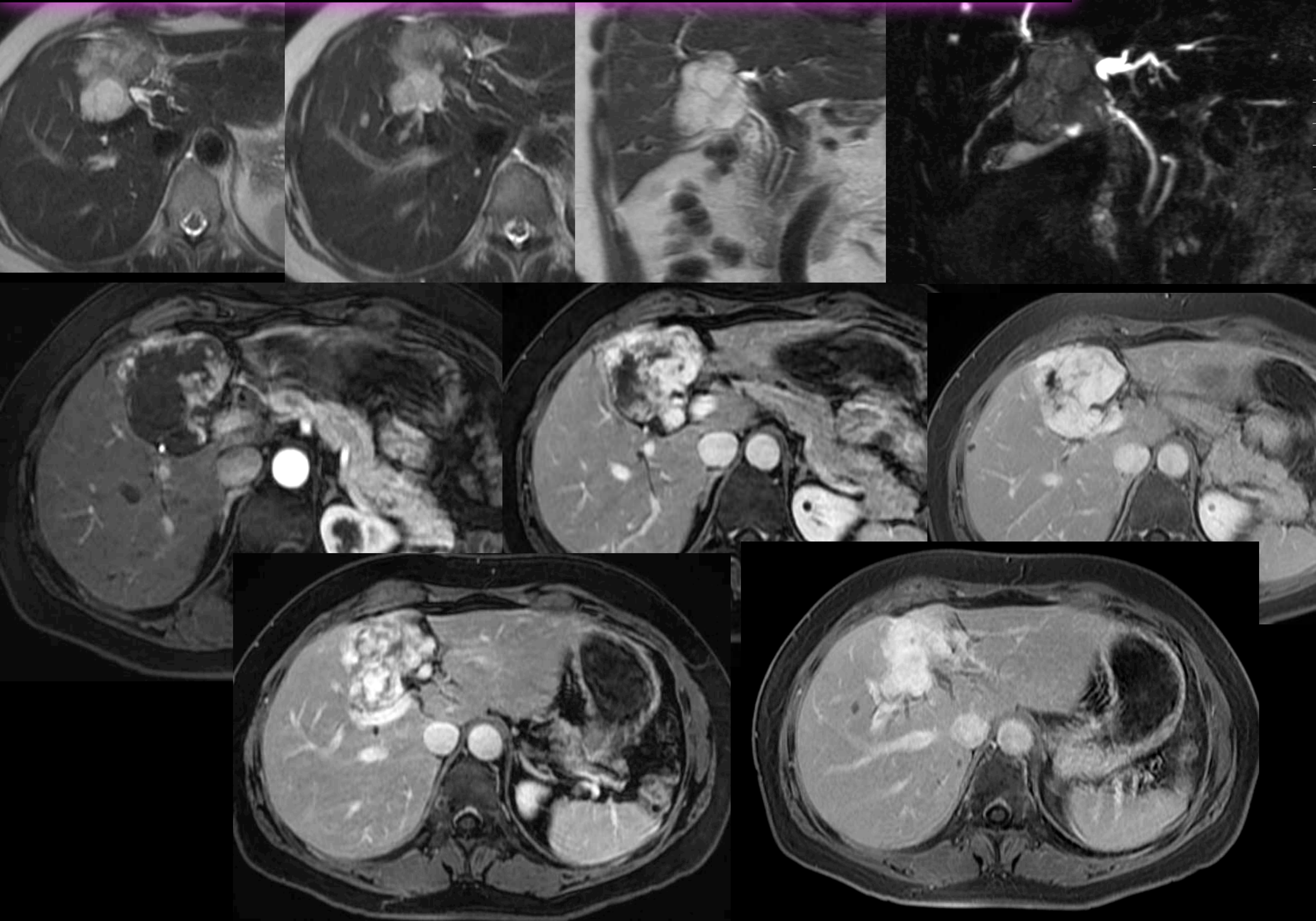




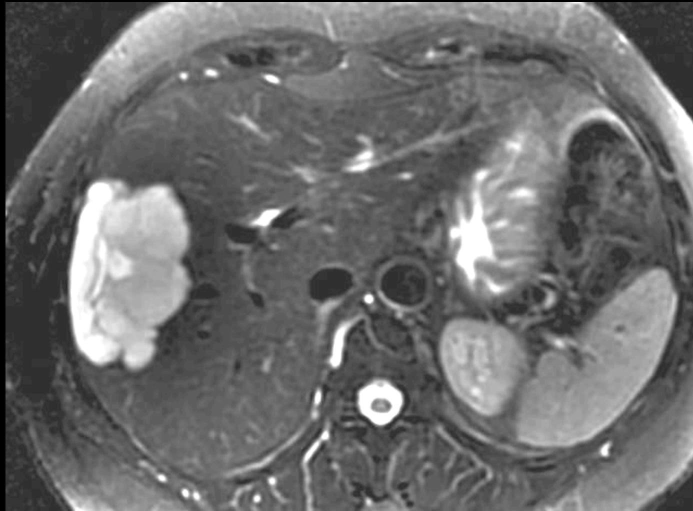


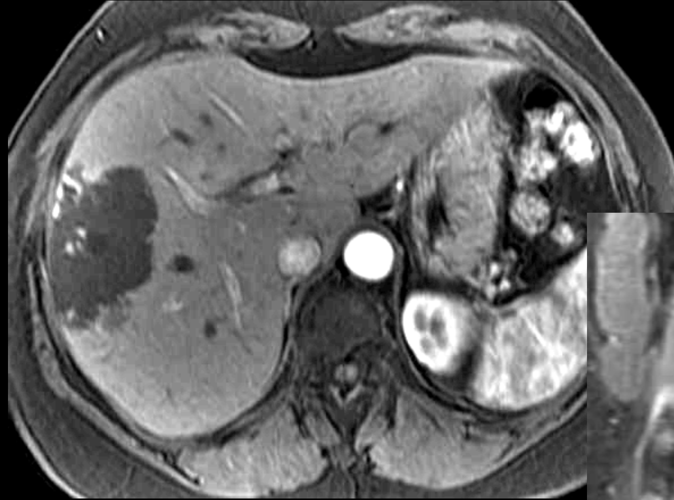
angiomes géants; cinétique de rehaussement +++

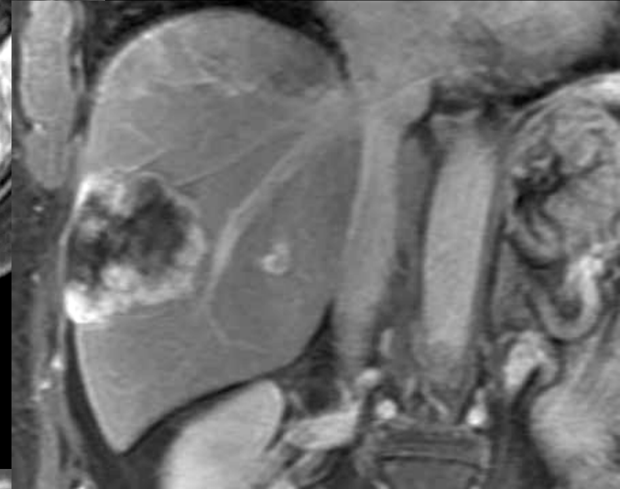
Angiomes : Difficultés diagnostiques

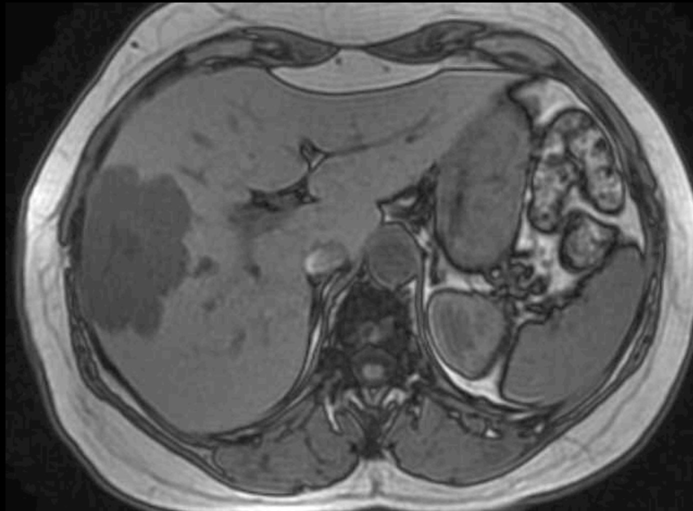


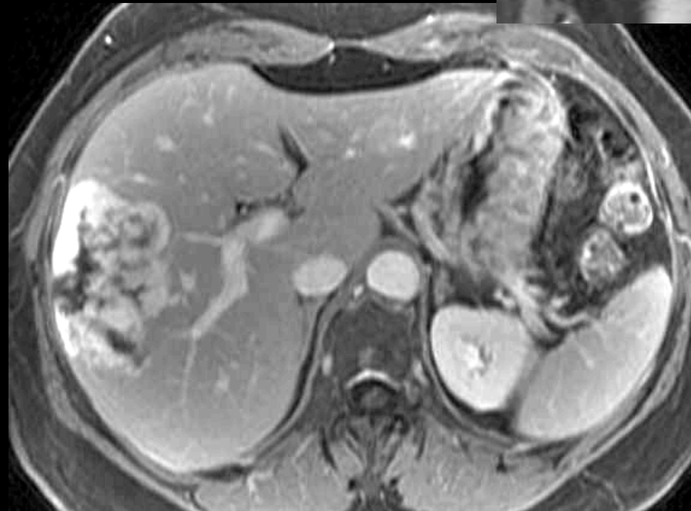
Angiomes : Difficultés diagnostiques



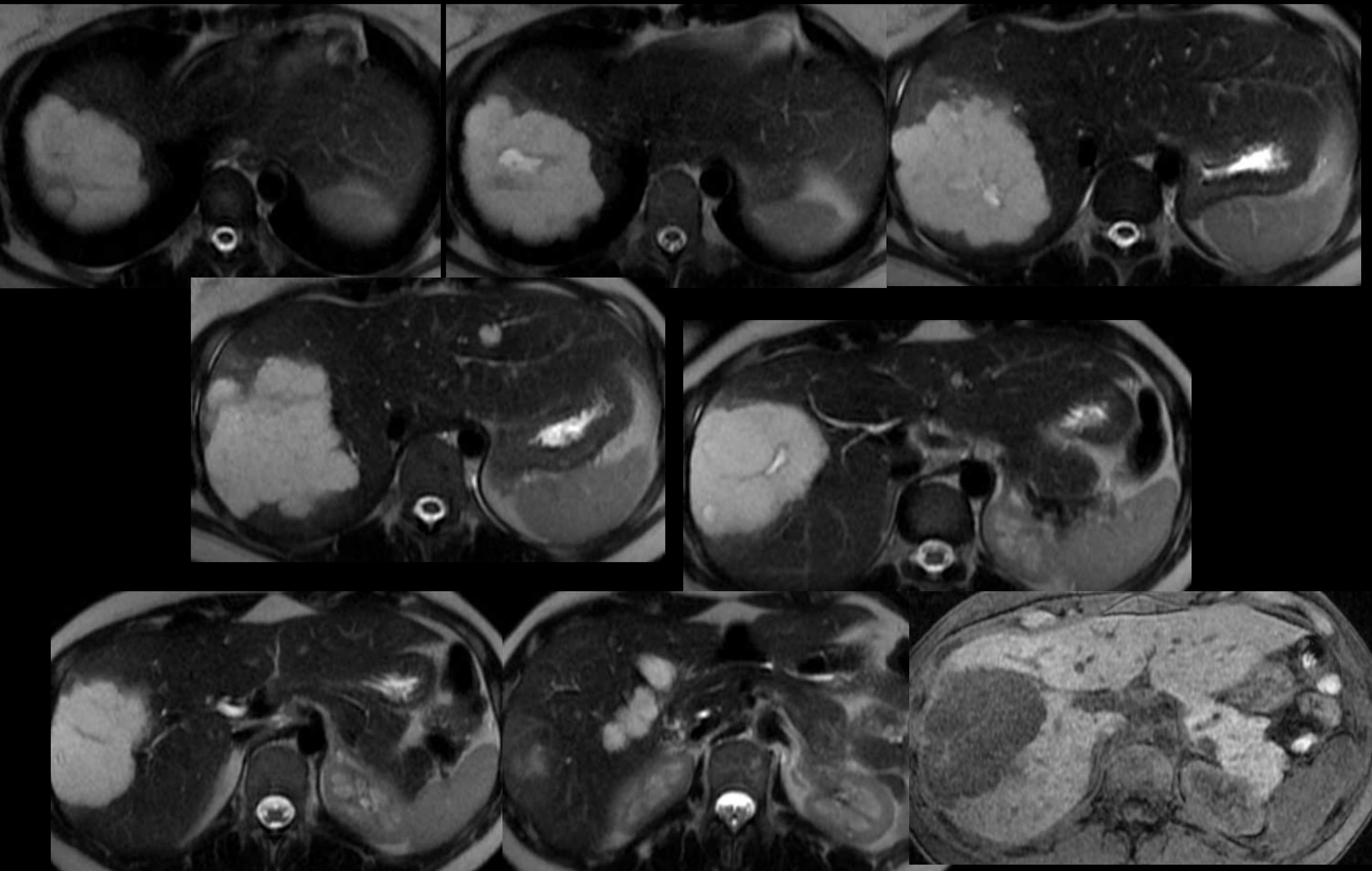




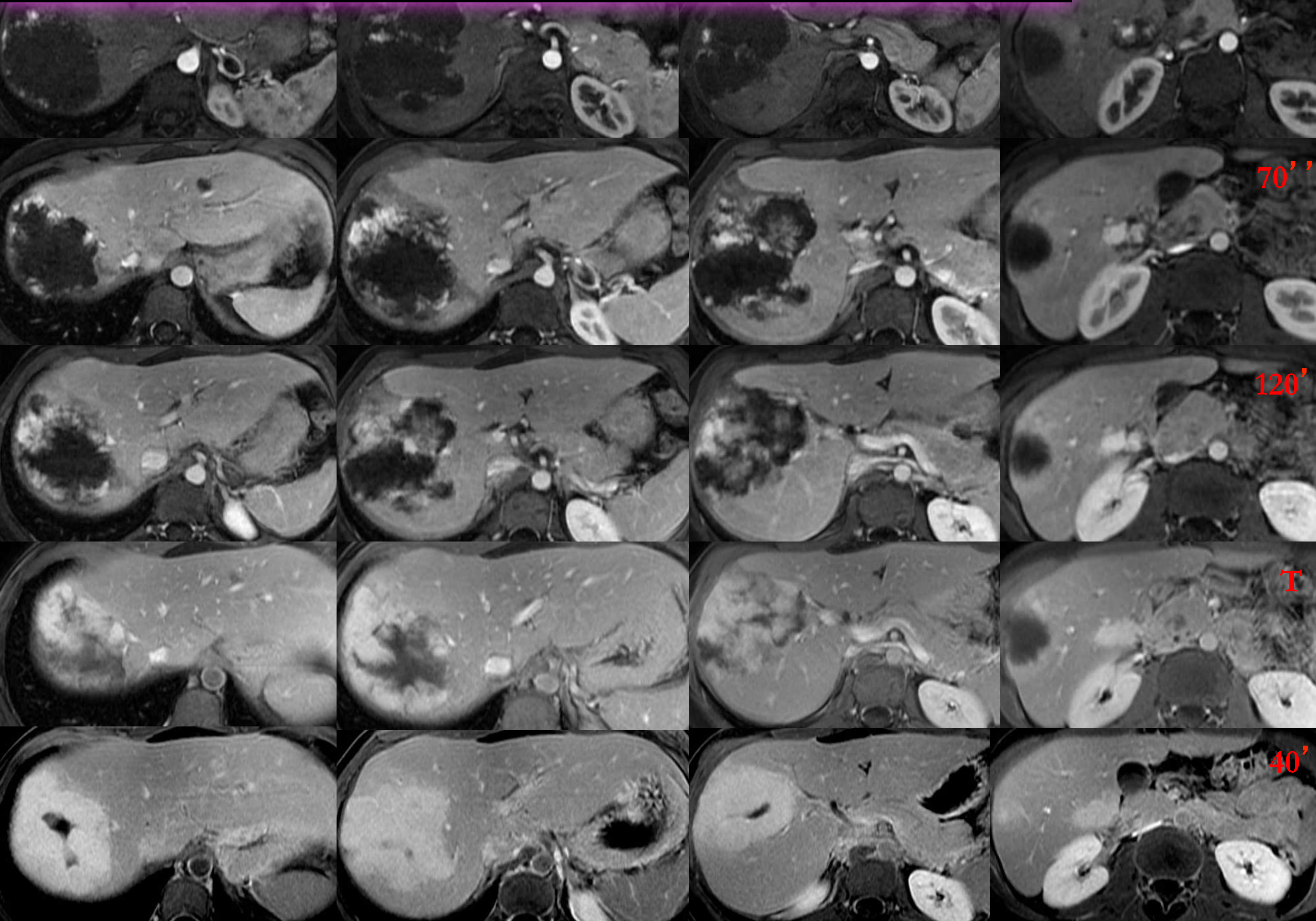




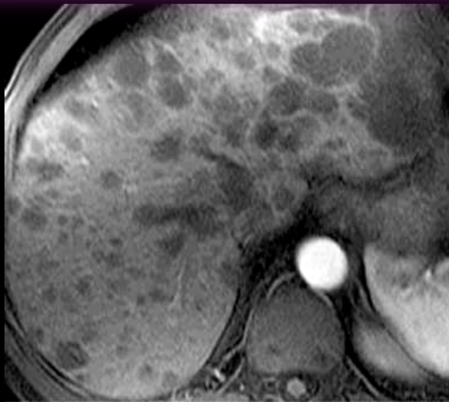
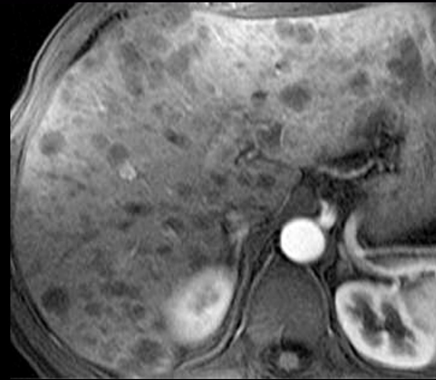
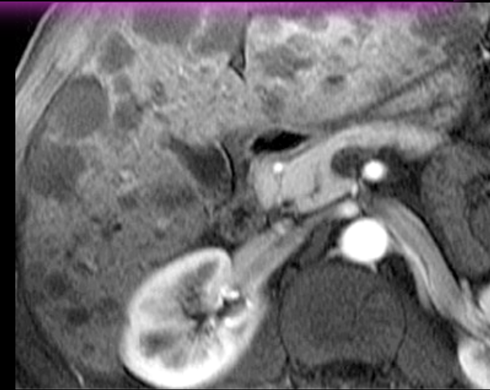
Angiomes : Difficultés diagnostiques



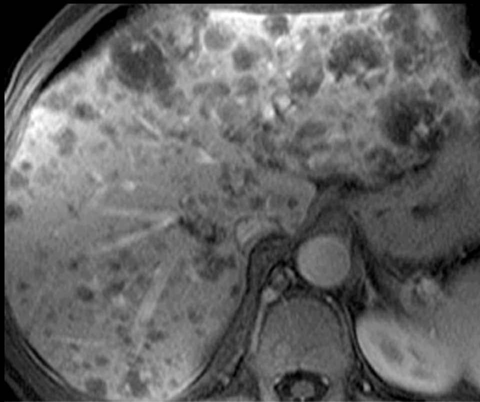
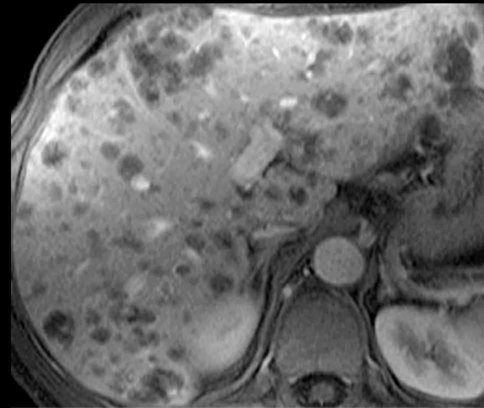
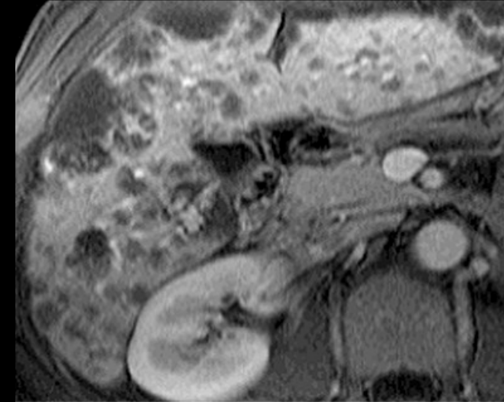
Angiomes : Difficultés diagnostiques



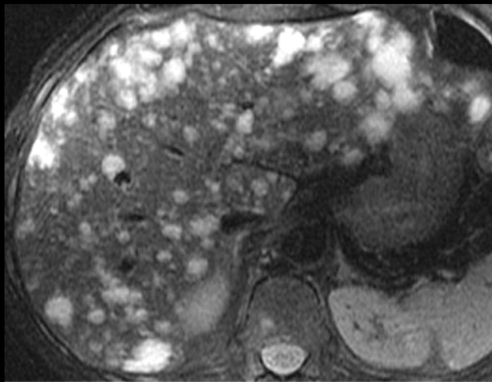
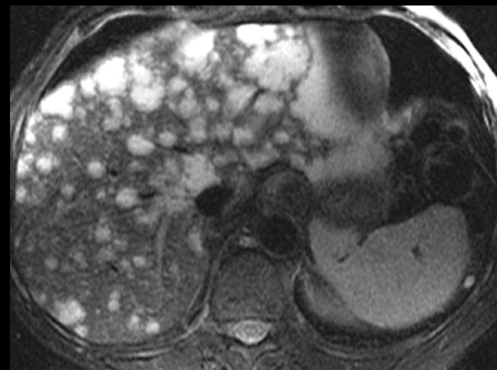
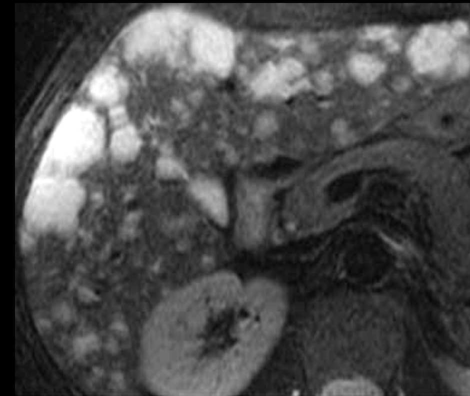
Angiomes : Difficultés diagnostiques

MR
T1
45"

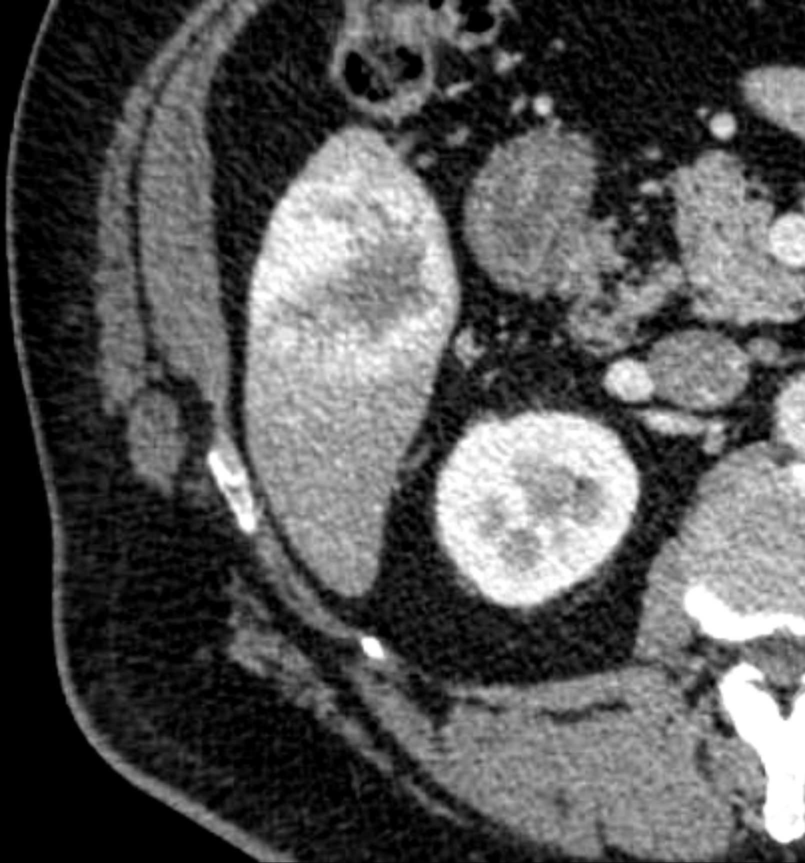
MR
T1
60"

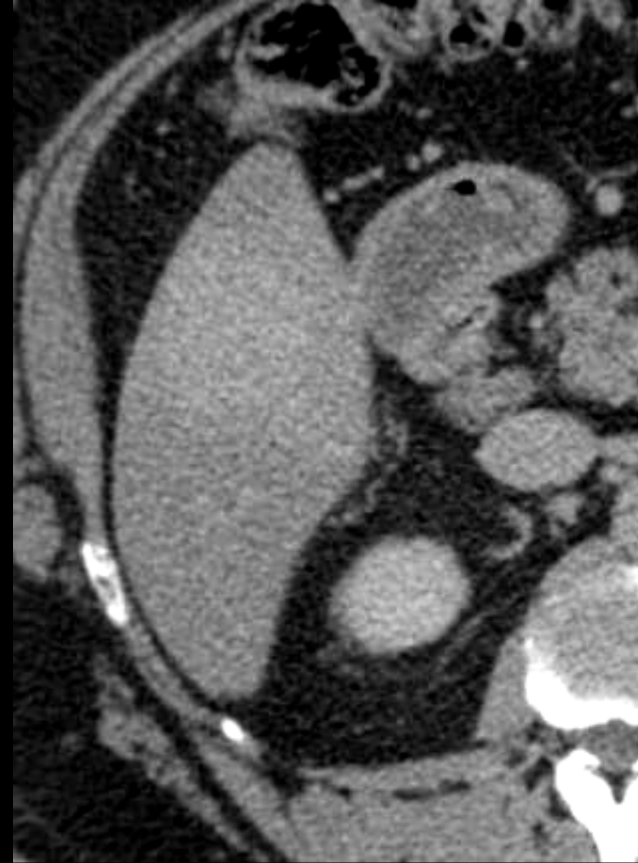




MR
T2

hémangiomatose disséminée; diagnostic échographique de métastases !!!

Angiomes :évolution

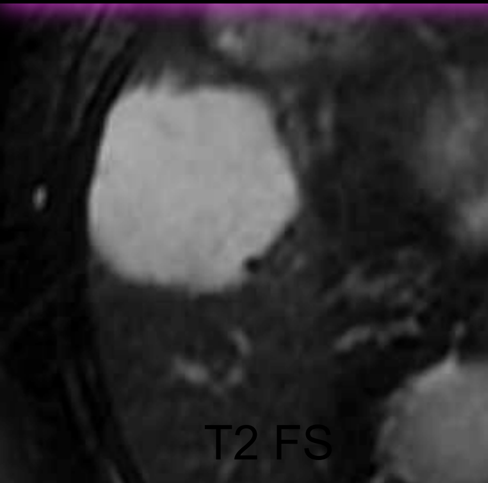


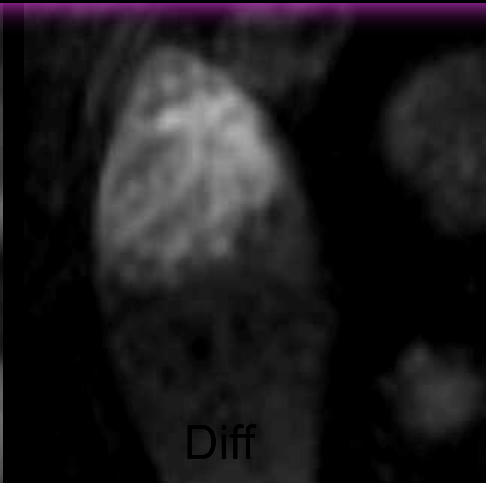


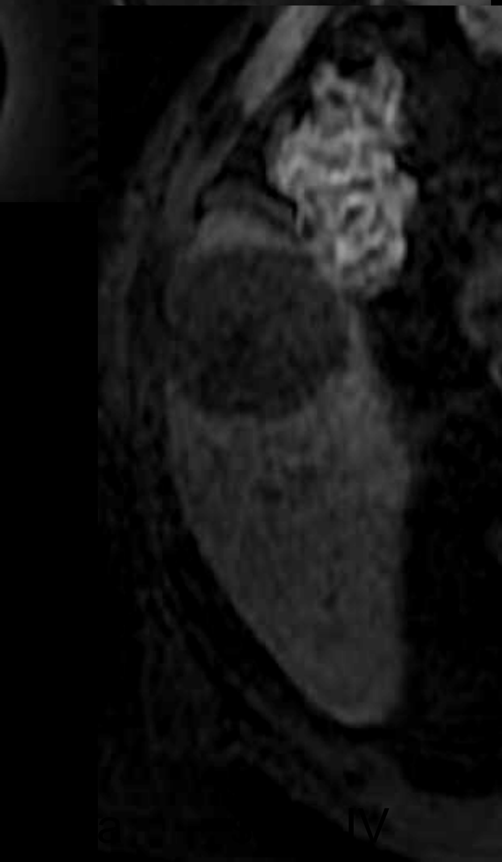
Patient de 67 ans, scanner pour iléite.
Découverte fortuite de lésions hépatique

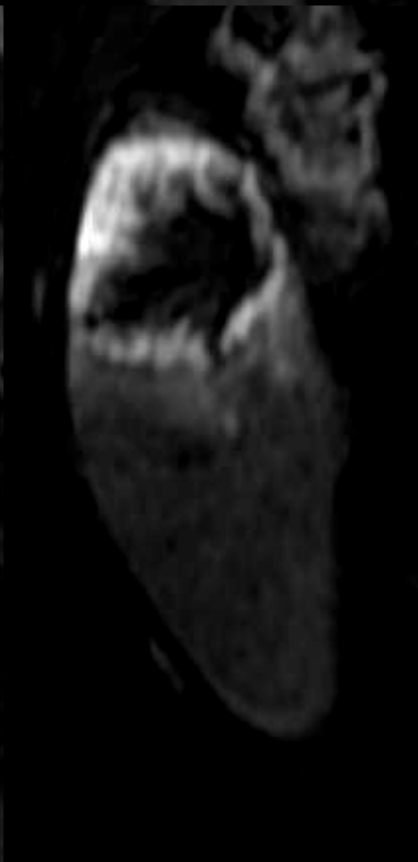
Sémiologie classique d'un ANGIOME

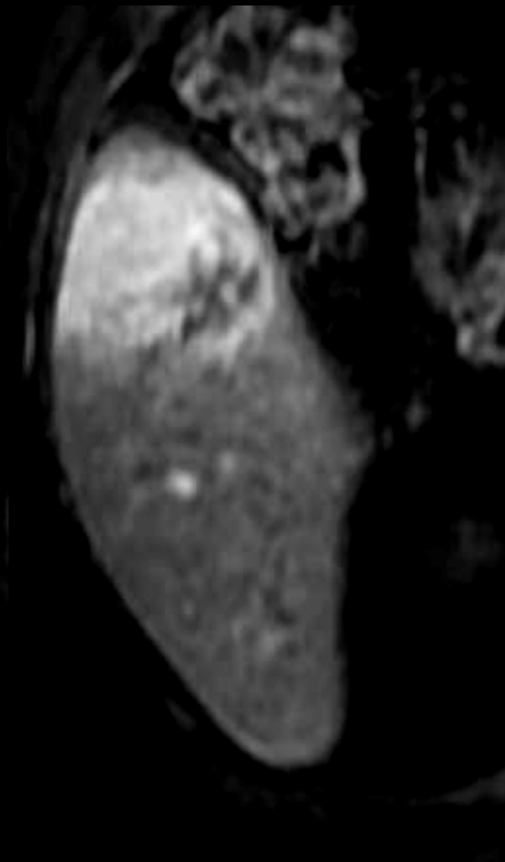
Angiomes :évolution

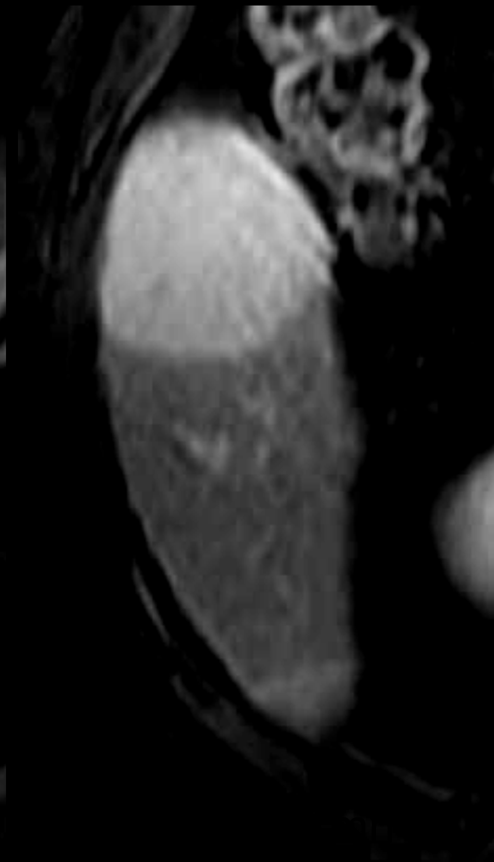




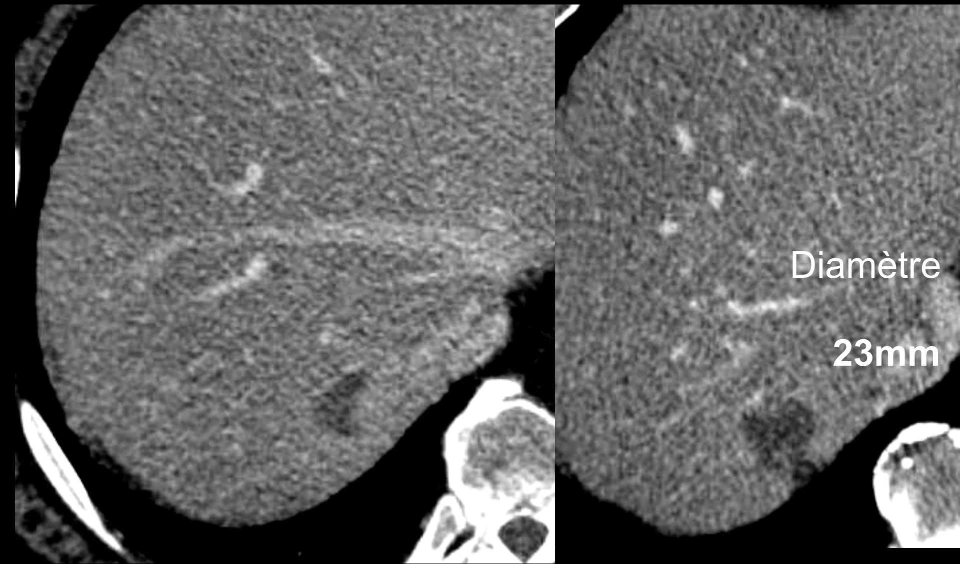








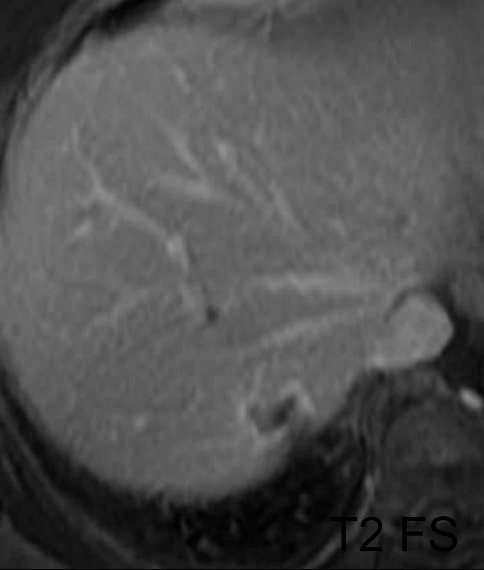
Sur ce même scanner, 2de lésion hépatique

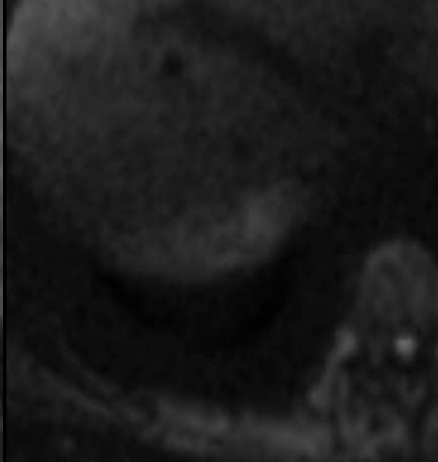


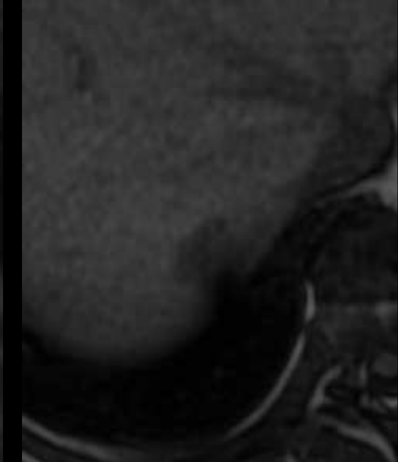
ATCD, sur un scanner thoracique réalisé 5 ans auparavant:

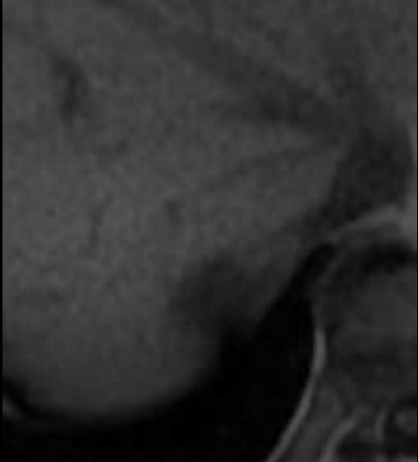
Diamètre

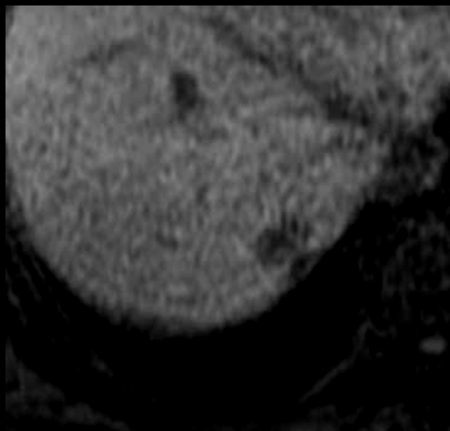
47mm

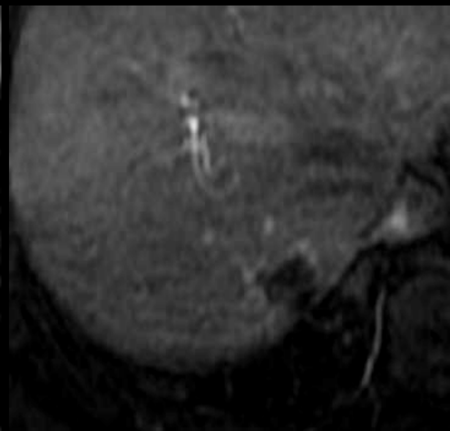

T2 FS

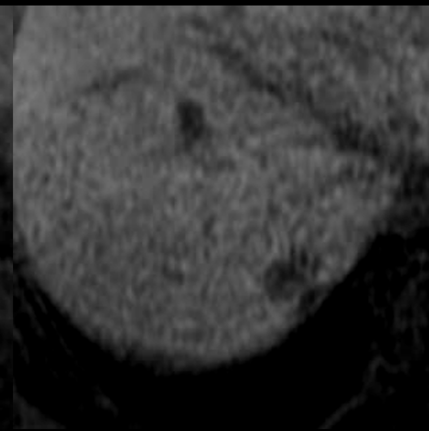


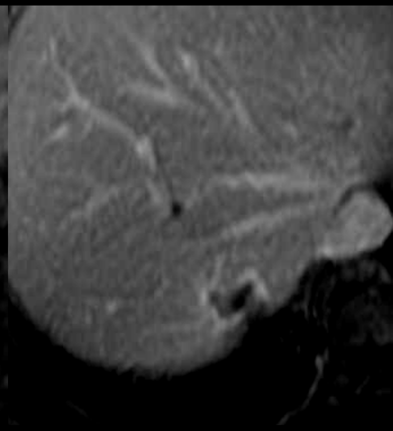




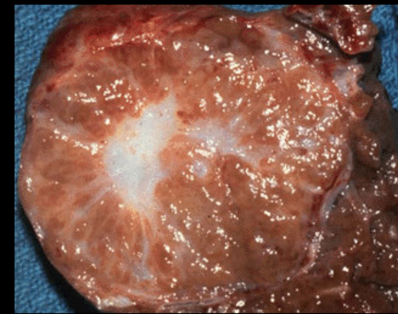


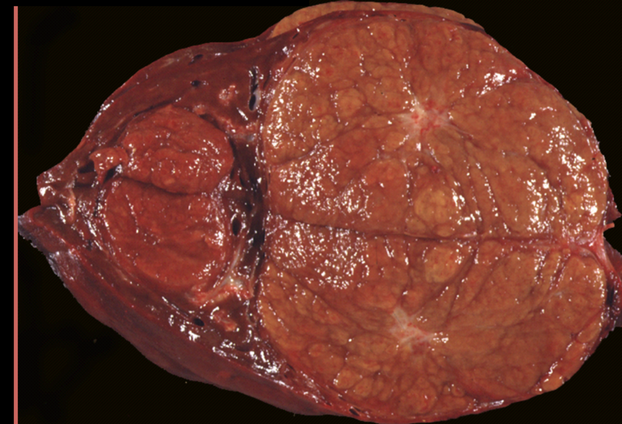


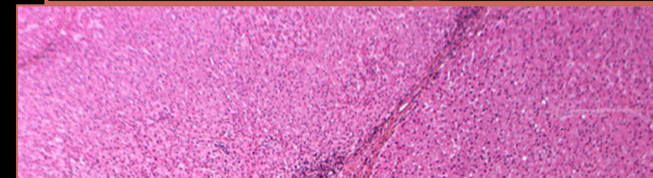




Hyperplasie nodulaire focale

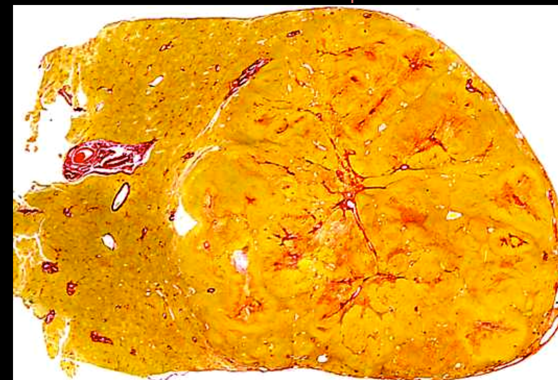




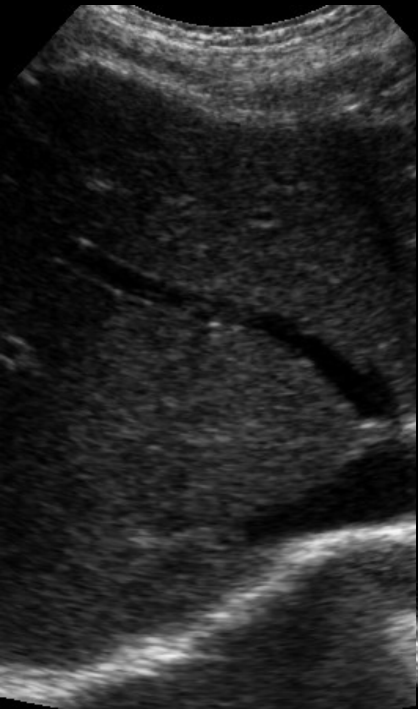


- Seconde tumeur bénigne la plus fréquente
- Asymptomatique
- Pas de dégénérescence
- Macro : tumeur lobulée, non encapsulée
- Bien limitée
- Cicatrice fibreuse centrale
- Hépatocytes normaux

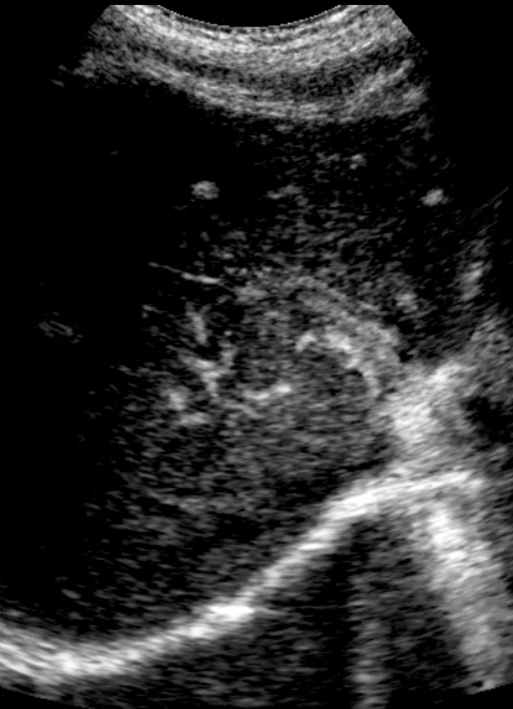
Lésion bénigne causée par une réponse hyperplasique à une anomalie vasculaire localisée



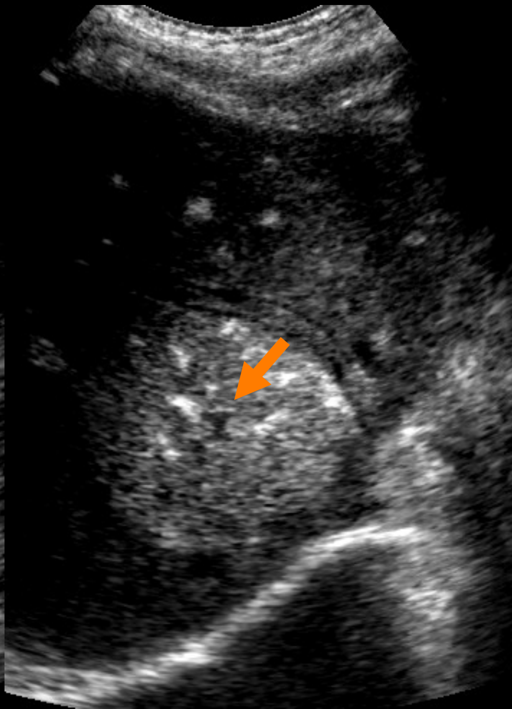
Hyperplasie nodulaire focale :
échographie et échographie avec injection de produit de contraste



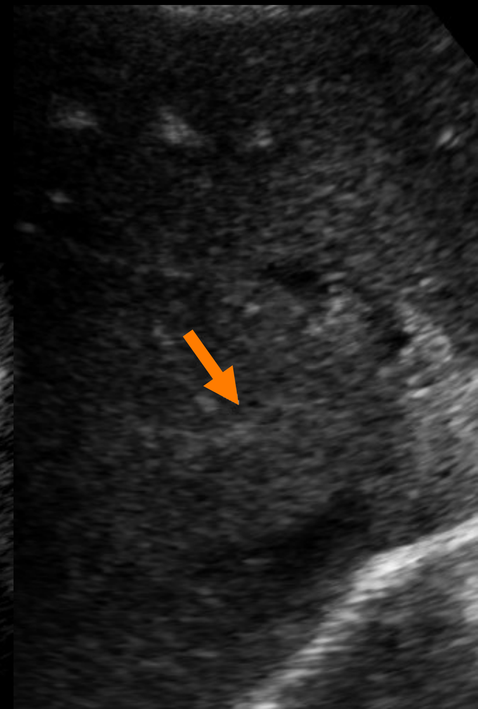
Sans injection



15 secondes

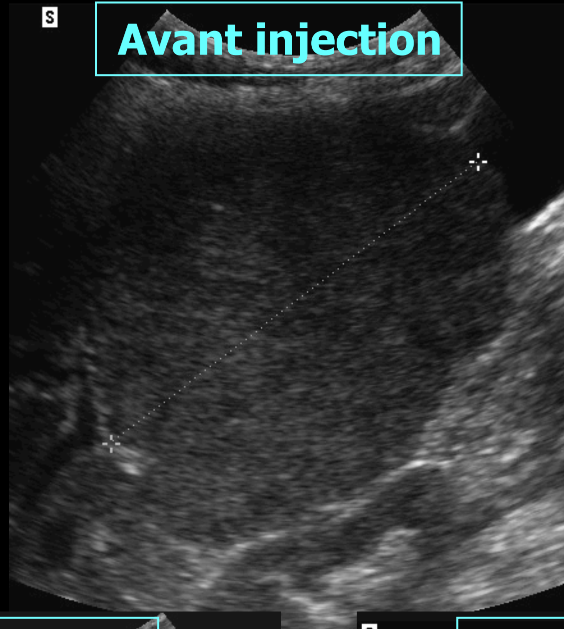


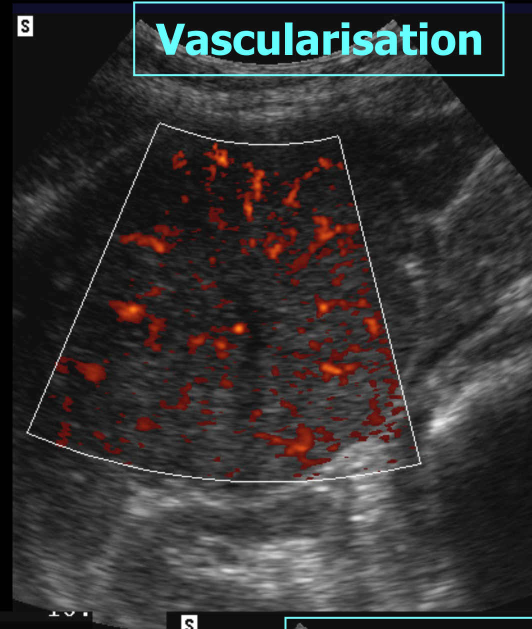
25 secondes

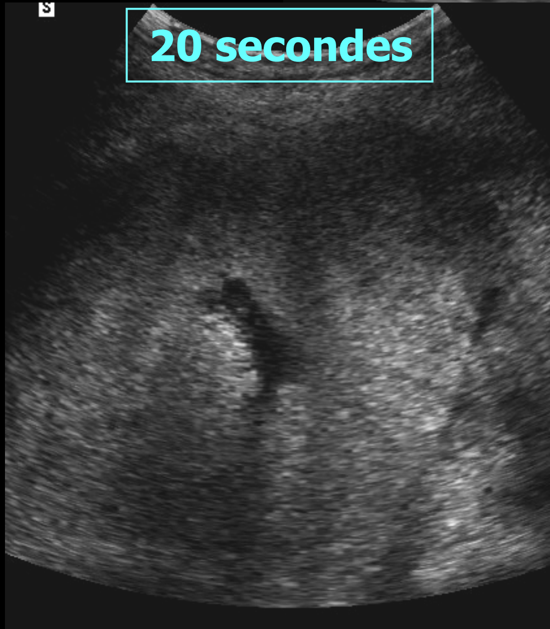


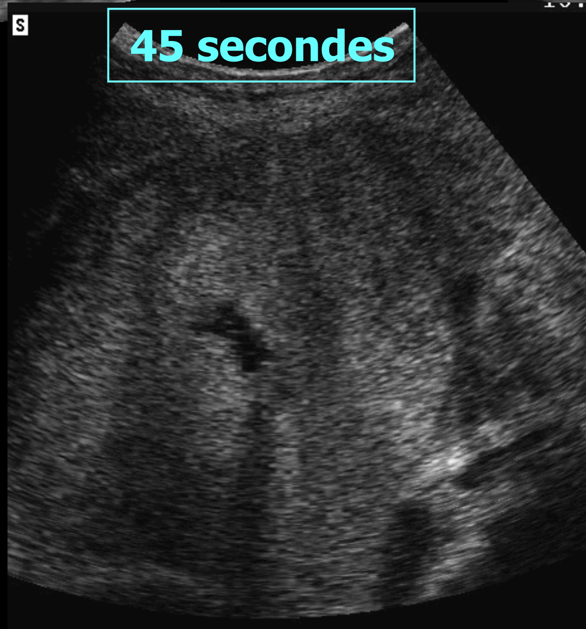
120 secondes

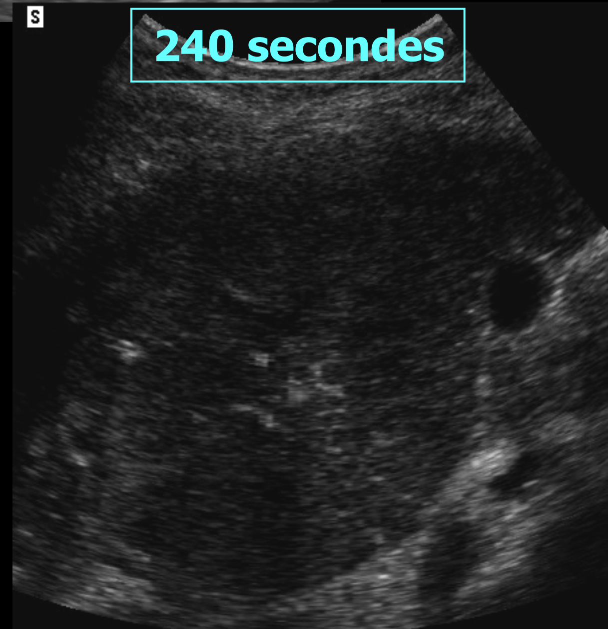
Hyperplasie nodulaire focale







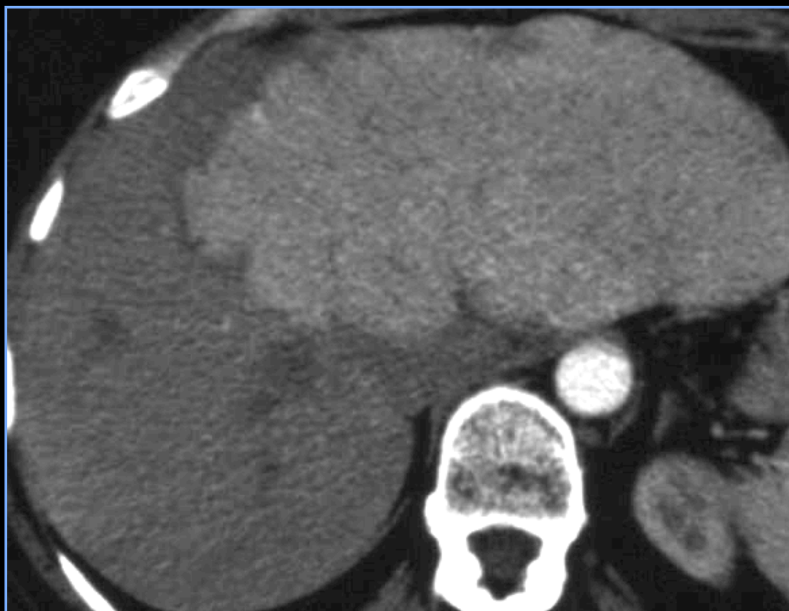


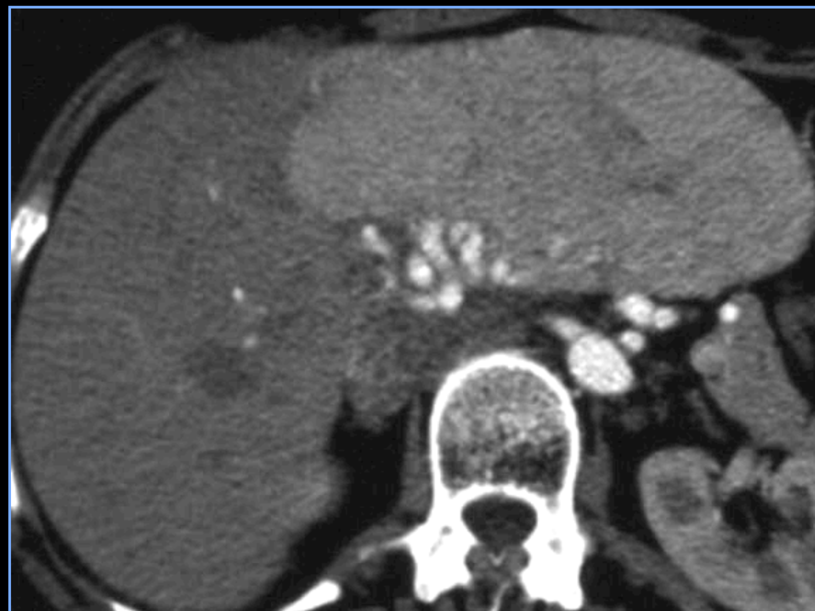


HNF : sémiologie typique

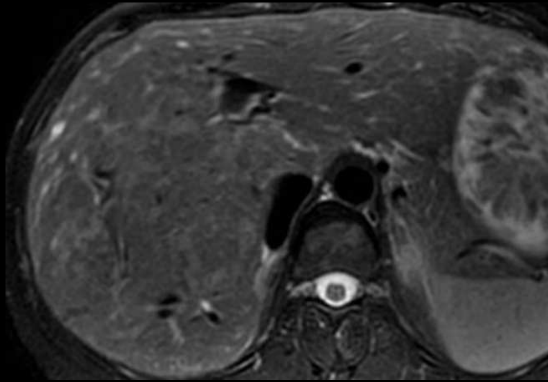
- Lésion hypervasculaire au temps artériel
- Homogène/foie sur les acquisitions plus tardives
- Prise de contraste intense ET homogène quelle que soit sa taille
- Cicatrice centrale sauf si inf à 2 cm
- Isosignal/parenchyme sain en T2
- HNF est 20 à 40 fois plus fréquente que l'adénome même chez des femmes utilisant une contraception orale
- Les HNF atypiques sont souvent des formes histologiques particulières (formes « télangiectasiques » n'existent plus : désormais rattachées au groupe des adénomes)

HNF : sémiologie typique

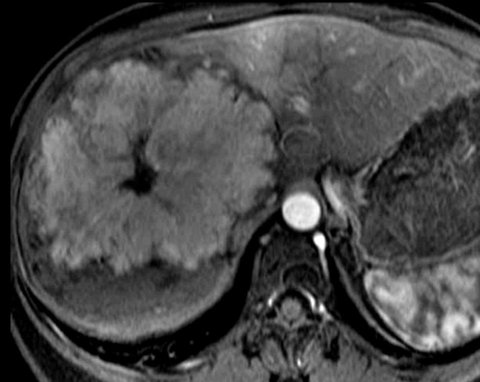




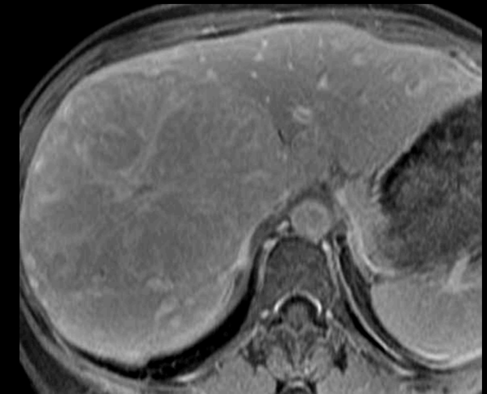
HNF : sémiologie typique



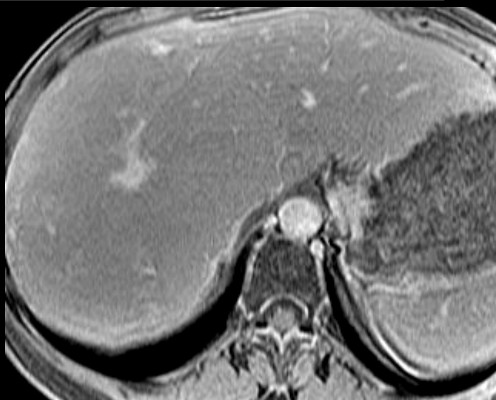
Je regarde le T2 :
isosignal T2



Rehaussement précoce
massif de toute la lésion



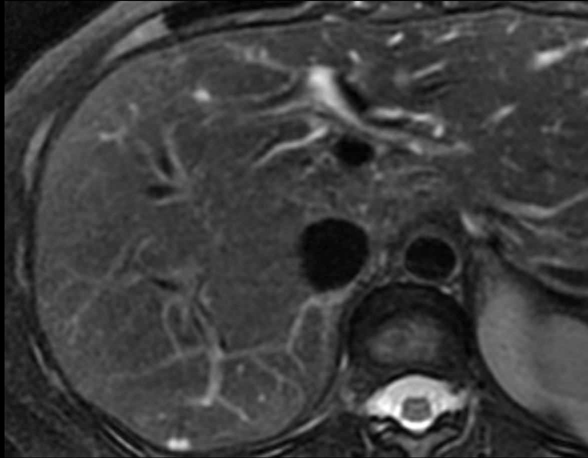
Je regarde le comportement
portal : homogénéisation

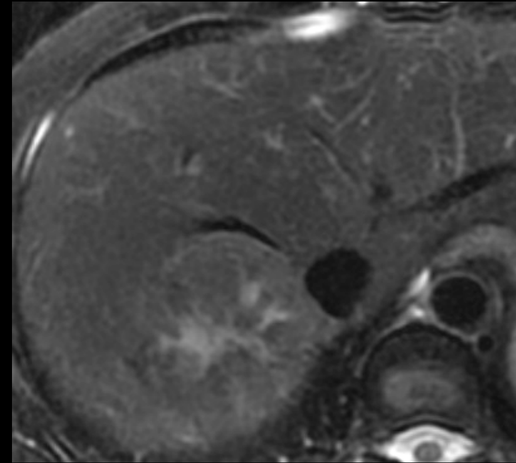


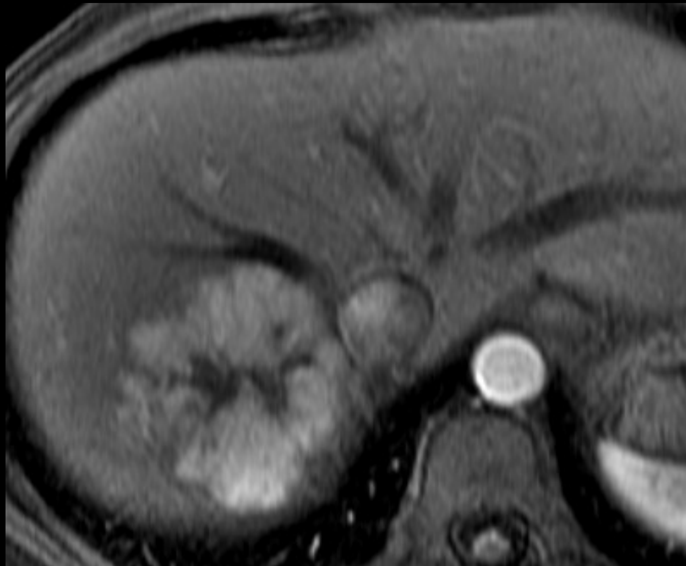
Je n'oublie pas l'acquisition tardive :
cicatrice fibreuse centrale

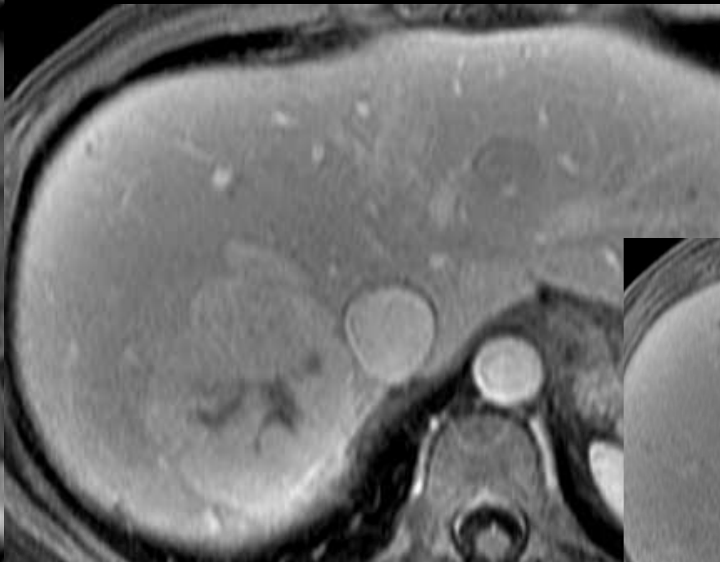
Hyperplasie nodulaire et focale

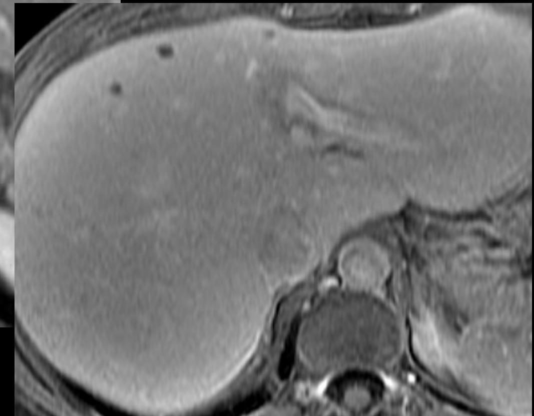
HNF : sémiologie typique







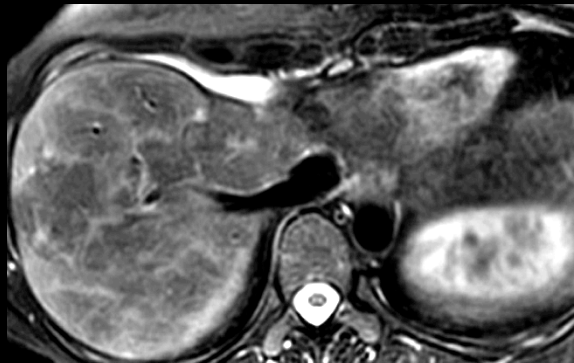


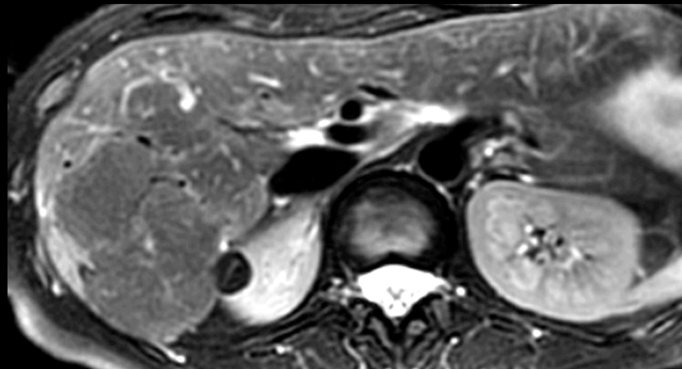


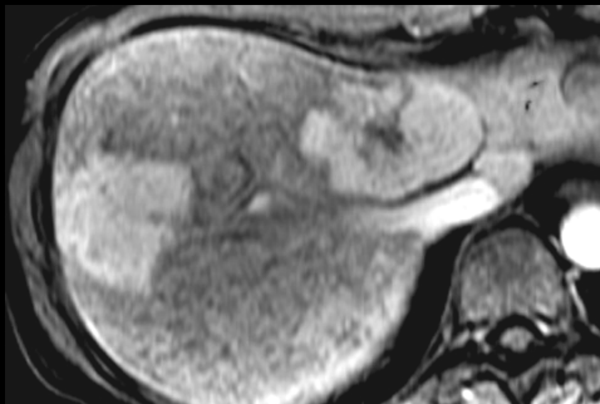
HNF : sémiologie typique

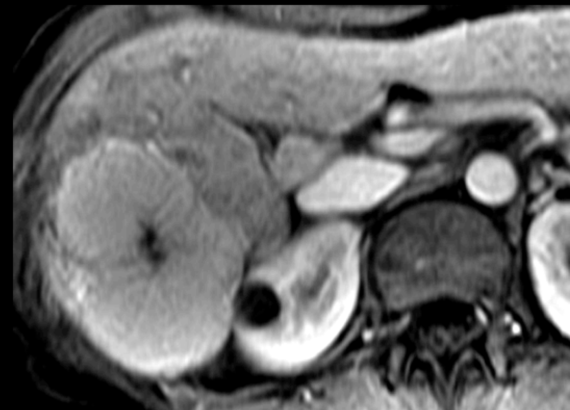
Souvent multiples +++++

Association avec angiomes dans 20% des cas

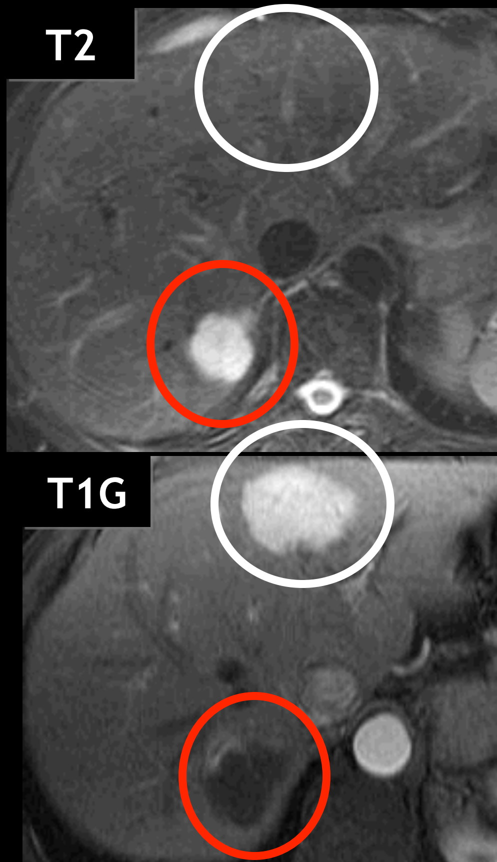




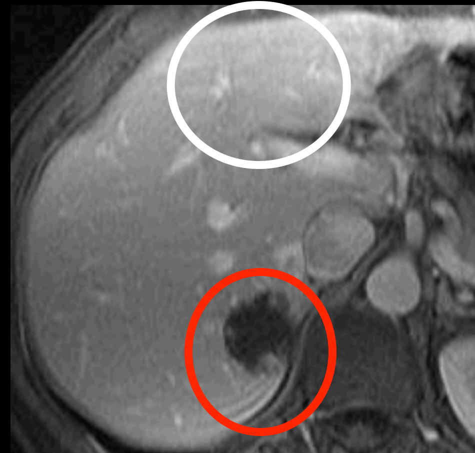


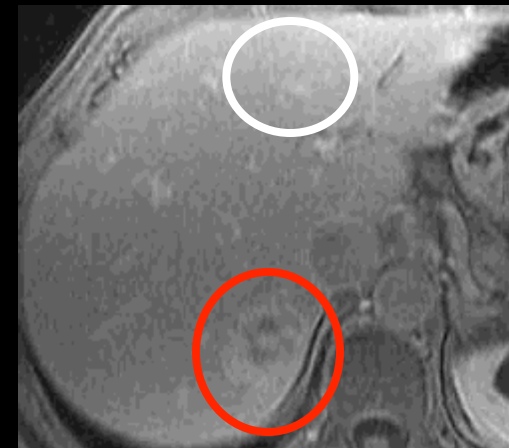


HNF : sémiologie typique



2 lésions



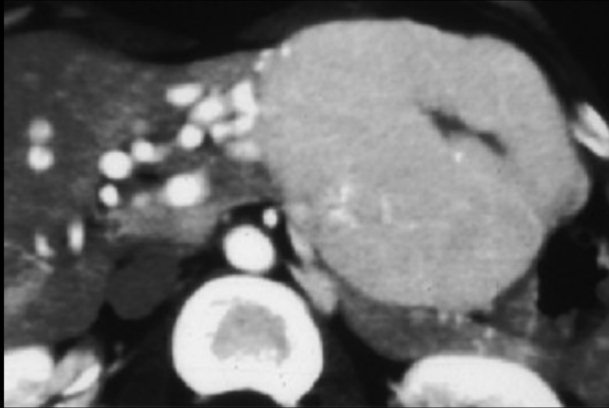


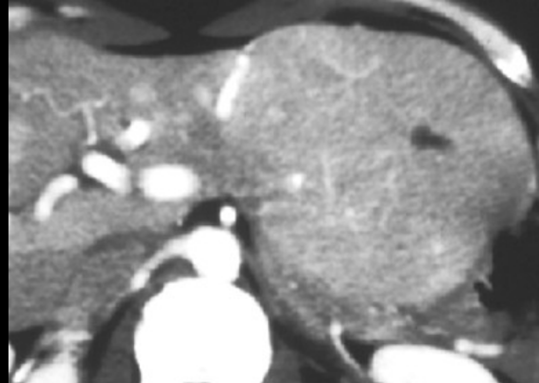
-1 lésion en HT2 liquidien, rehaussement précoce centripète avec remplissage tardif : angiome

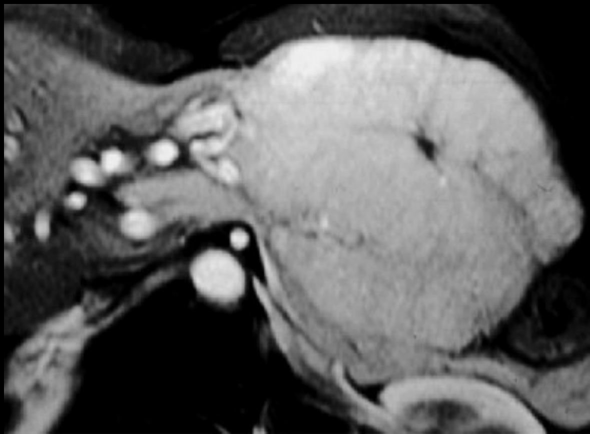
-1 lésion en isoT2, rehaussement précoce massif, homogénéisee au temps portal, cicatrice fibreuse centrale

HNF : sémiologie typique

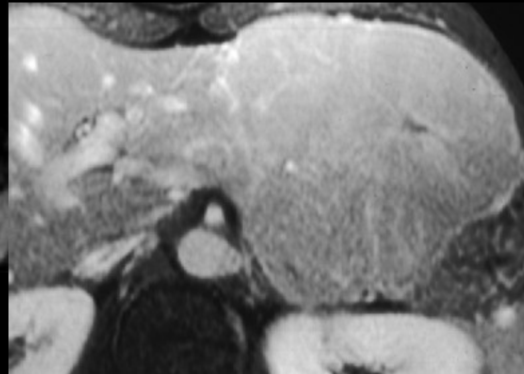
CT 70 s



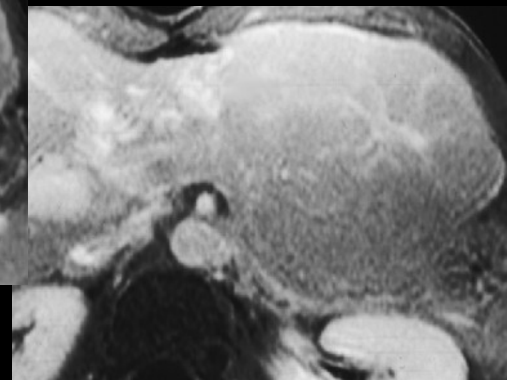




IRM 40 s



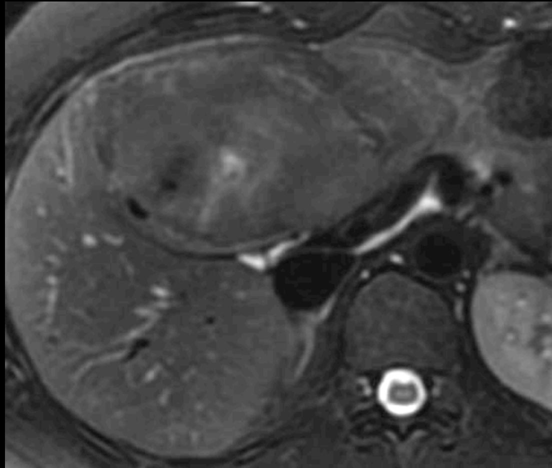
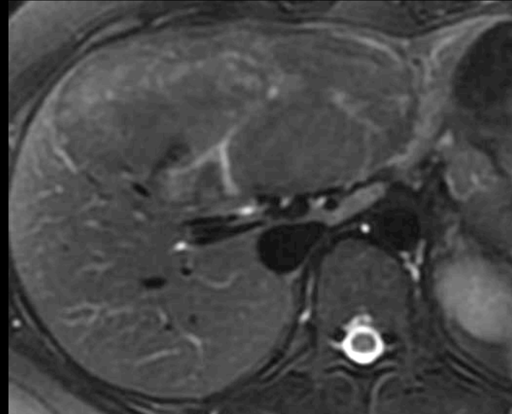
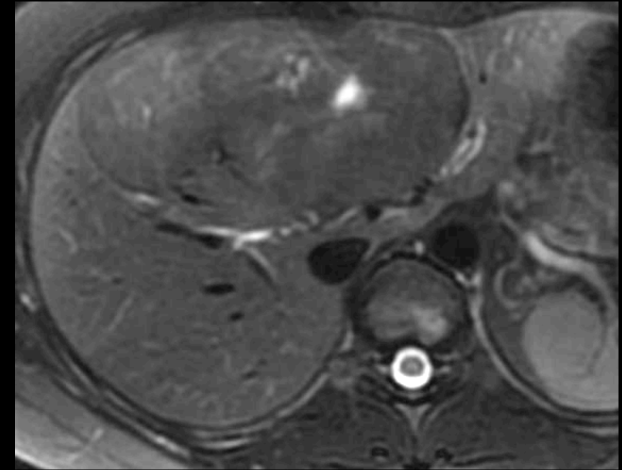
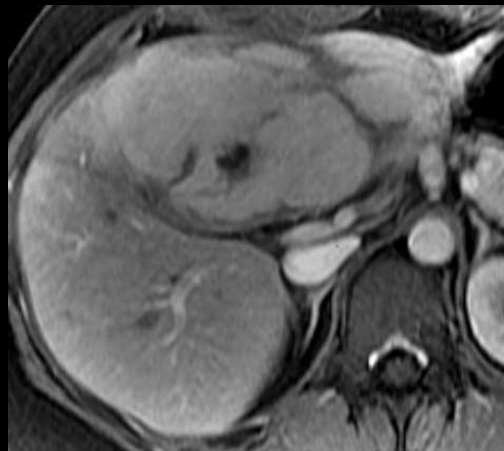
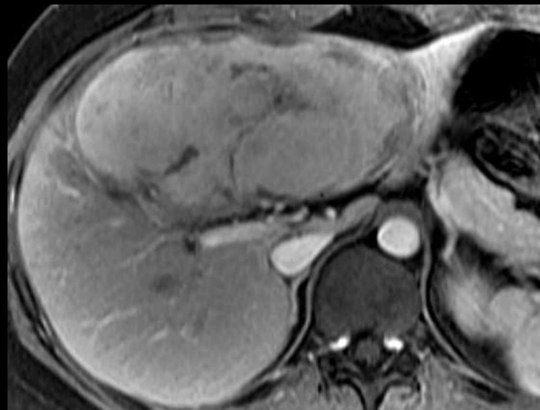
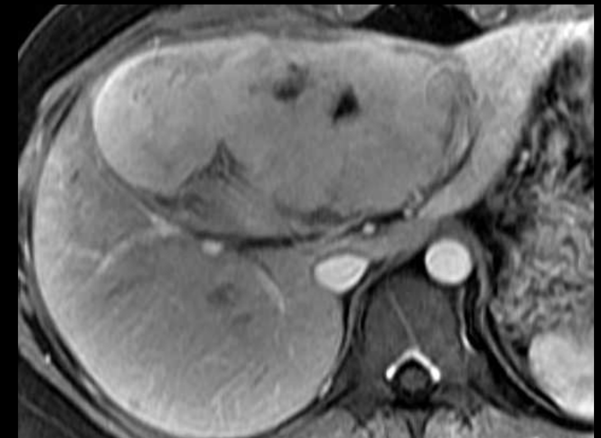
IRM 1' 30 s



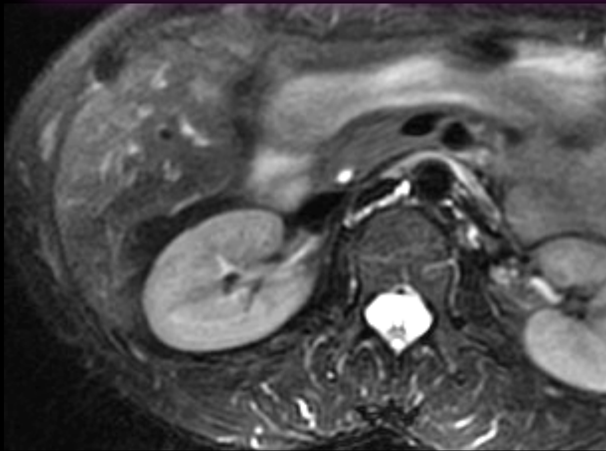
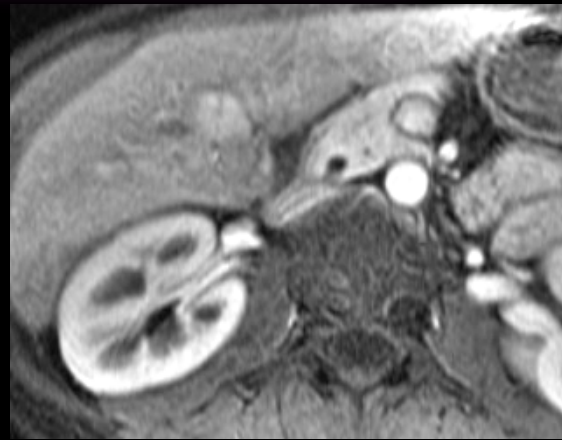
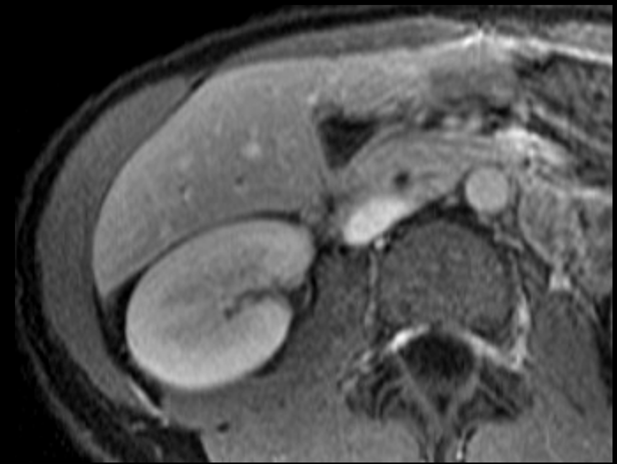
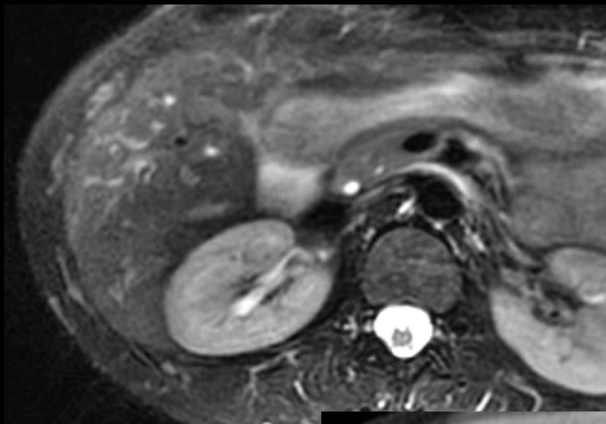
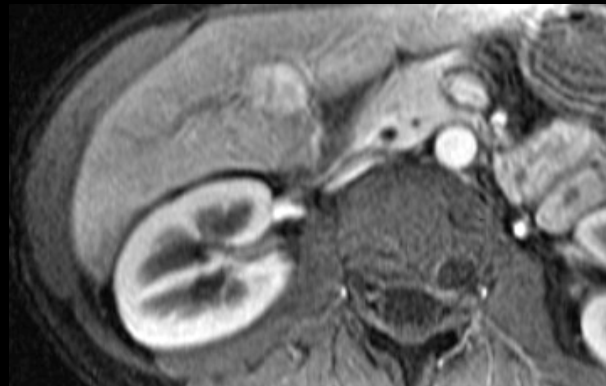
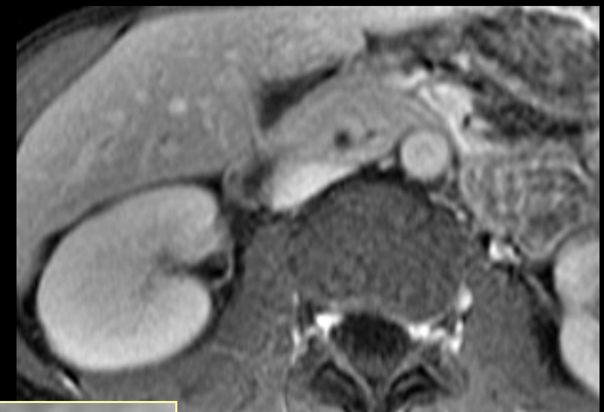
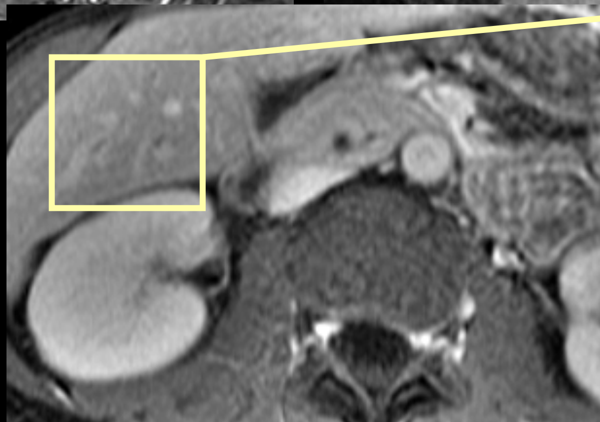
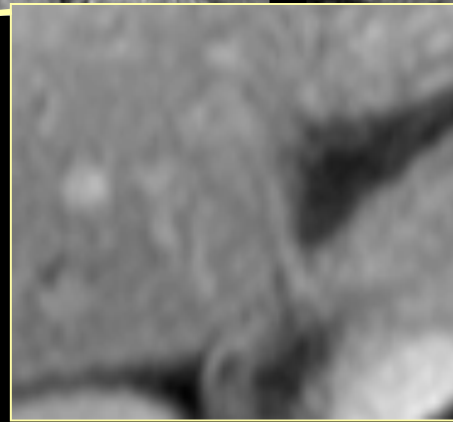
IRM 3'

hyperplasie nodulaire focale typique, femme 23 ans

HNF : sémiologie atypique

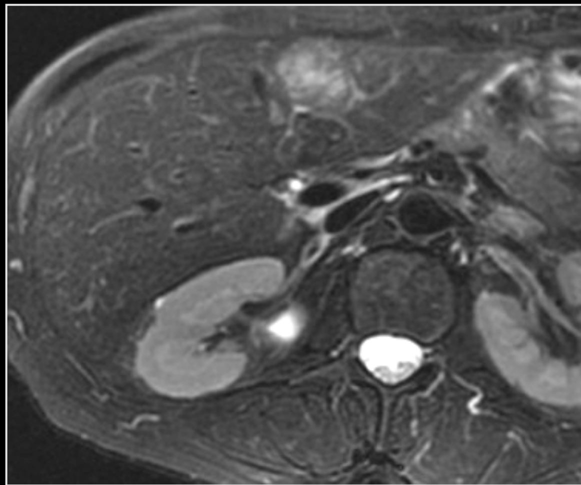







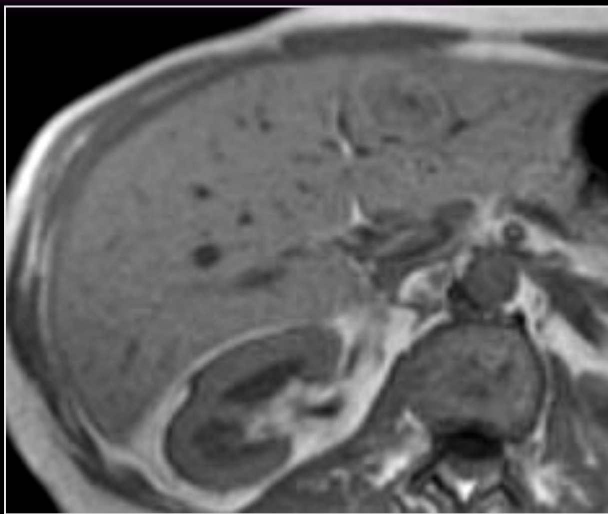
HNF : sémiologie atypique

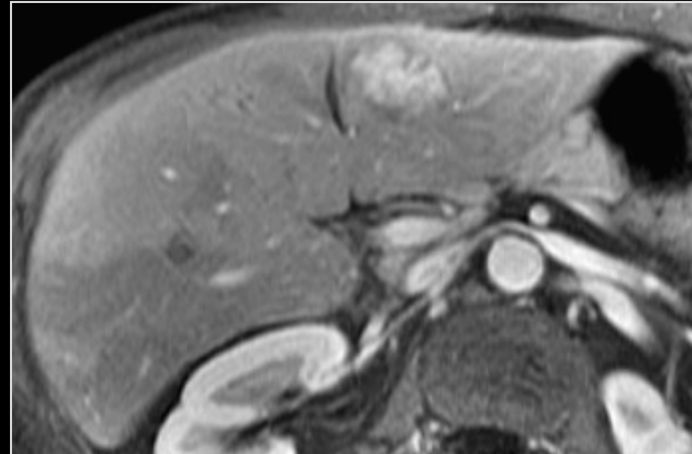









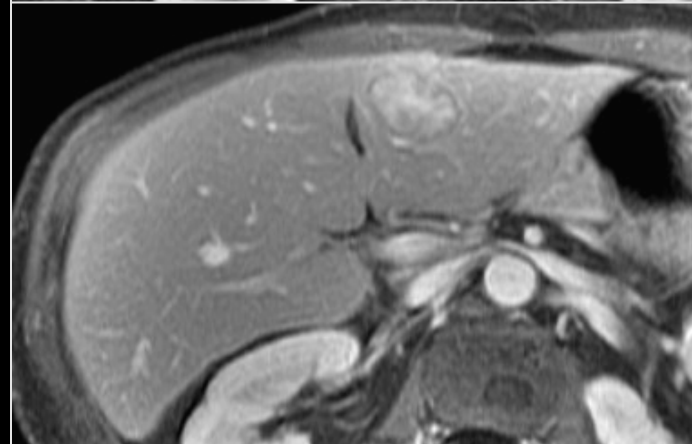
Femme, 40 ans

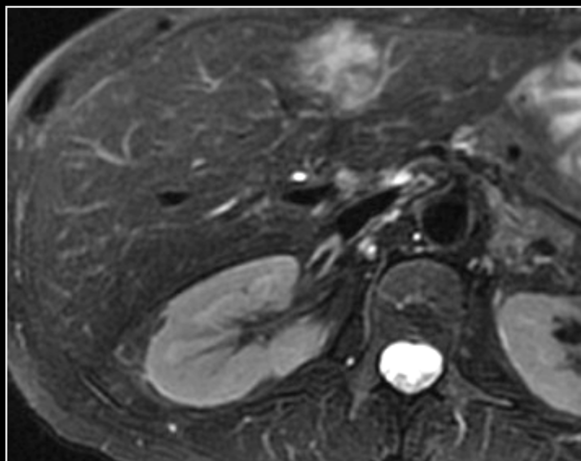
HNF : sémiologie atypique

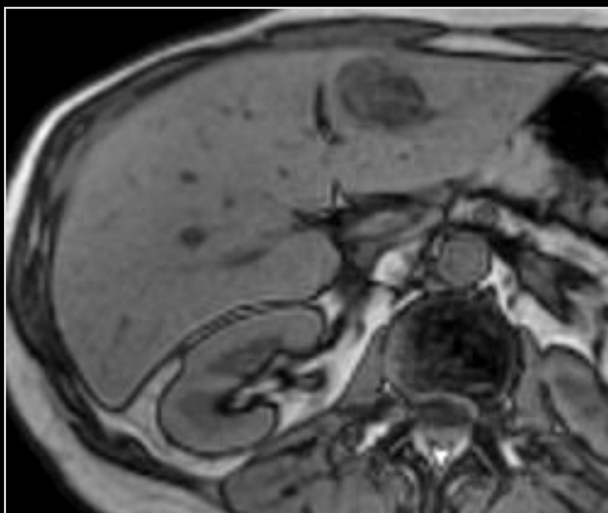


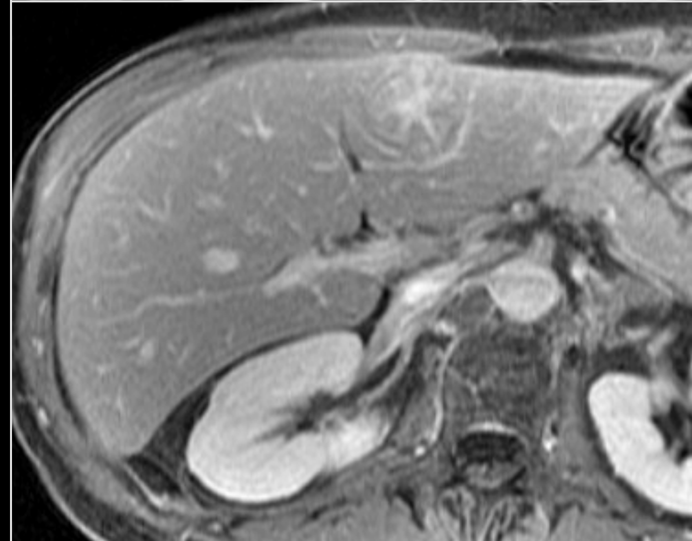








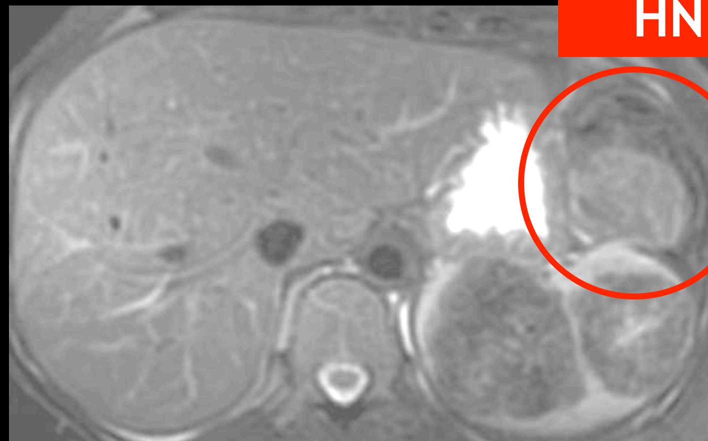


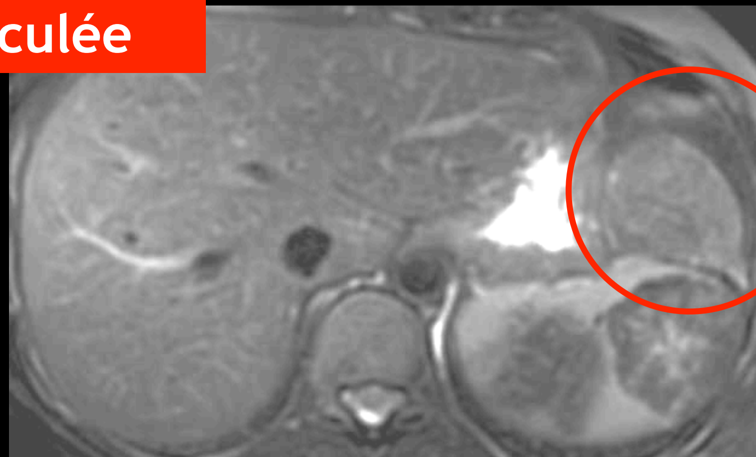


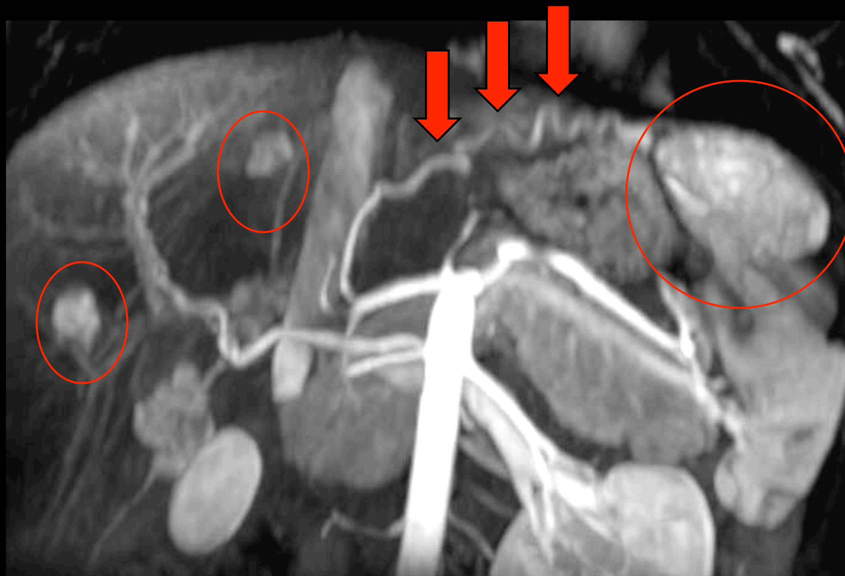
Femme, 60 ans

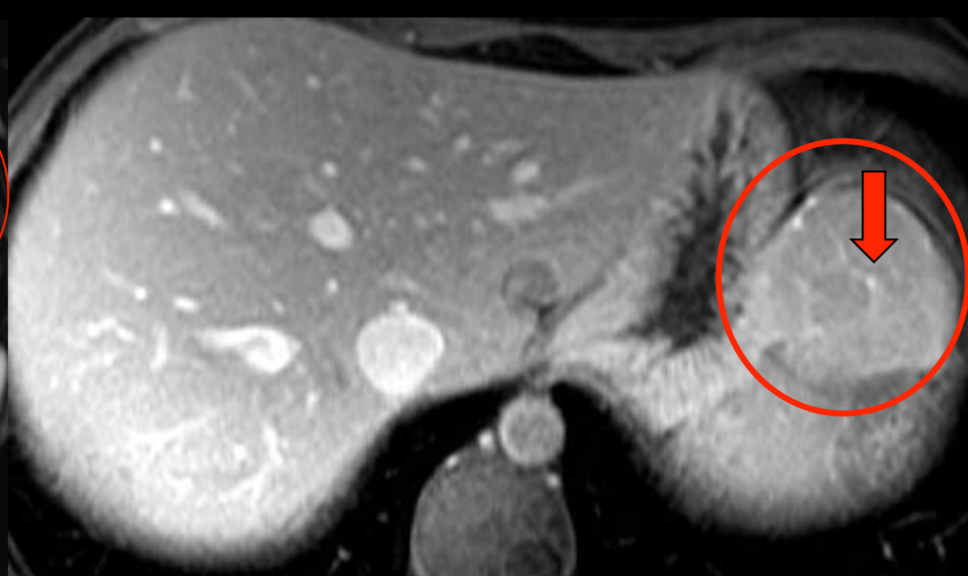
HNF : sémiologie atypique

HNF pédiculée

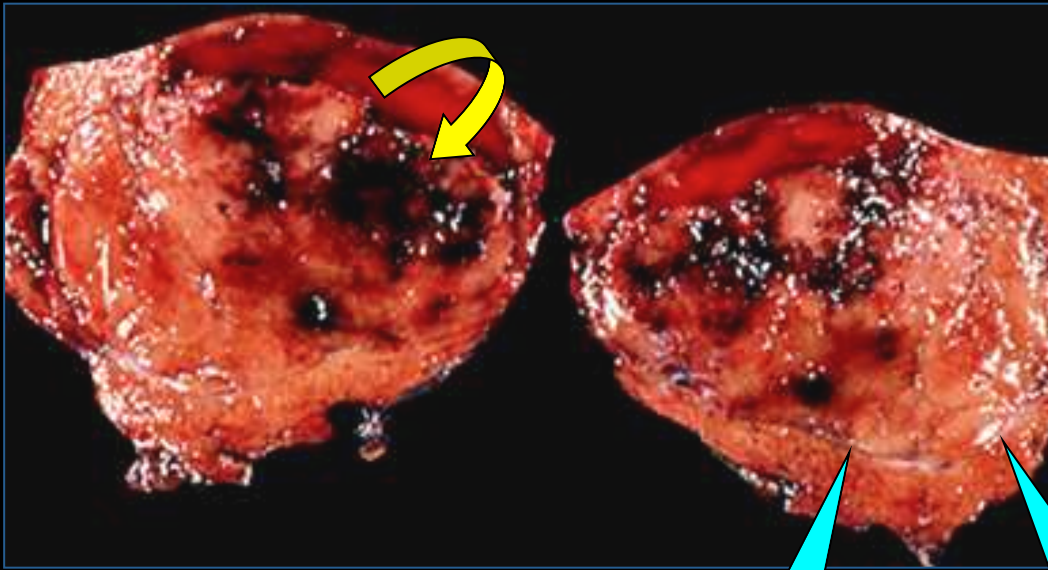






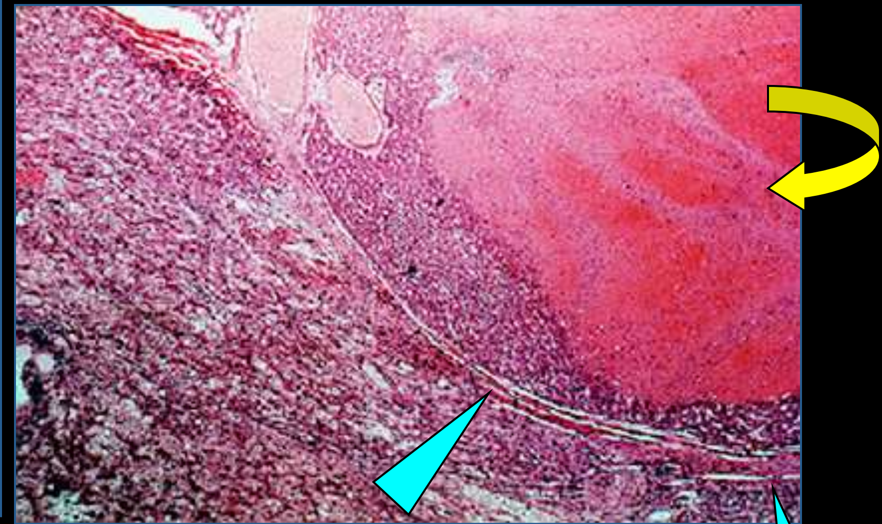


Adénome



Tumeur bénigne constituée d'hépatocytes organisés en cordons; pas de vx portes ni VCL ni canalicule biliaire

Parois vasculaires fines, capsule fibreuse, hémorragies, lacs biliaires et surcharge graisseuse



La péliose intratumorale (cavités kystiques contenant du sang et communiquant avec les sinusoïdes hépatiques) **explique le caractère hémorragique de l'adénome**

Adénome

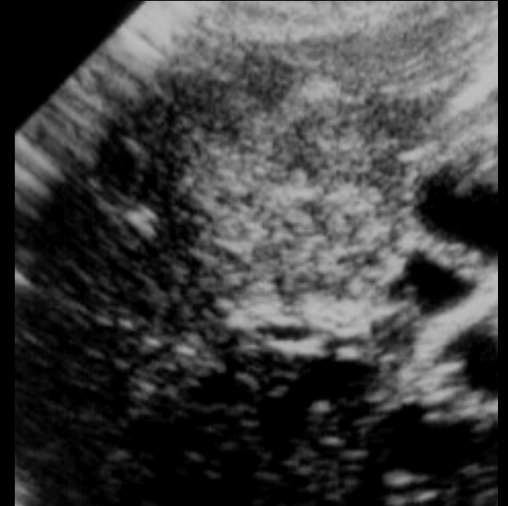
Tumeur Hypervascularisée

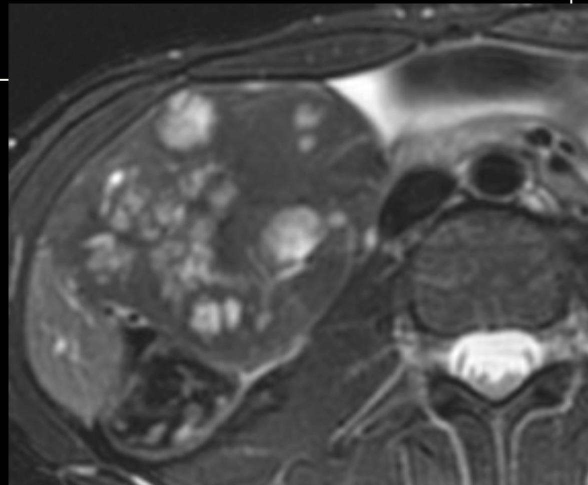
- Hépatocytaire
- Pas de cellules de Küpfer
- Nécrose, Calcifications, Hémorragie, Stéatose

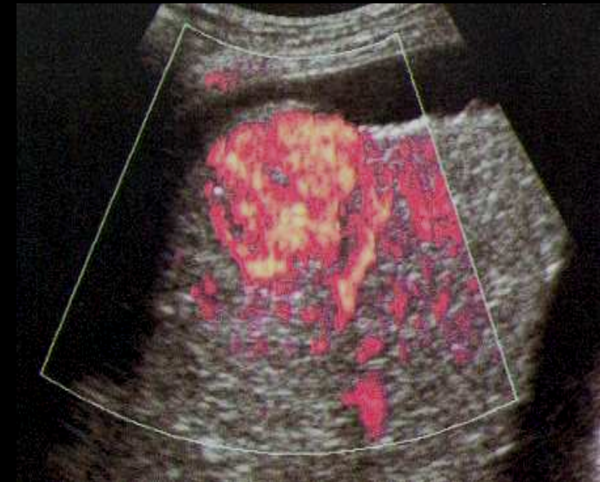
• Adénomatose 60%

• Dégénérescence?

• COP/stéroïdes / anabolisants/grossesse/ diabète/ glycogénose Ia







-**Adénome hépatocellulaire avec mutation HNF-1:**

- 35%
- lésions stéatosiques +++
- femmes 95%
- association à l’ HNF

-**Adénome hépatocellulaire avec mutation béta-caténine**:

- 10%
- tumeur peu inflammatoire et peu stéatosique
- souvent unique,
- hommes 40%
- dégénérescence CHC

-**Adénome télangiectasique ou inflammatoire**: (ancien HNF télangiectasique):

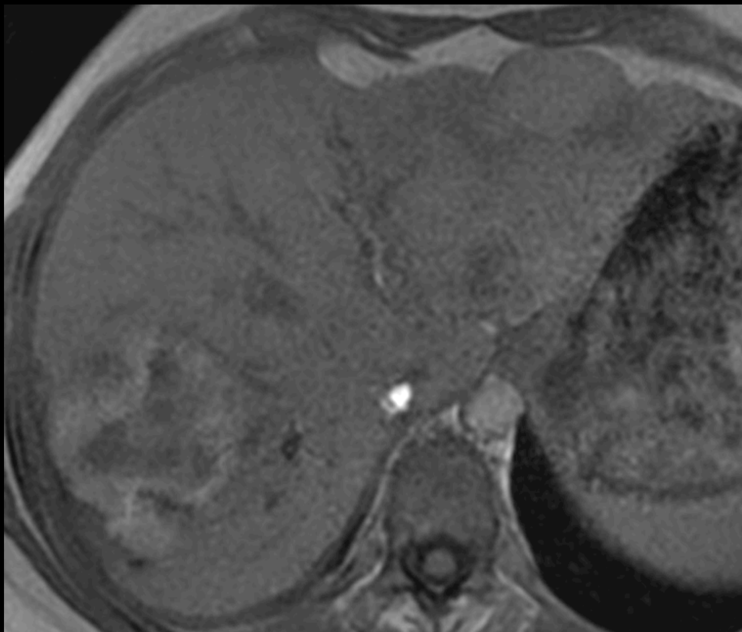
- 50%
- infiltrat inflammatoire et dilatation des sinusoïdes
- femmes 90%
- svt très volumineuses
- IMC> 25 50%
- sd inflammatoire 90%, stéatose foie sain 40%, complications hémorragiques (35%)> CHC (10%)

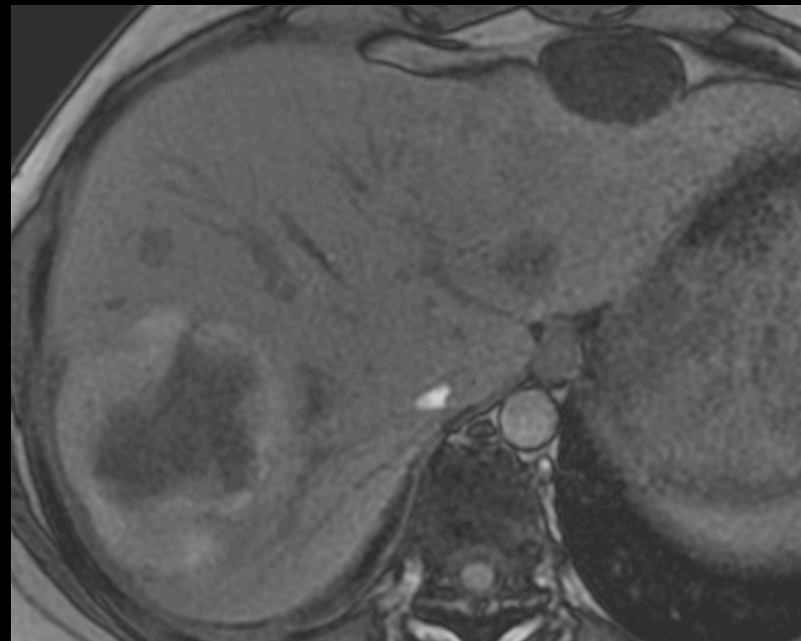
- **Adénome hépatocellulaire sans mutation HNF-1α ou mutation β-caténine et sans surexpression des protéines inflammatoires: 5%**

Adénome graisseux

In Phase

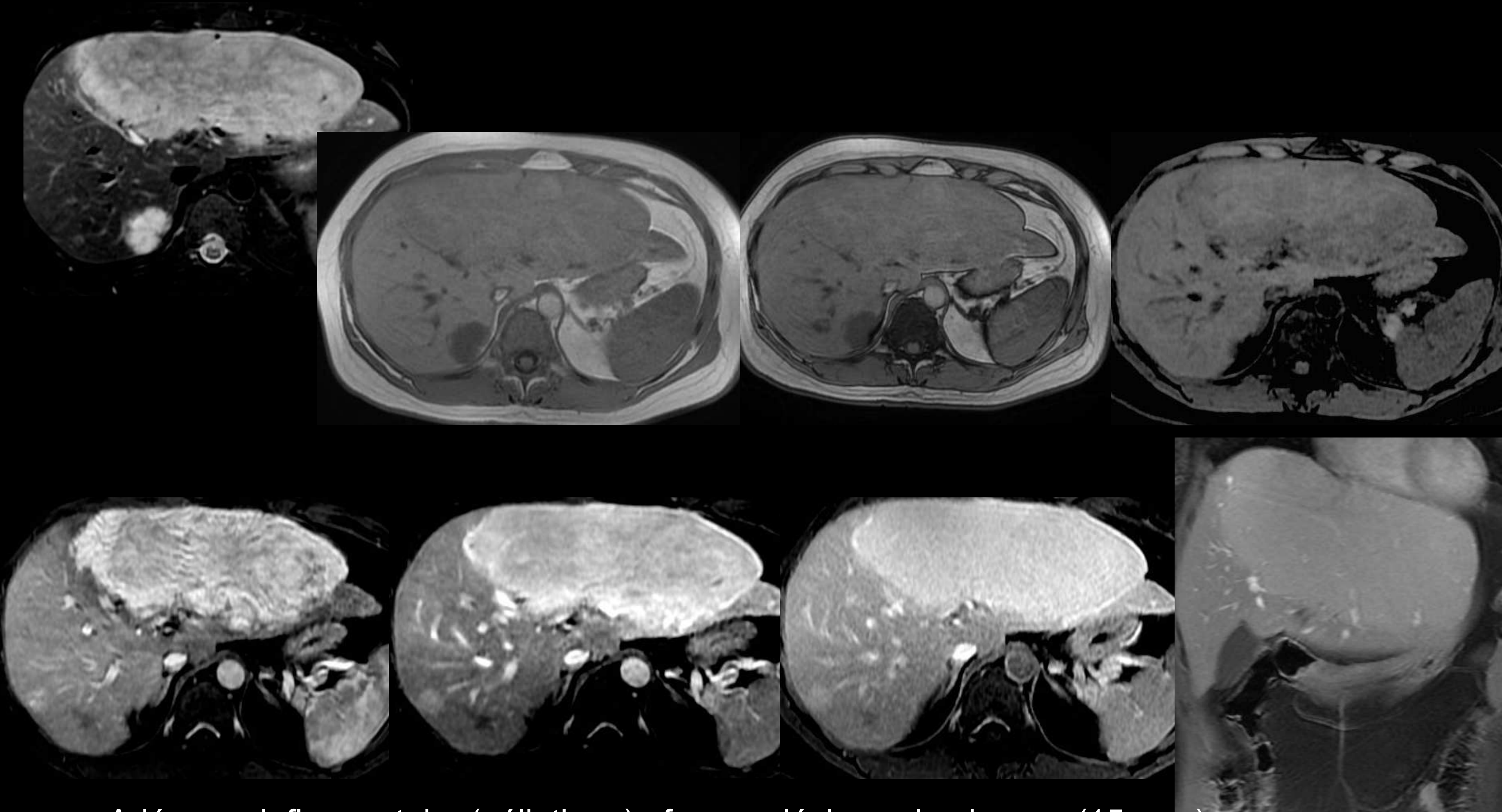
Out of Phase





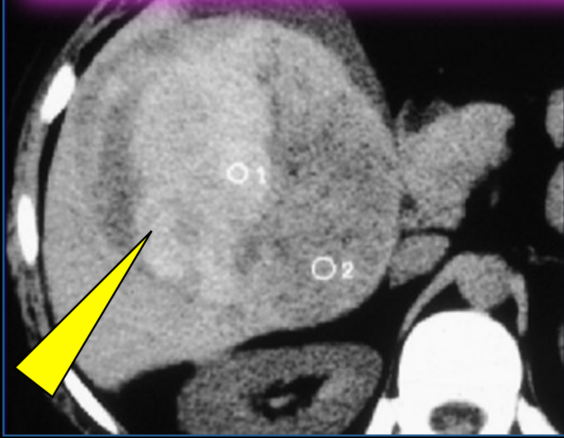
Plutôt les adénomes avec mutation HNF 1

Adénome inflammatoire(télangiectasique)

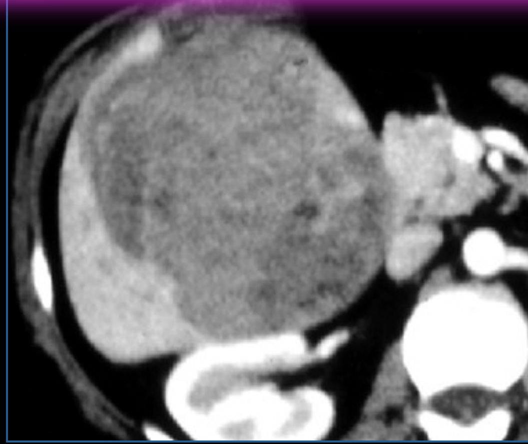


Adénome inflammatoire (péliotique) : femme, lésion volumineuse (15 cms)

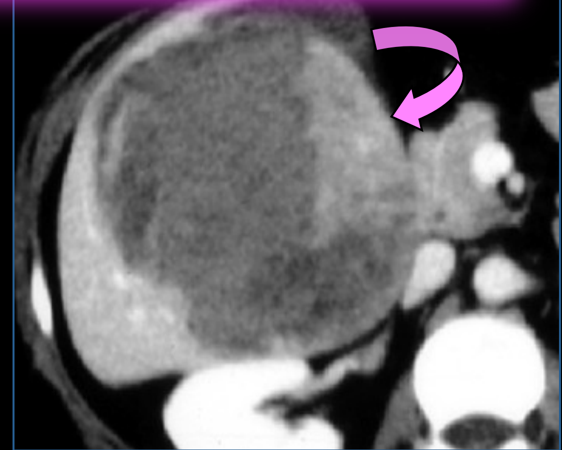
Adénome hémorragique



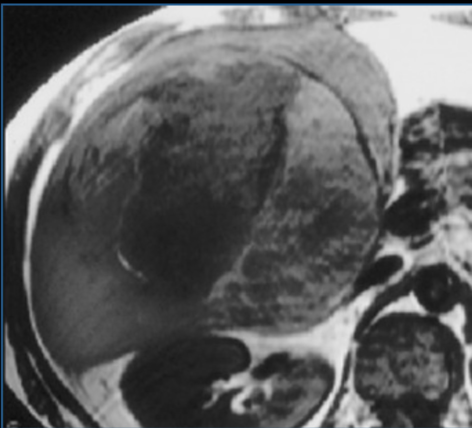
CT avant injection



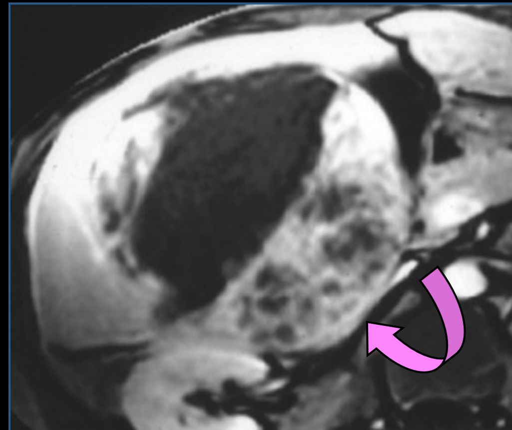
CT 45 "



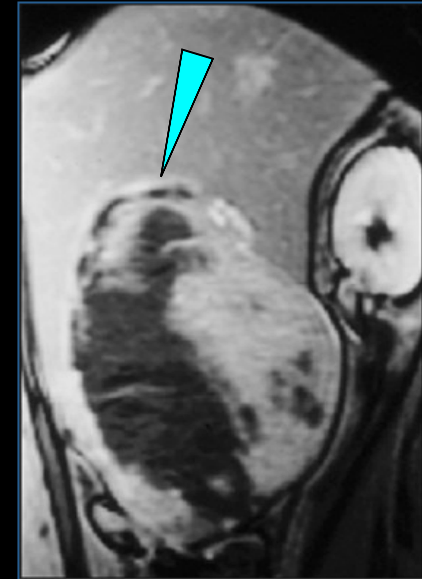
CT 1'30



SE T1



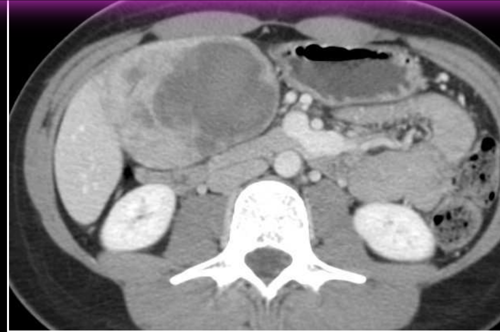
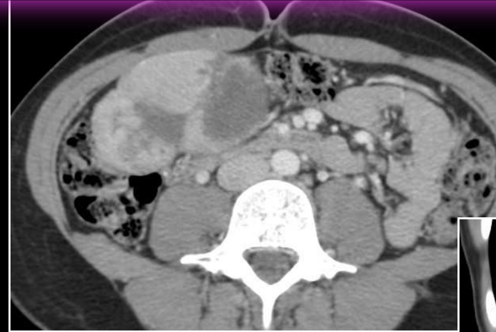
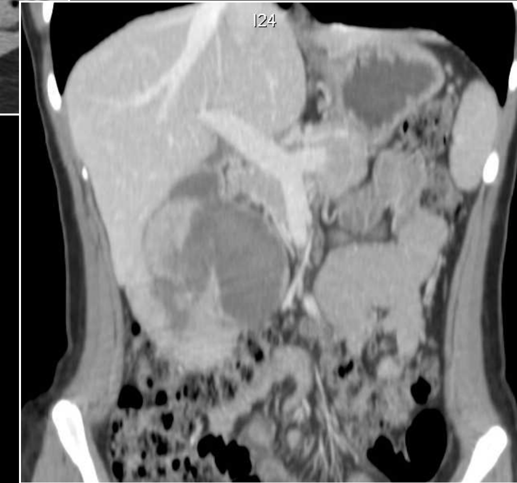
SE T1 2'

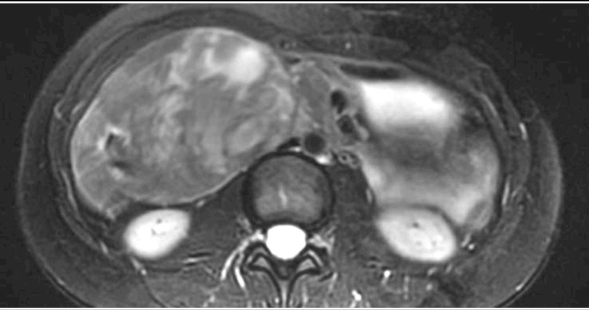
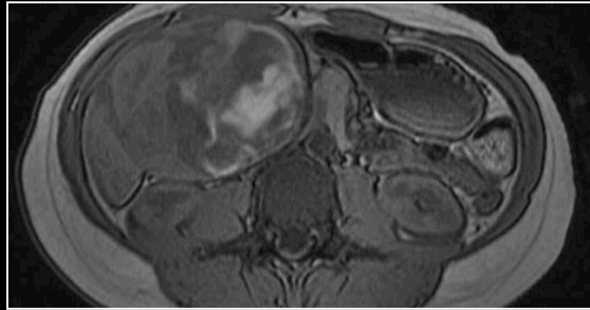
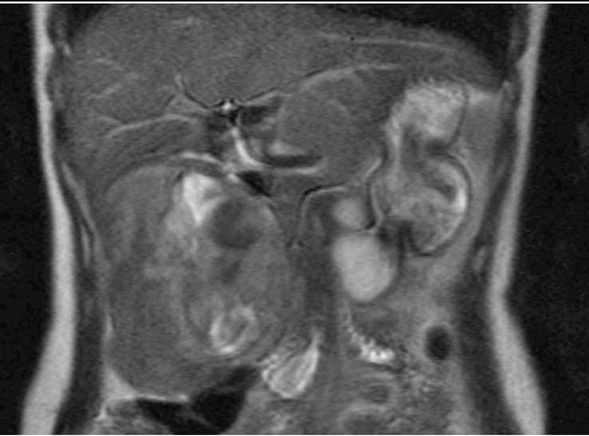
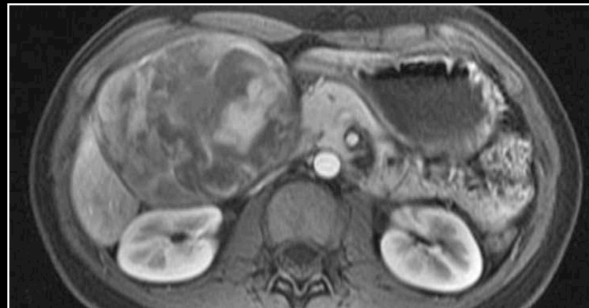
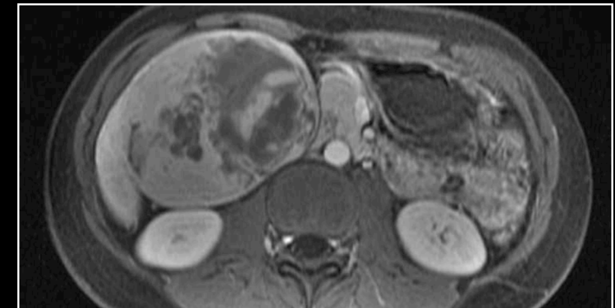


SE T1 6'

adénome hépatique hémorragique, femme 34 ans

Adénome hémorragique

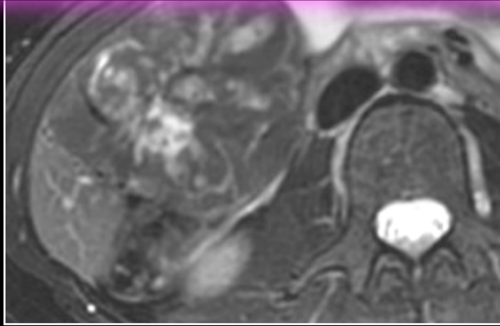




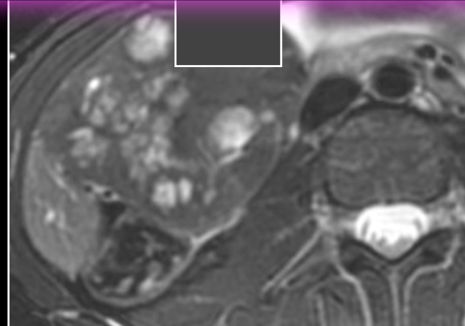






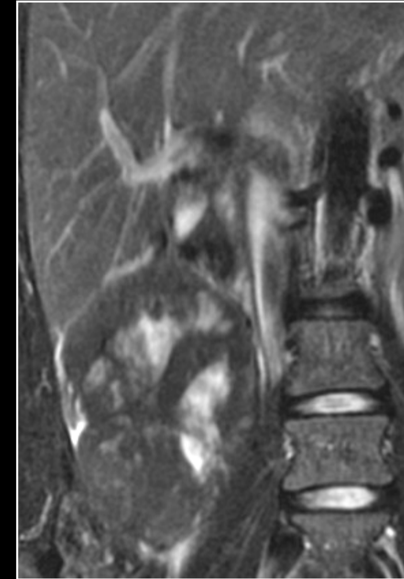
Homme 25 ans, douleurs en HCD, biologie normale

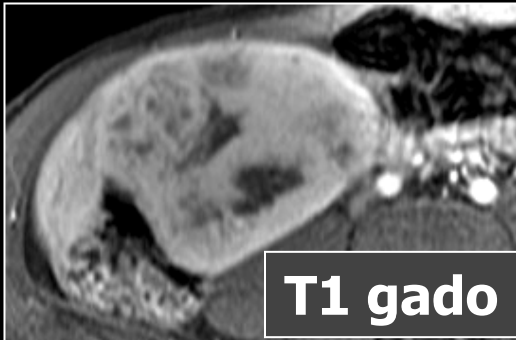
Adénome hémorragique

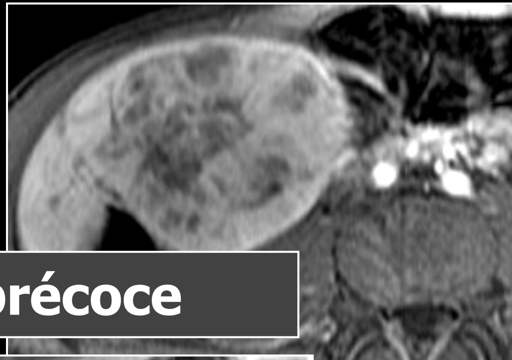
Adénome hémorragique



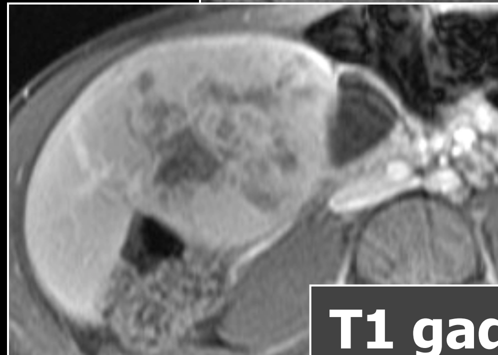


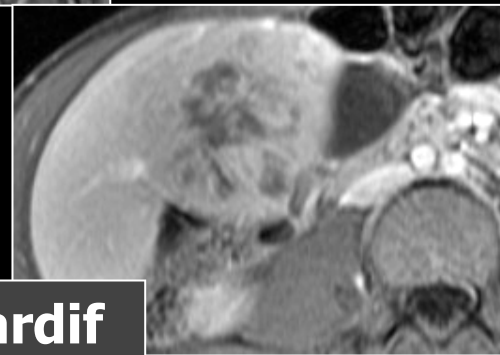






T1 gado précoce

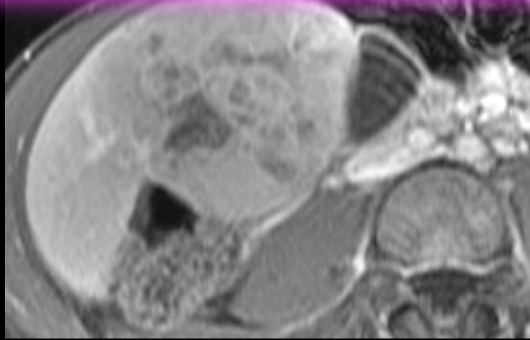


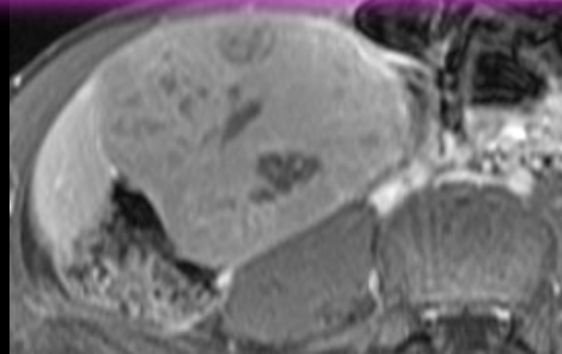


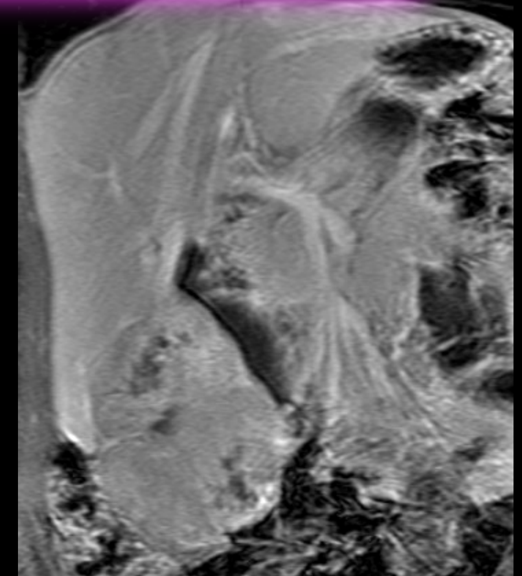
T1 gado tardif

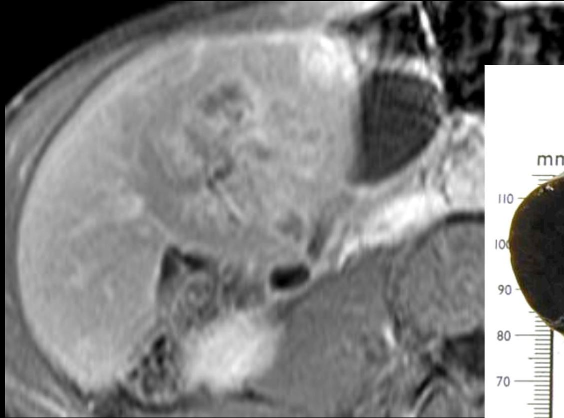
Jeune femme 23 ans ; découverte d'une masse abdominale lors d'une consultation pour début d'une contraception.

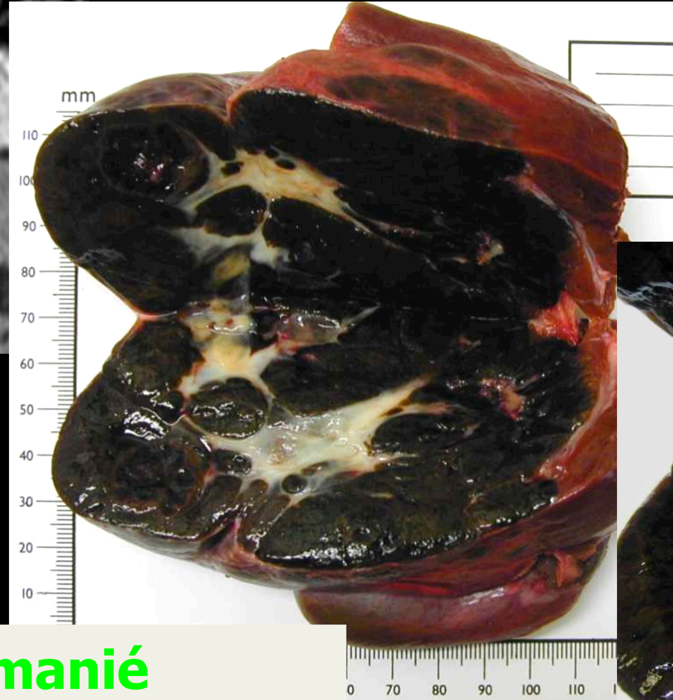
Adénome hémorragique

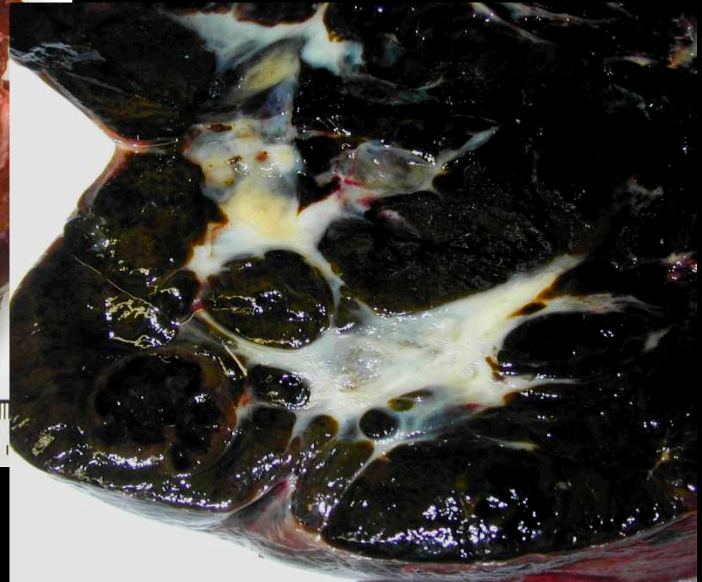








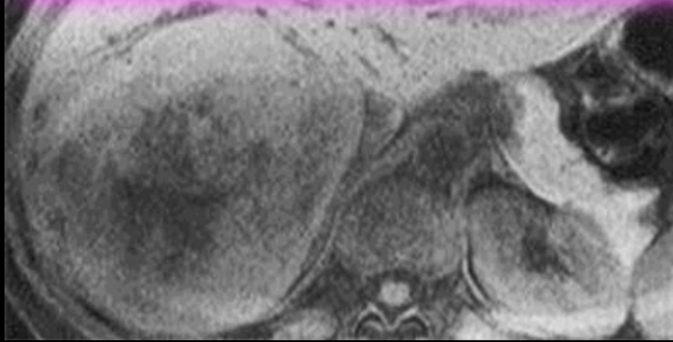




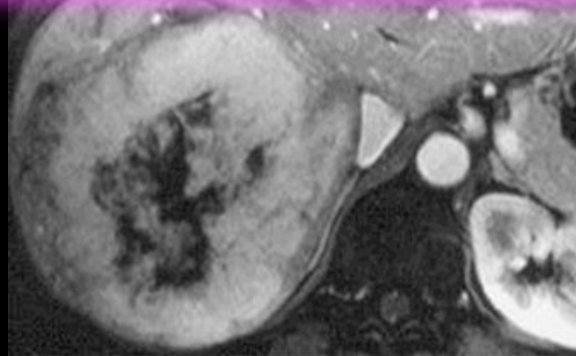
Adénome remanié

par des hémorragies anciennes

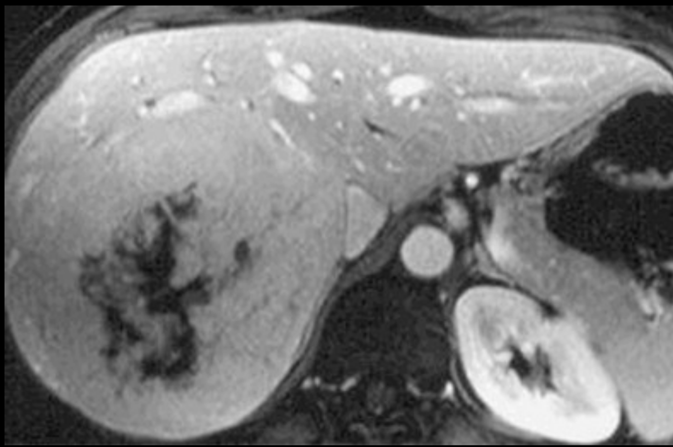
Adénome hémorragique



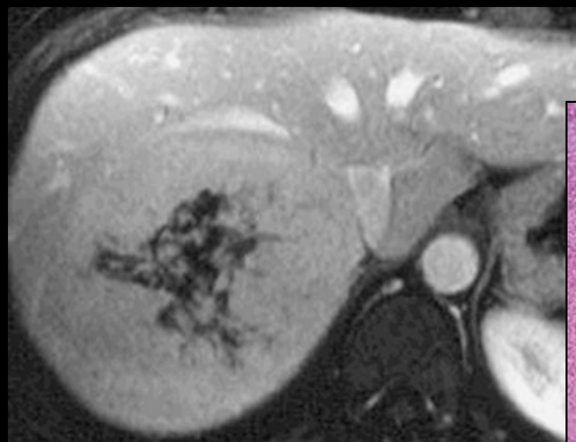
EG T1 sans Fat Sat



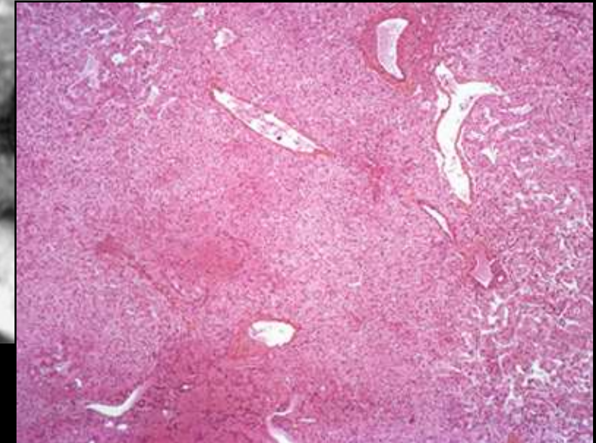
T1 50" avec Fat Sat



T1 70" avec Fat Sat



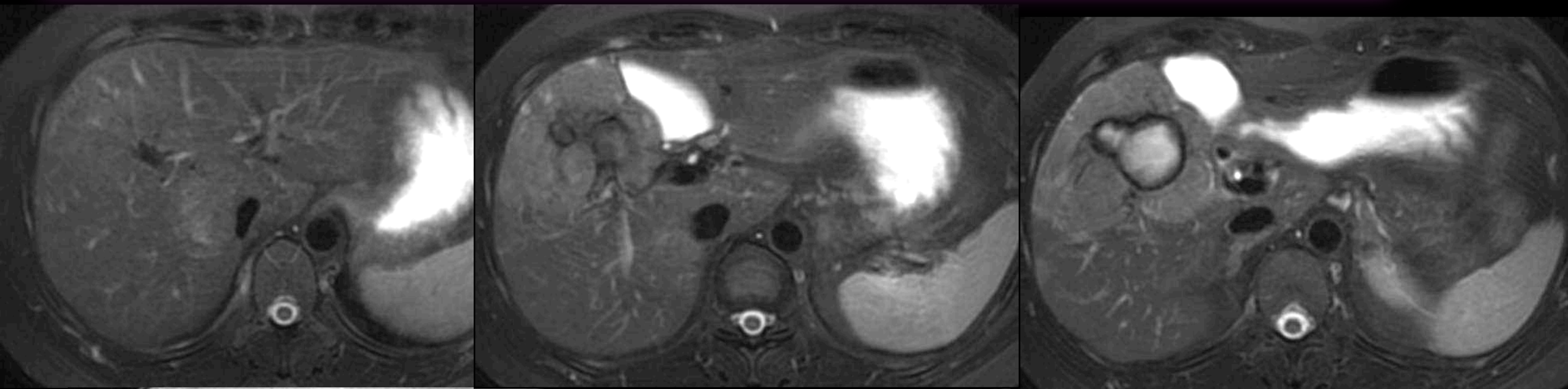
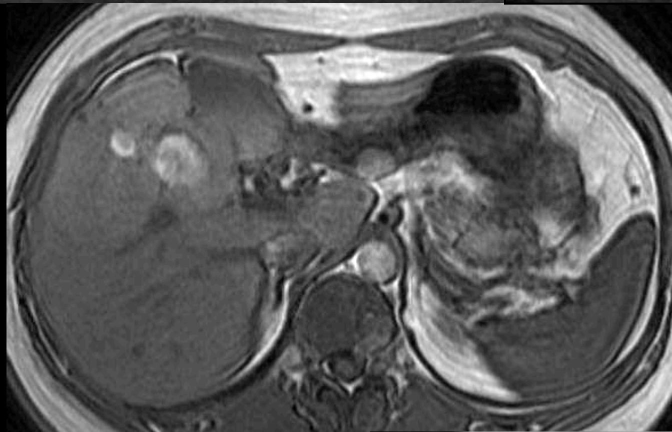
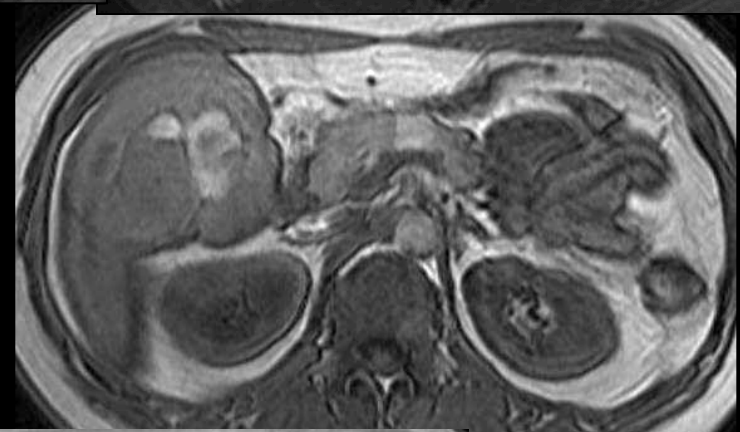
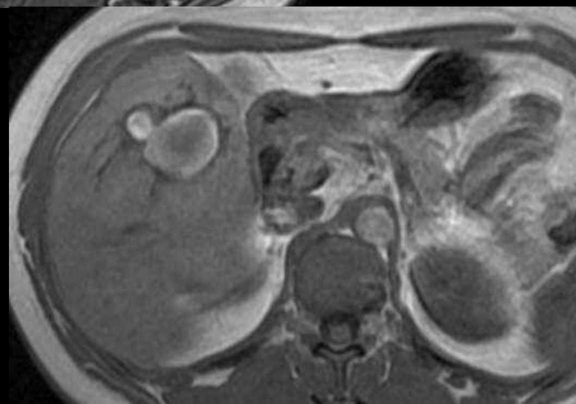
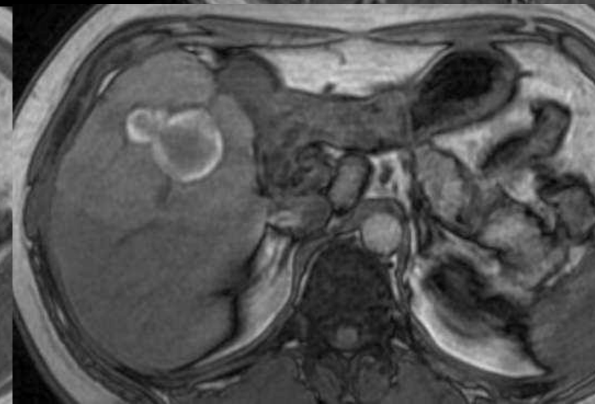
T1 2' avec Fat Sat



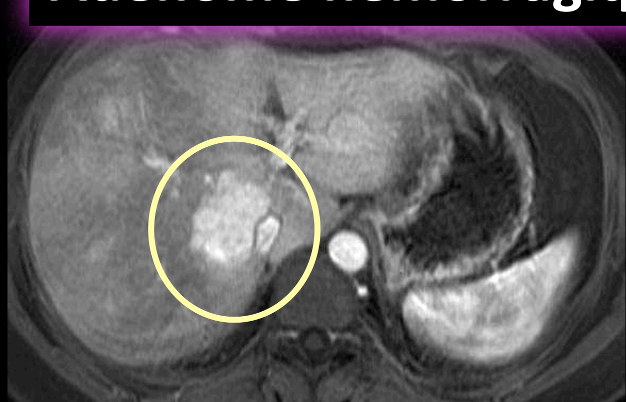
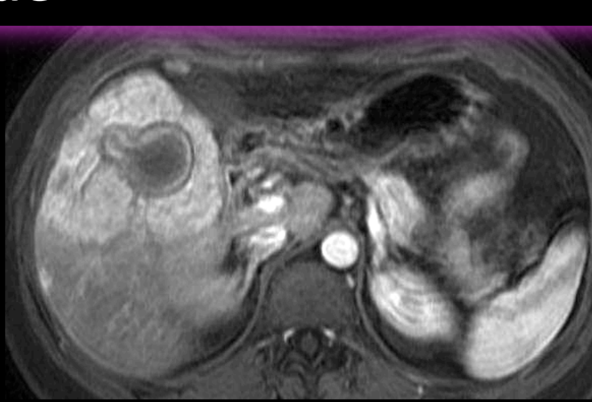
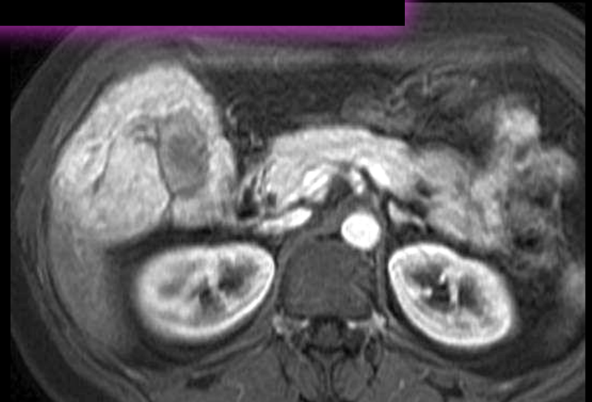
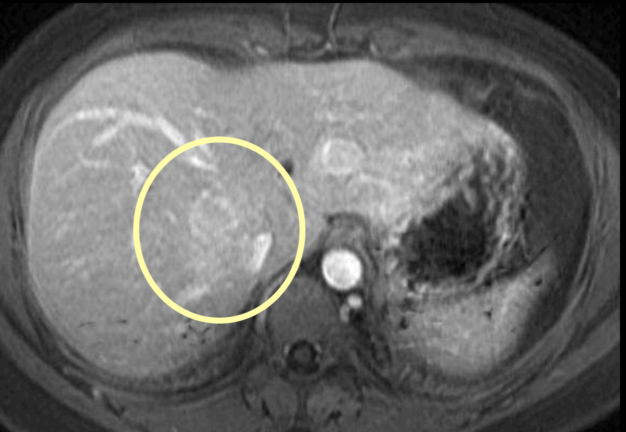
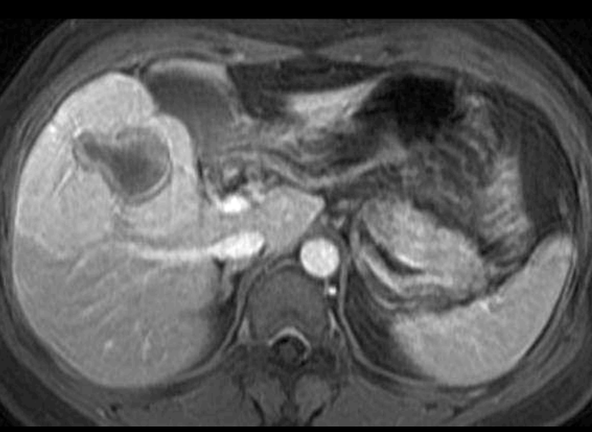
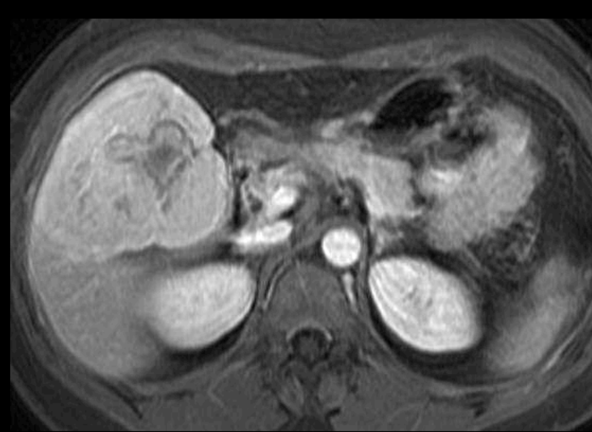
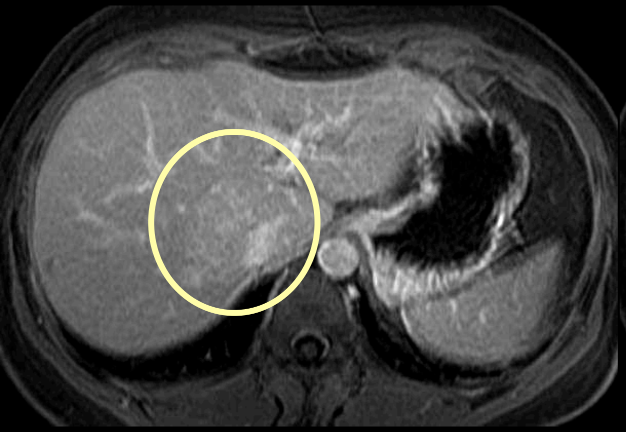
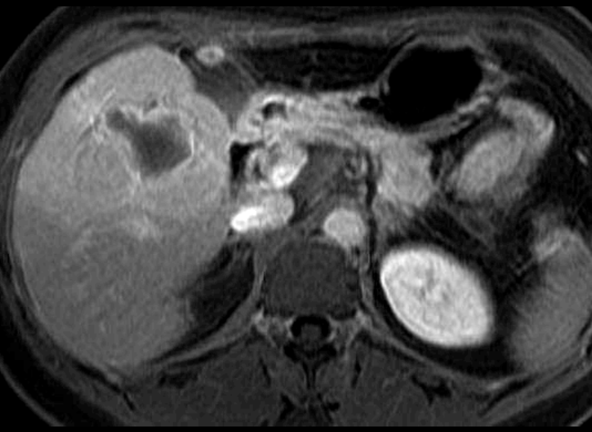
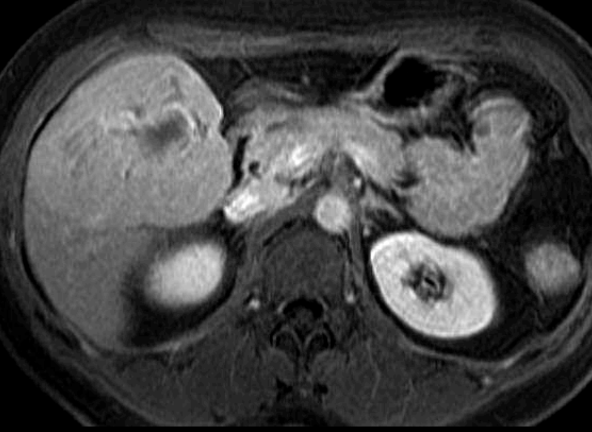
Adénome hépatique nécrosé non hémorragique, femme 37 ans

Diagnostic différentiel macroscopique impossible avec CHC sur foie non cirrhotique ! !

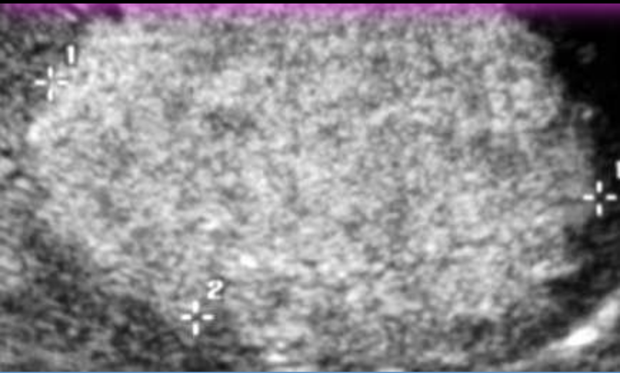
Adénome hémorragique

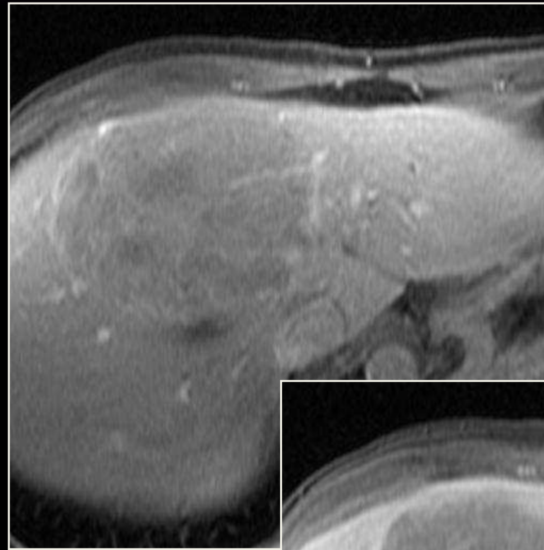






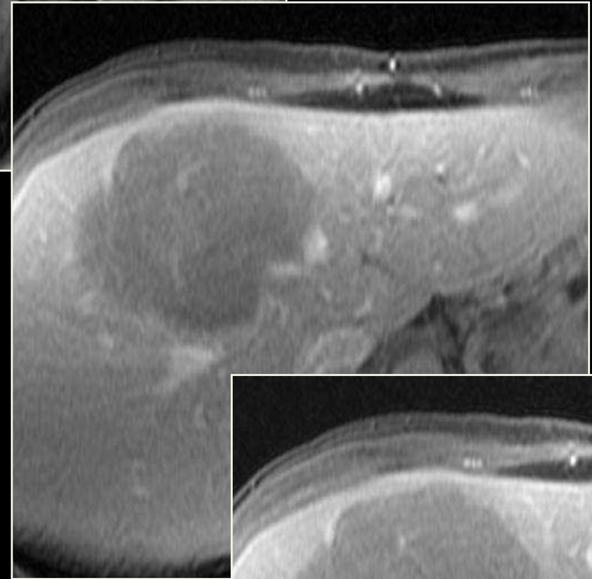
Adénome hémorragique

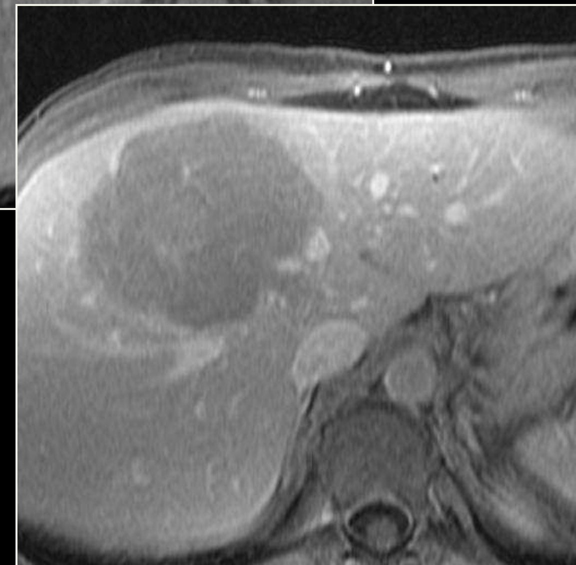










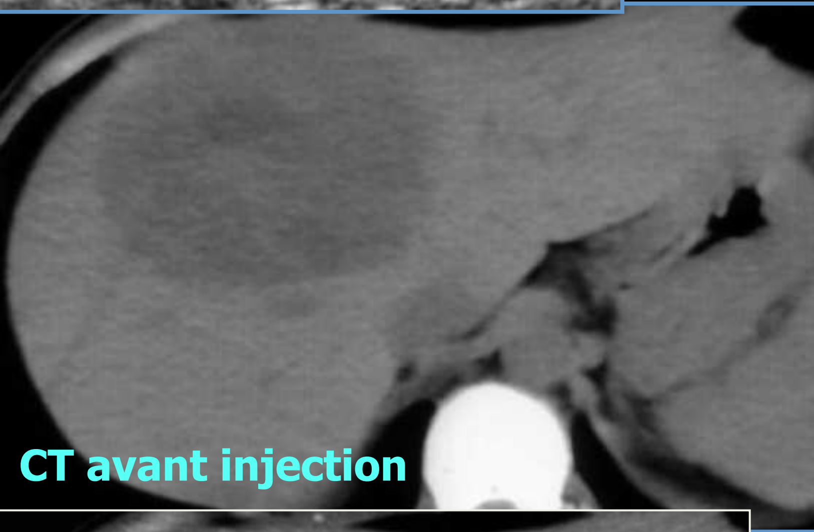
Adénome avec wash out

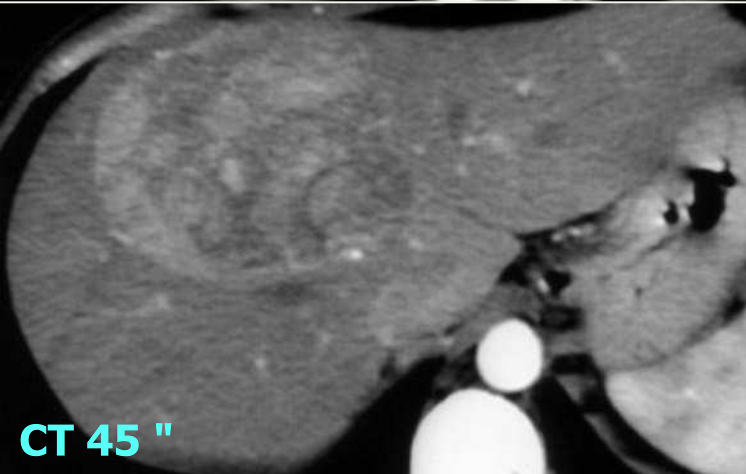




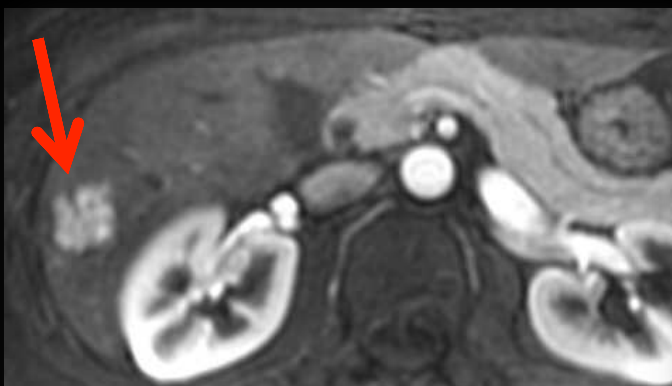


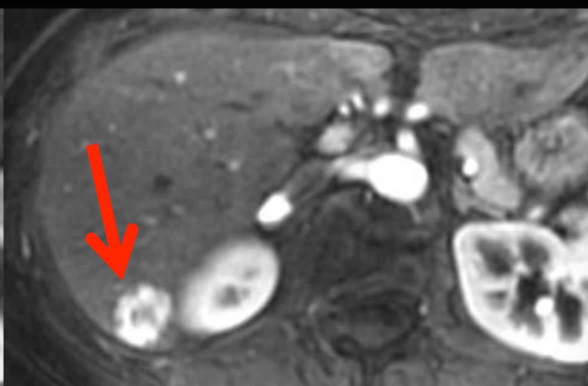


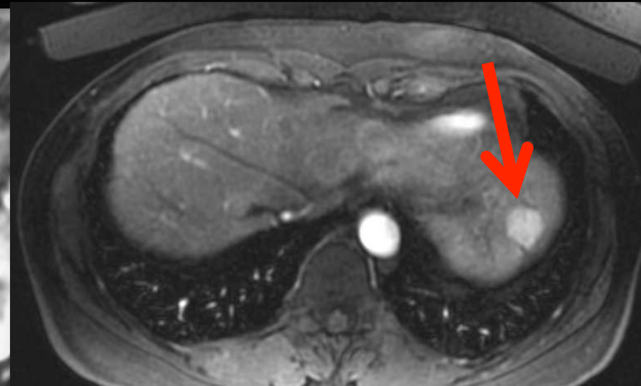


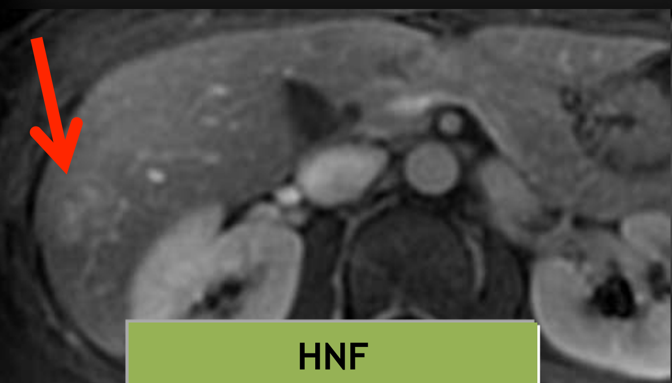


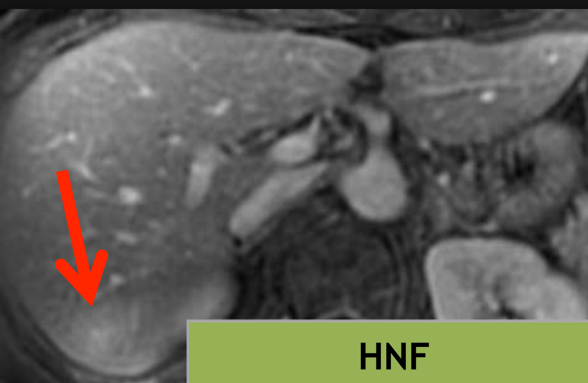
Adénome avec wash out

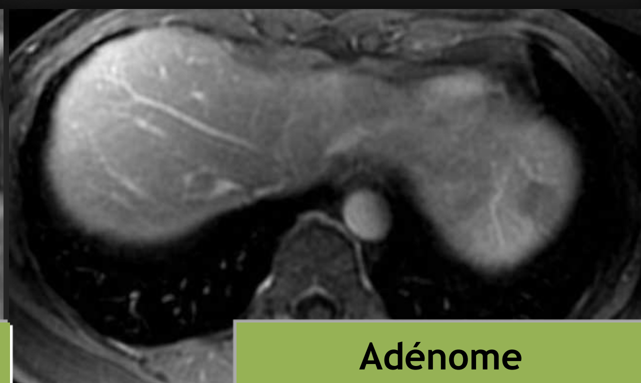










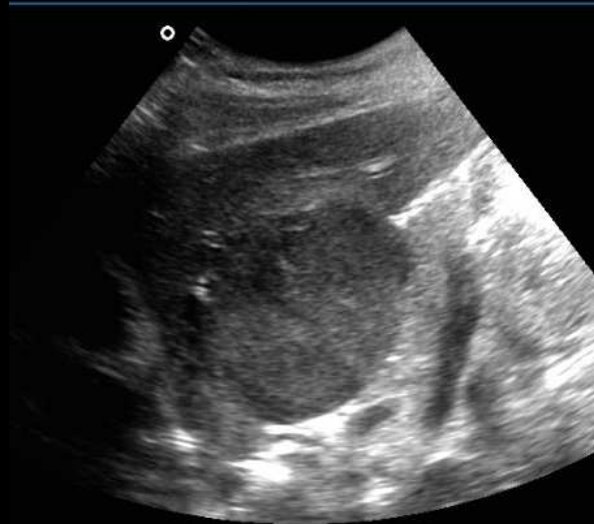


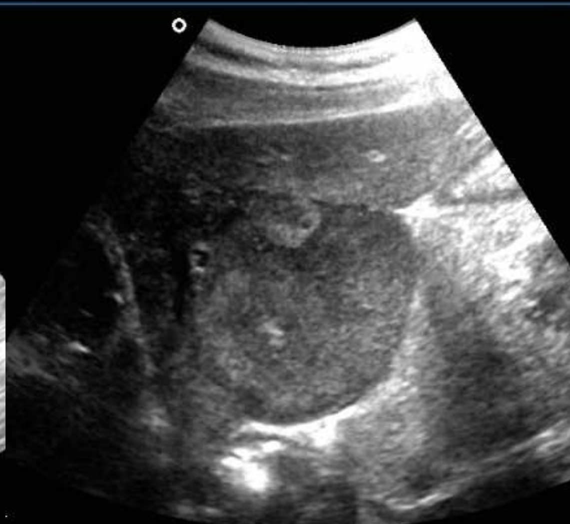
Adénome : apport de l'IRM

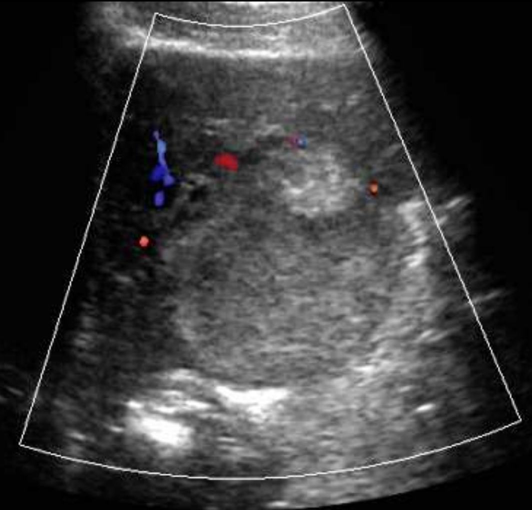
- Pondération T2: hétérogénéité
- Pondération T1 avant gado: remaniements hémorragiques
- Pondération T1 après gado: hypervascularisation, prise de contraste moins intense, moins homogène
- In Phase / Out of Phase : présence de graisse intrahépatocytaire

Tumeurs rares : Angiomyolipome

Observation Benoit DUPAS-CHU
Nantes







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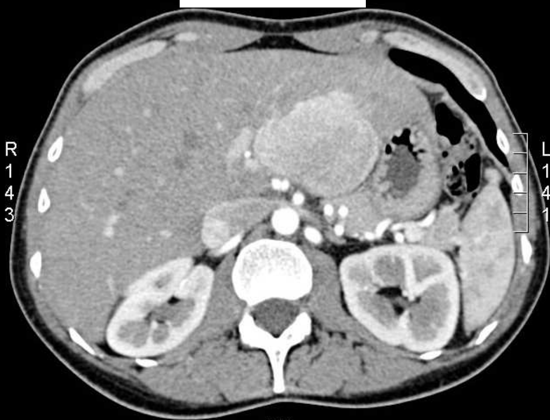
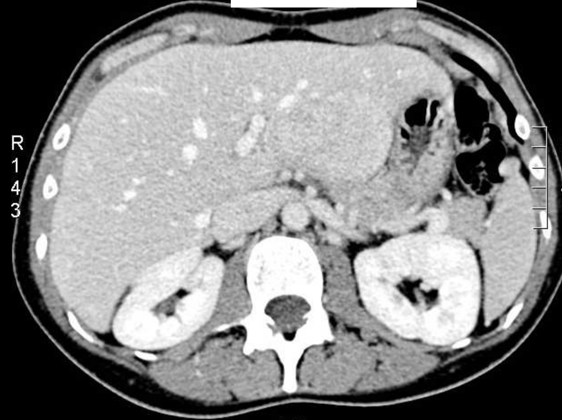
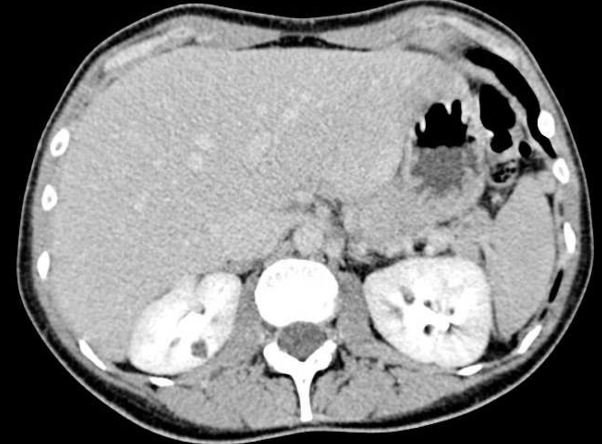


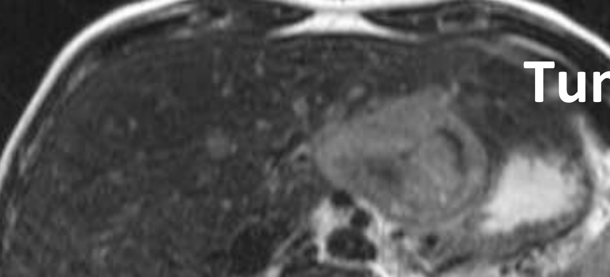
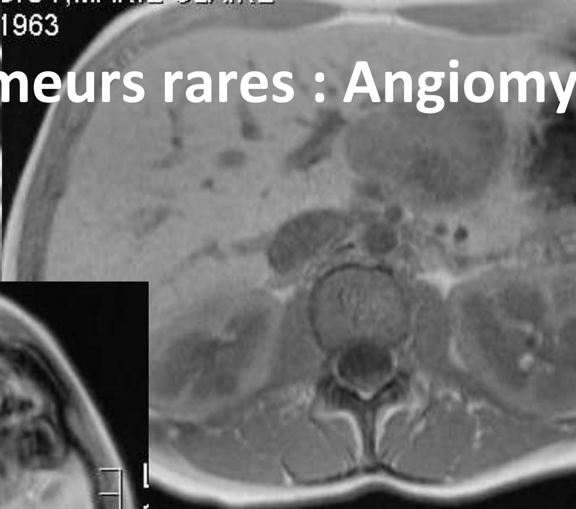
70 sec

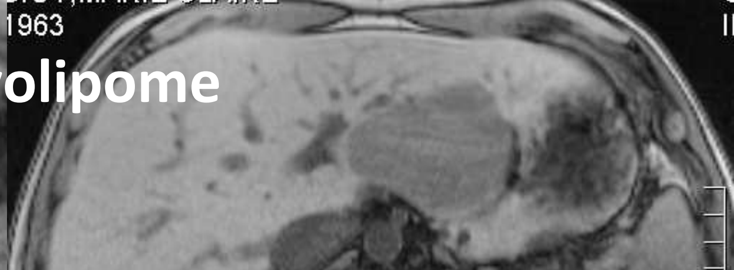


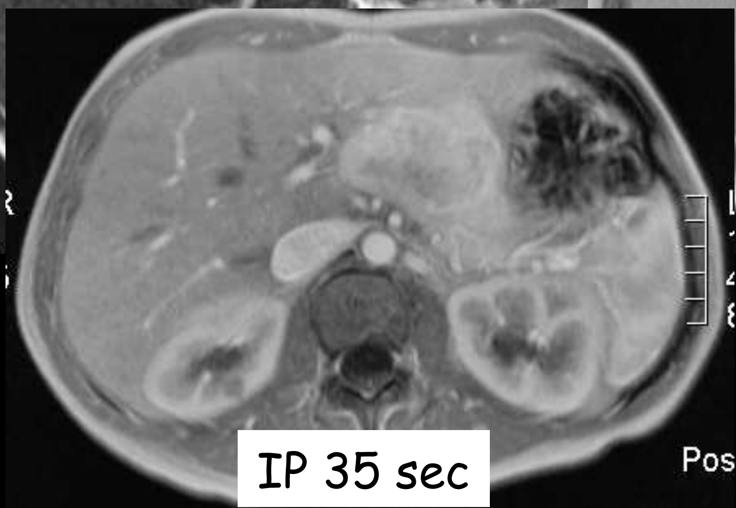
3 min

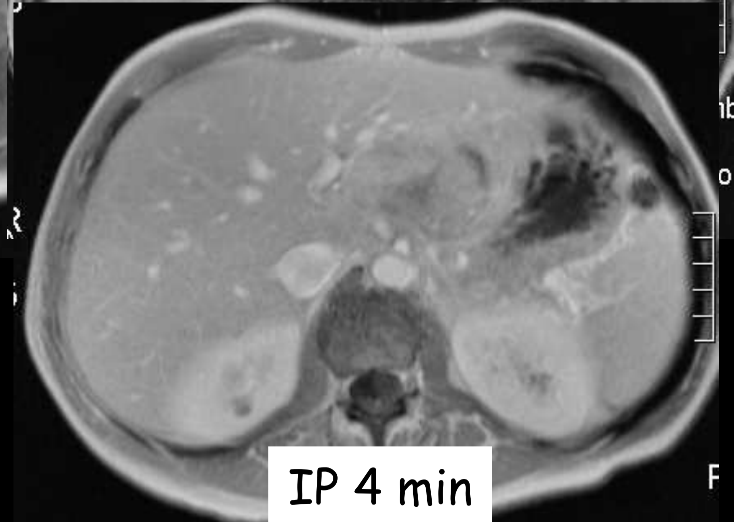


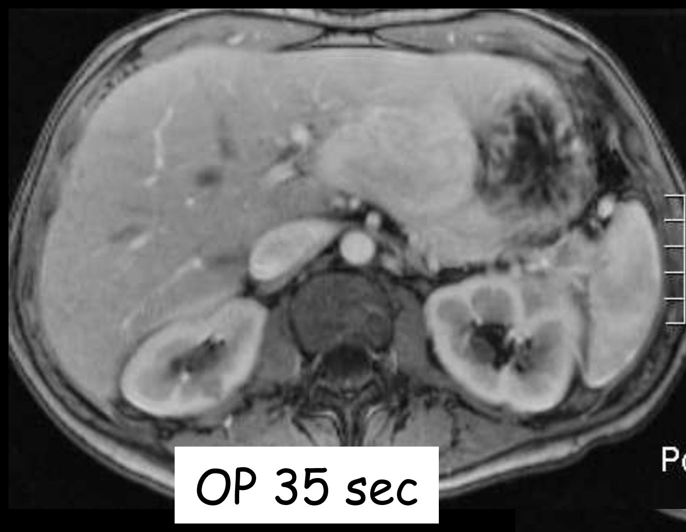
Tumeurs rares : Angiomyolipome

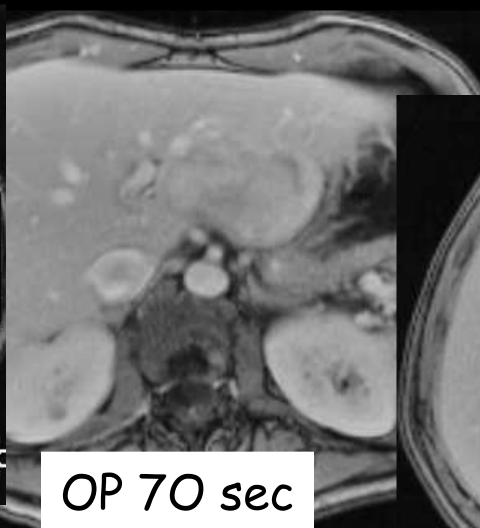



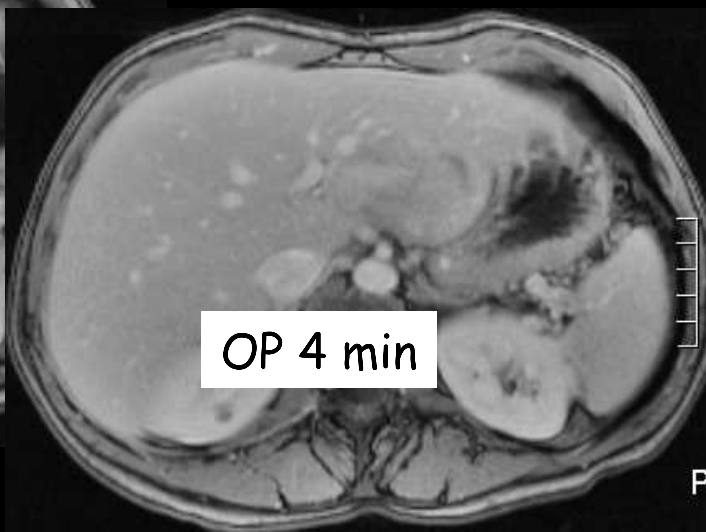


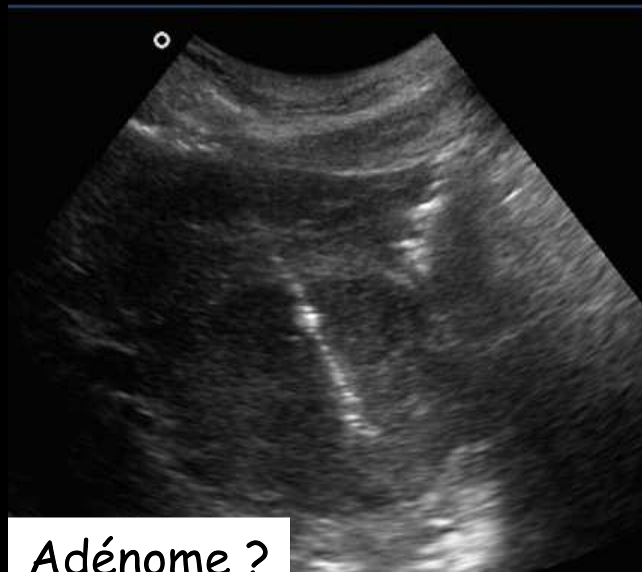


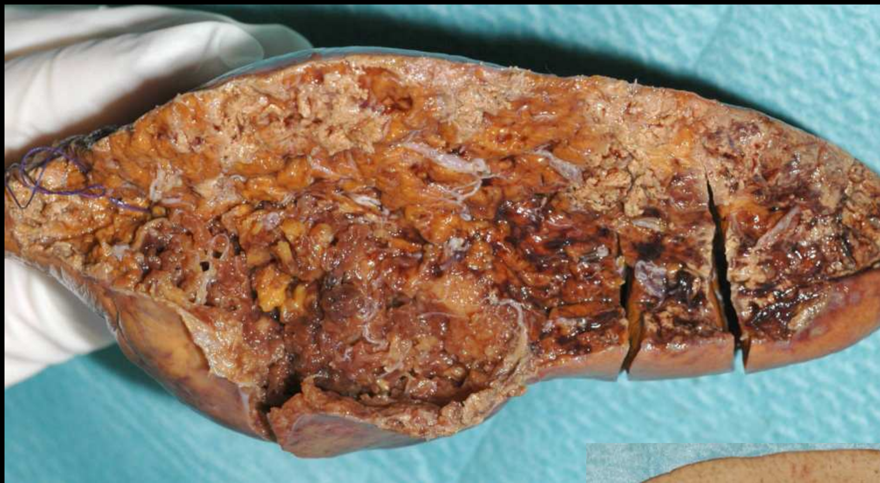


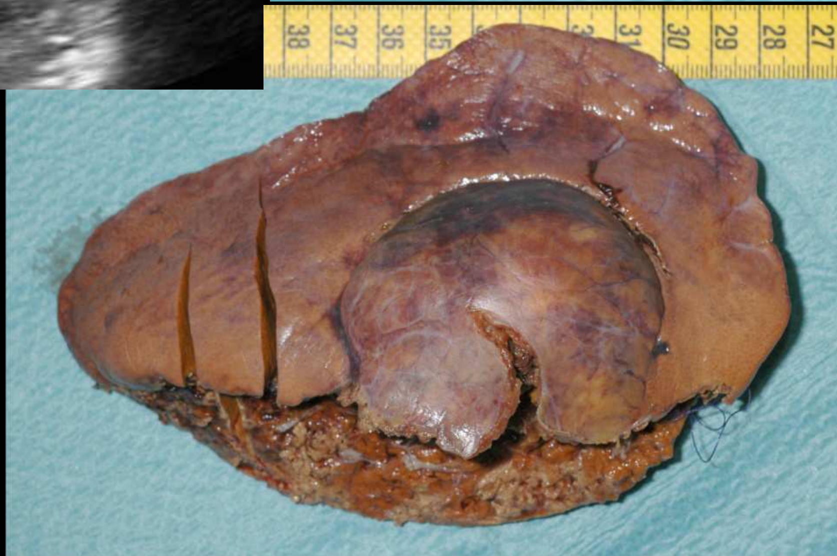


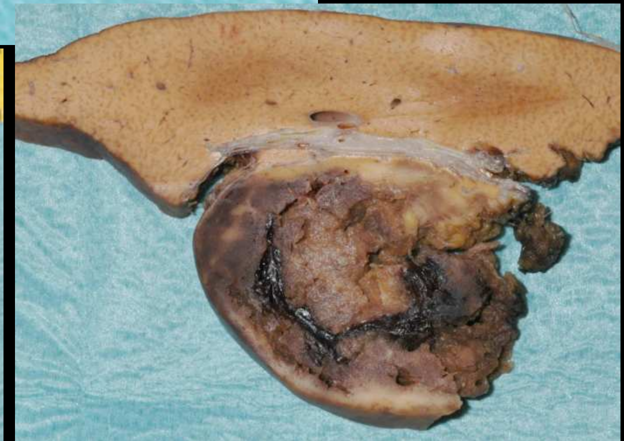


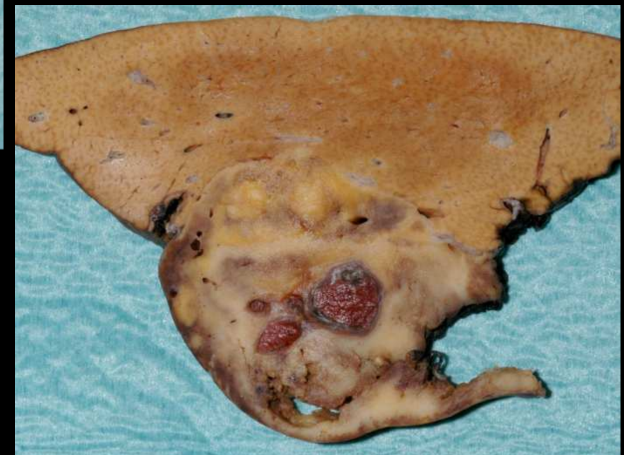






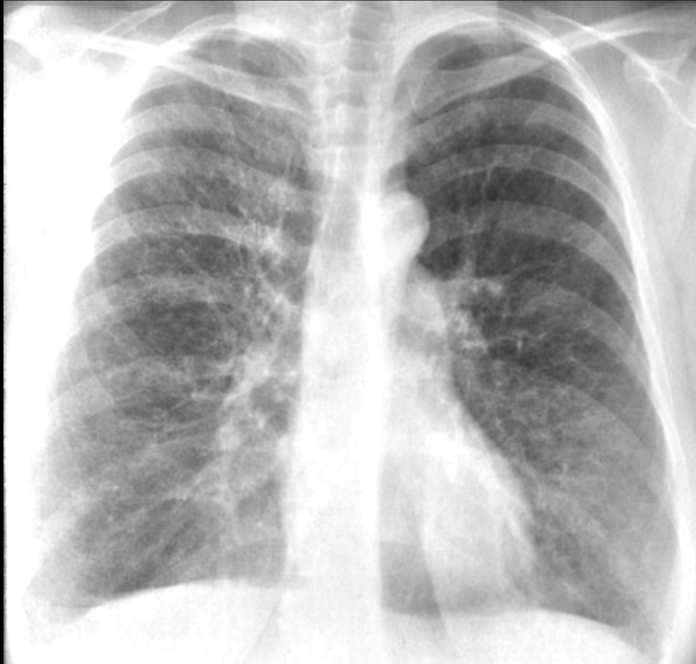
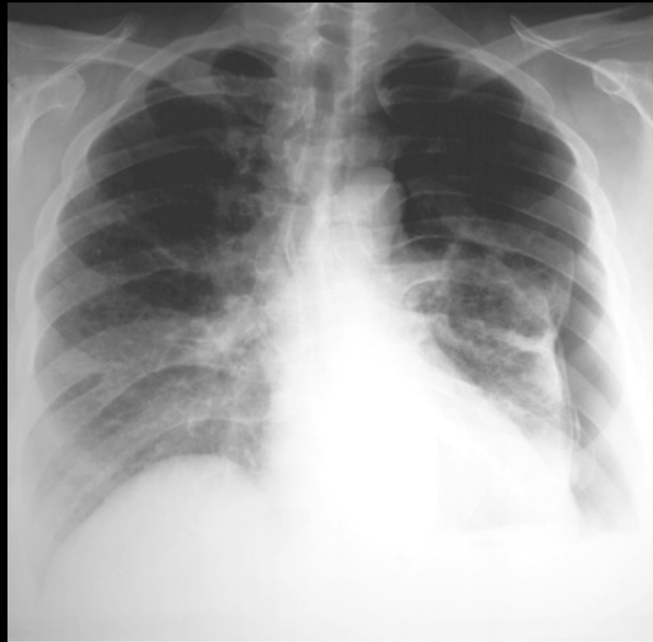
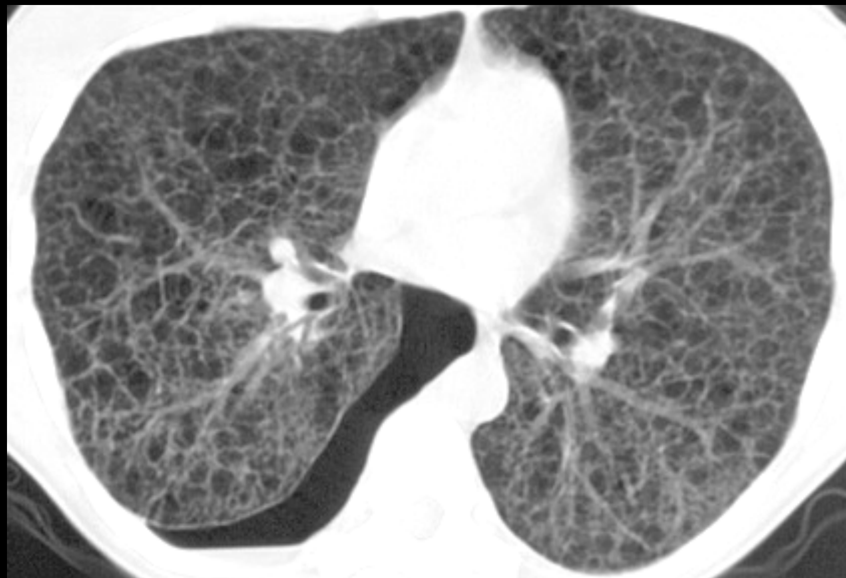


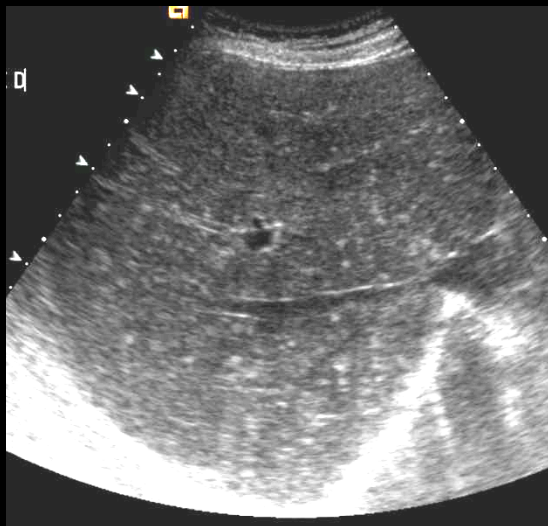
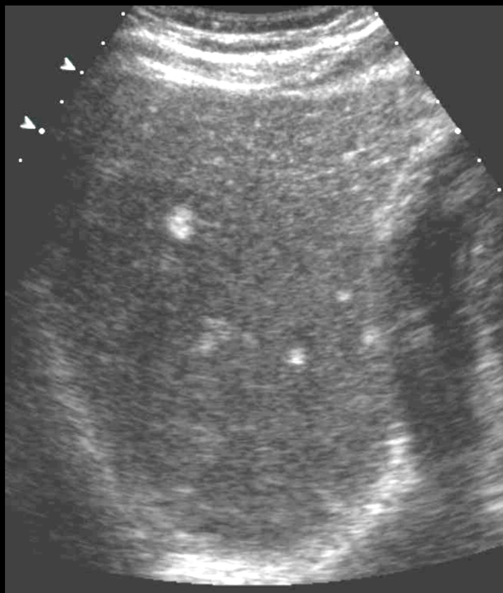
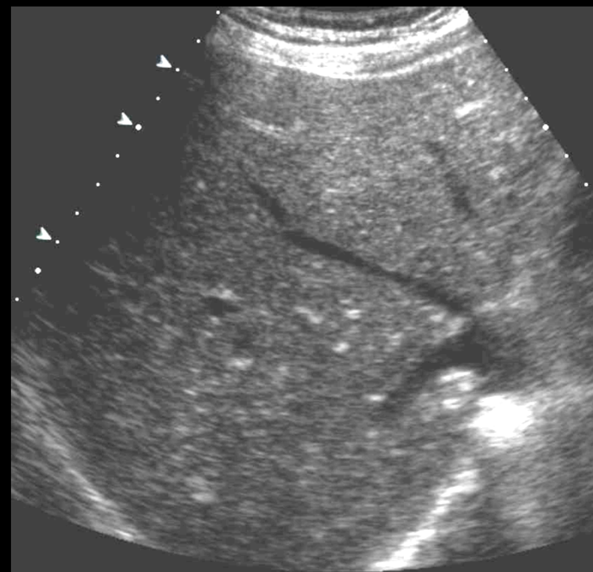
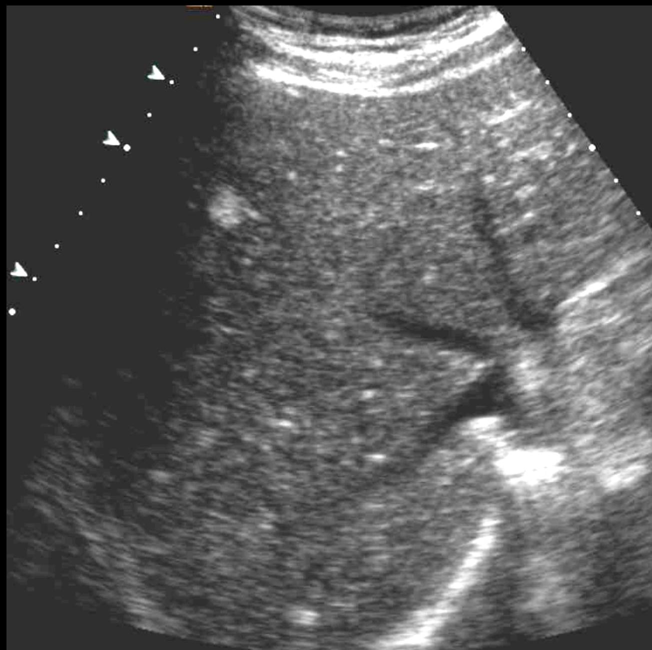
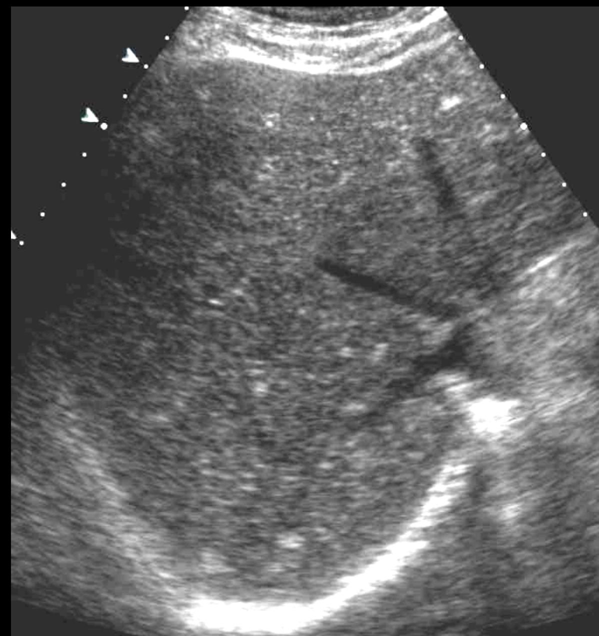




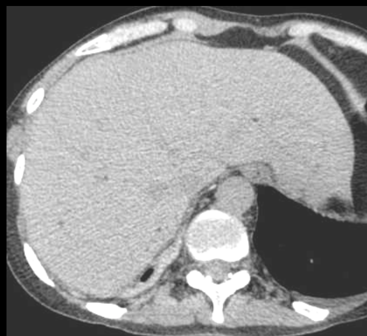
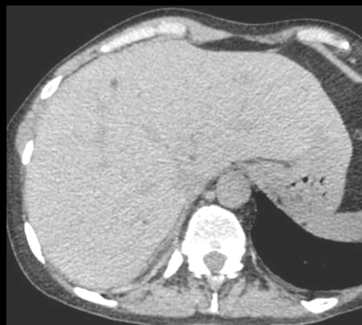
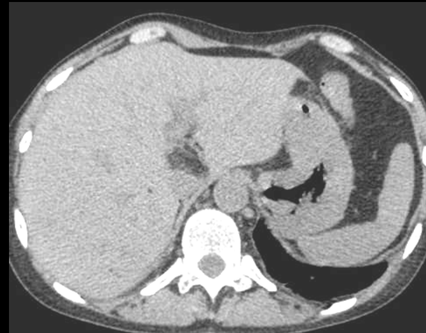
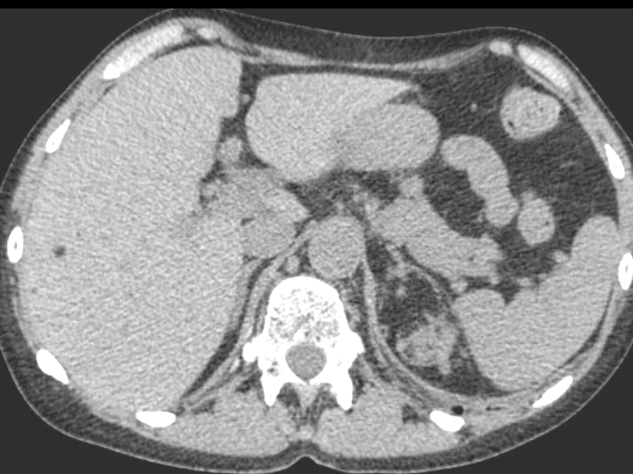
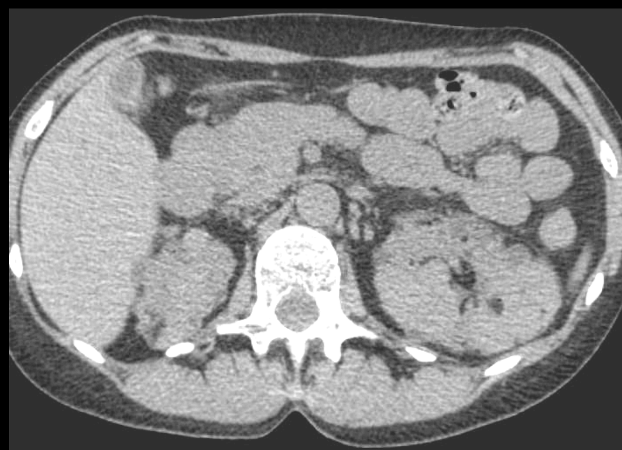
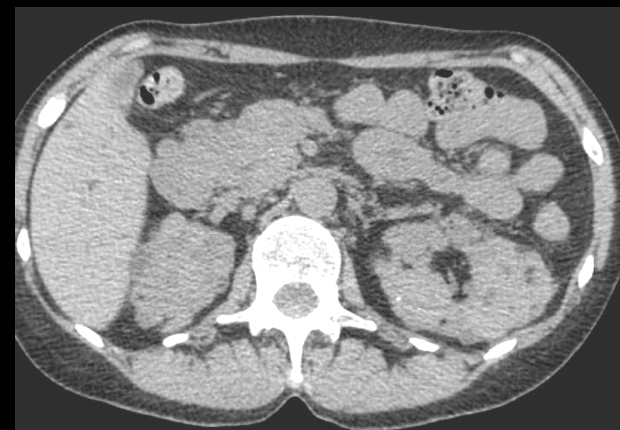
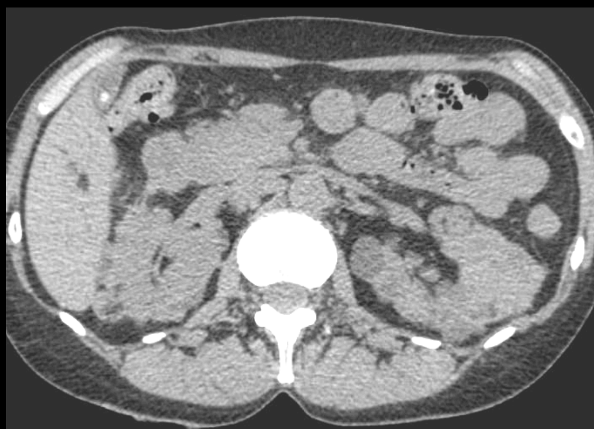
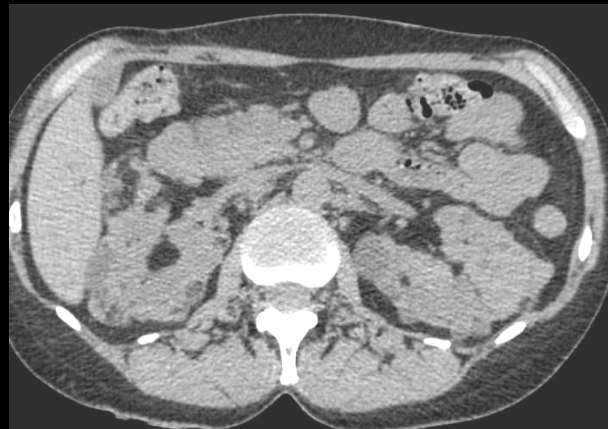
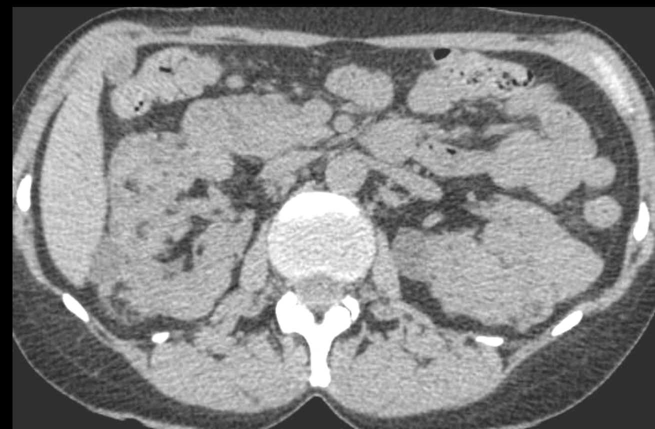
Angiomyolipome
de type épithélioïde de 7,5 cm
immunohistochimie +++

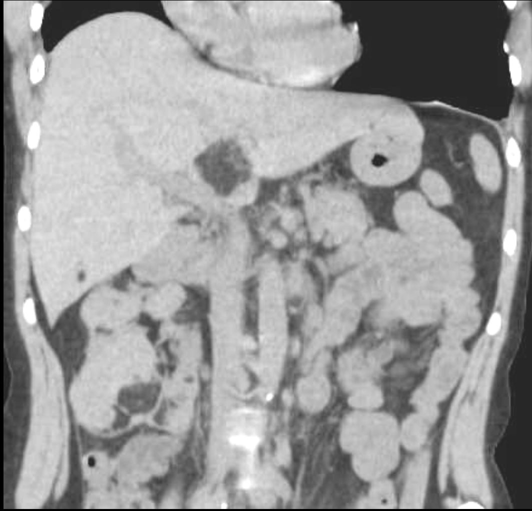
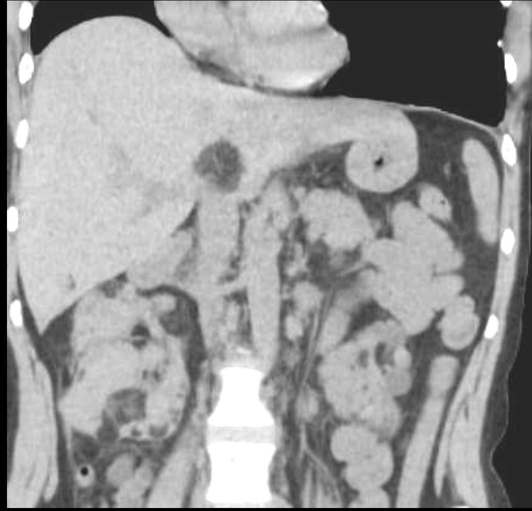
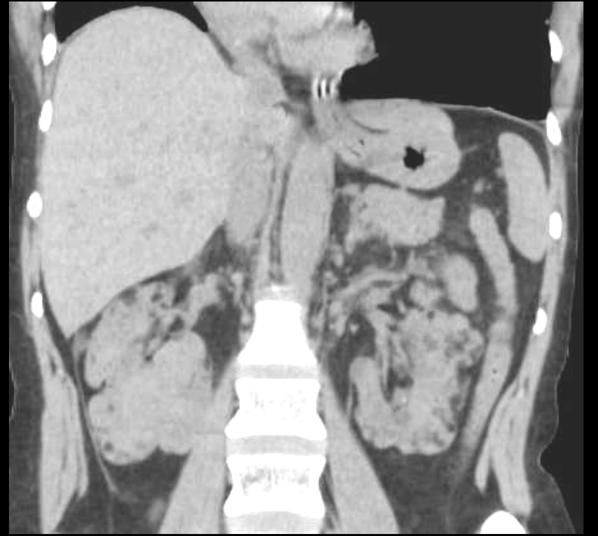
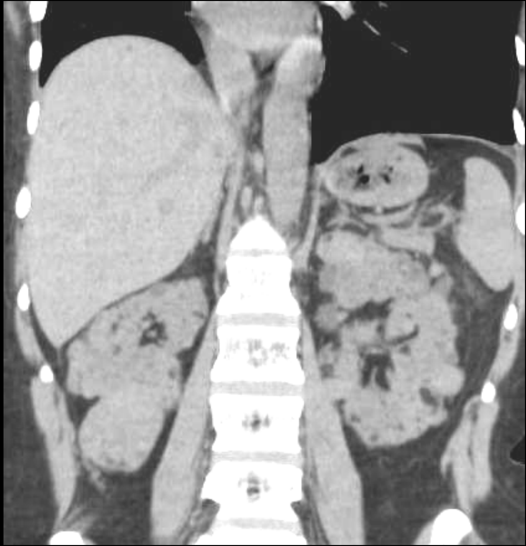
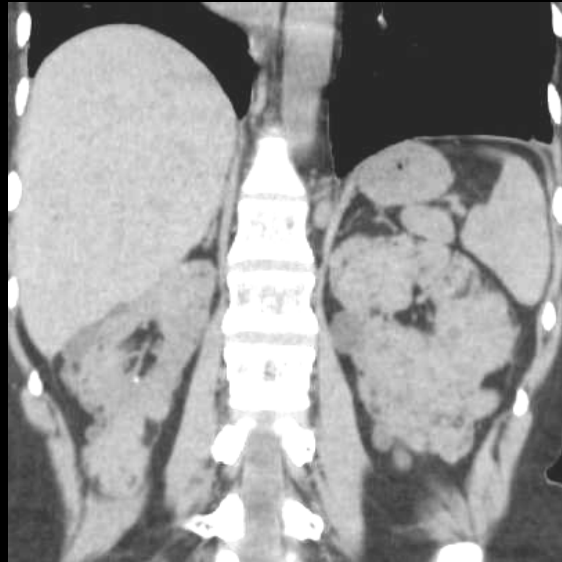
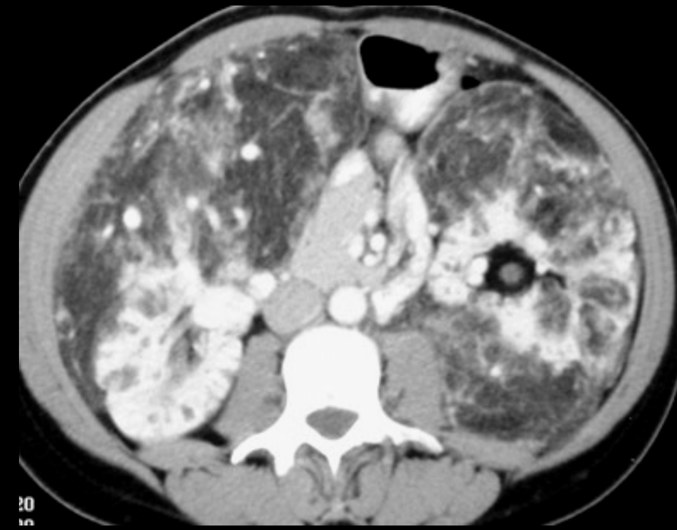
Observation Benoit DUPAS-CHU Nantes

Angiomyolipomes rénaux et hépatiques dans le cadre d'une sclérose tubéreuse de Bourneville

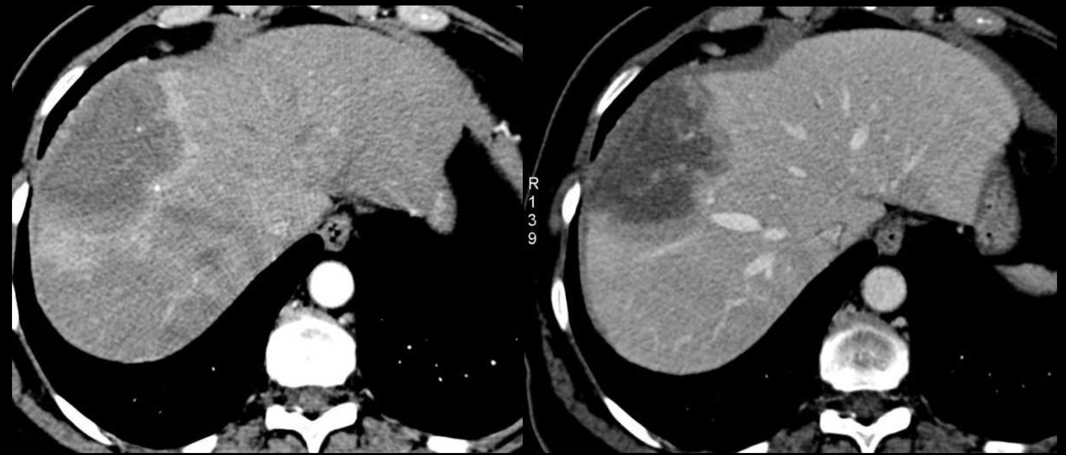







Femme, 57 ans

ATCD de cancer du sein trois ans auparavant

Tumeurs rares :

Pseudo tumeur inflammatoire



Observation Benoit DUPAS-CHU Nantes