

Biliary diseases: benign and malignant lesions

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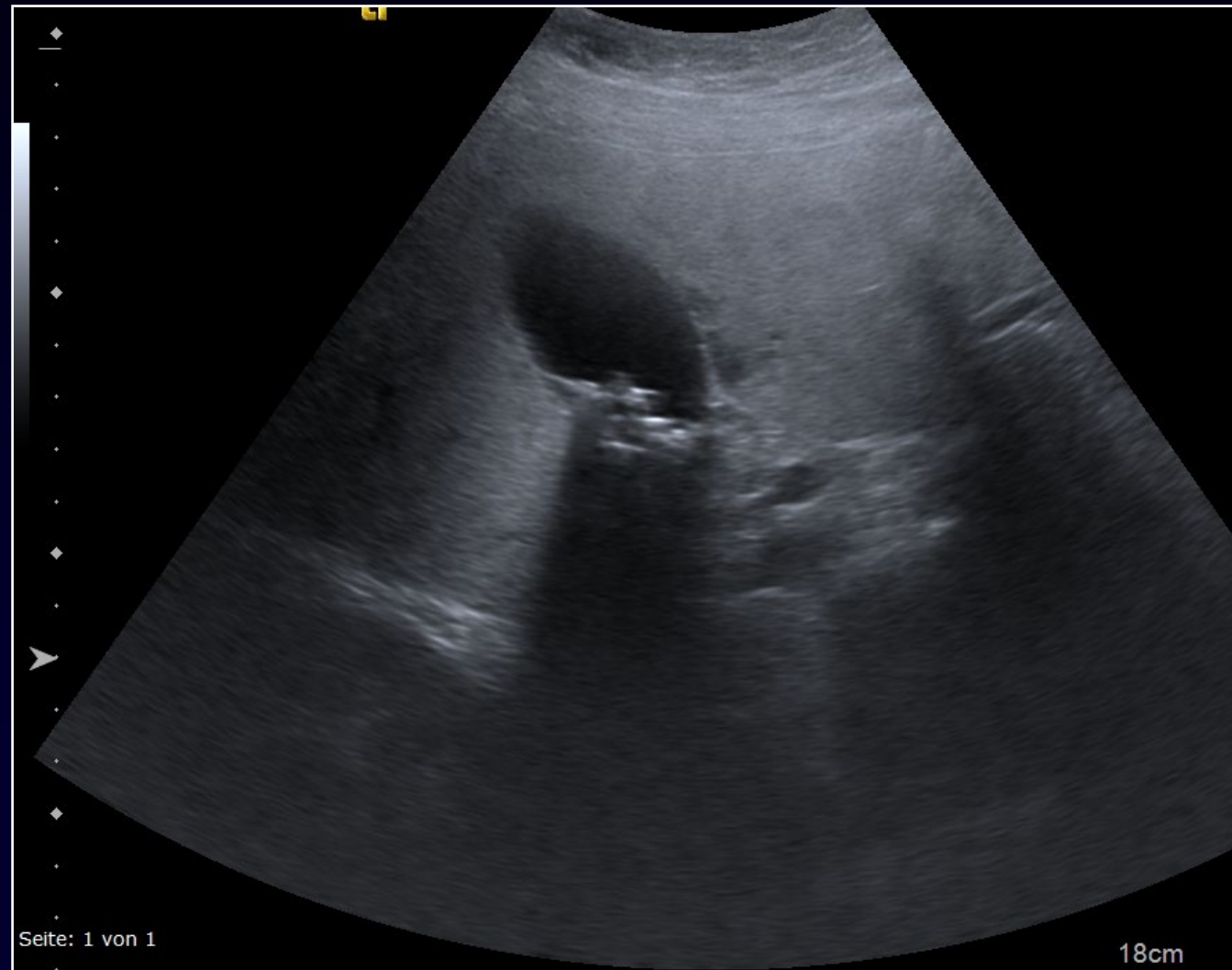
Outline

1. Gallstones
2. Inflammatory disease
3. Benign tumors
4. Malignant tumors
5. Post-procedural changes

Gallstones

- 5F: female, forty, fair, fertile, fat
- Acute RUQ pain, jaundice, pancreatitis
- US / MRI > CT
- Choledocholithiasis → 95% Gallstones

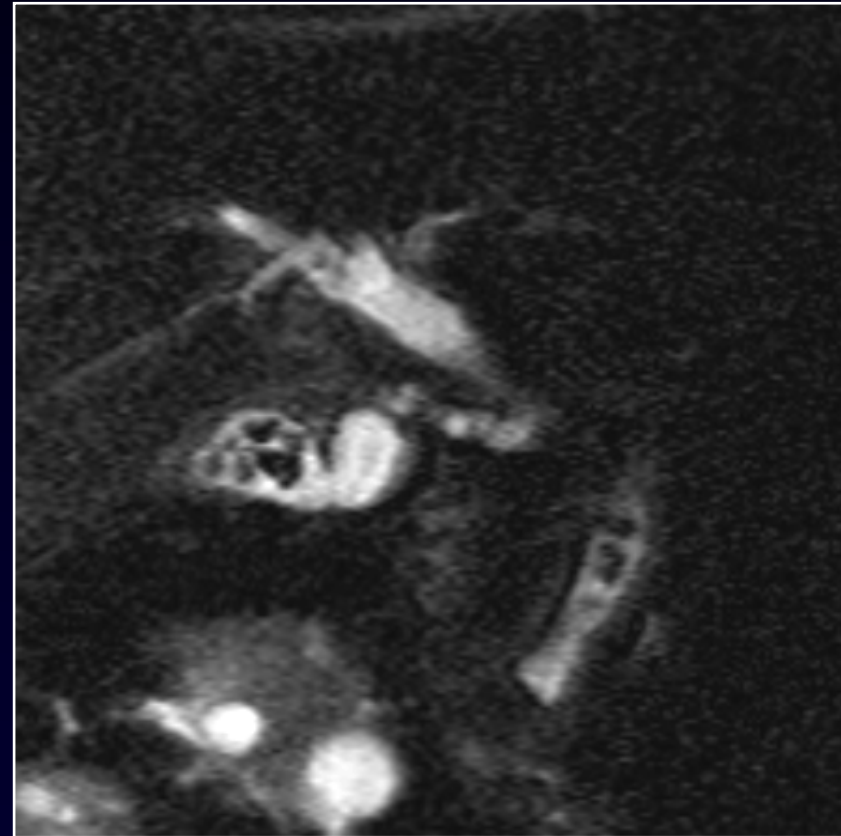
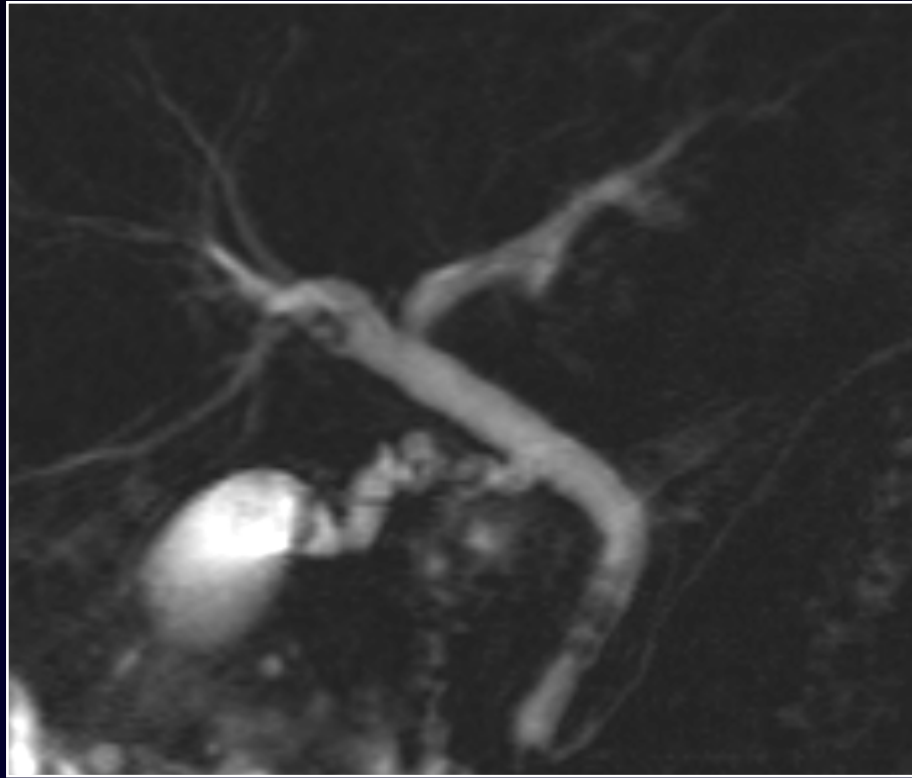
Gallstones



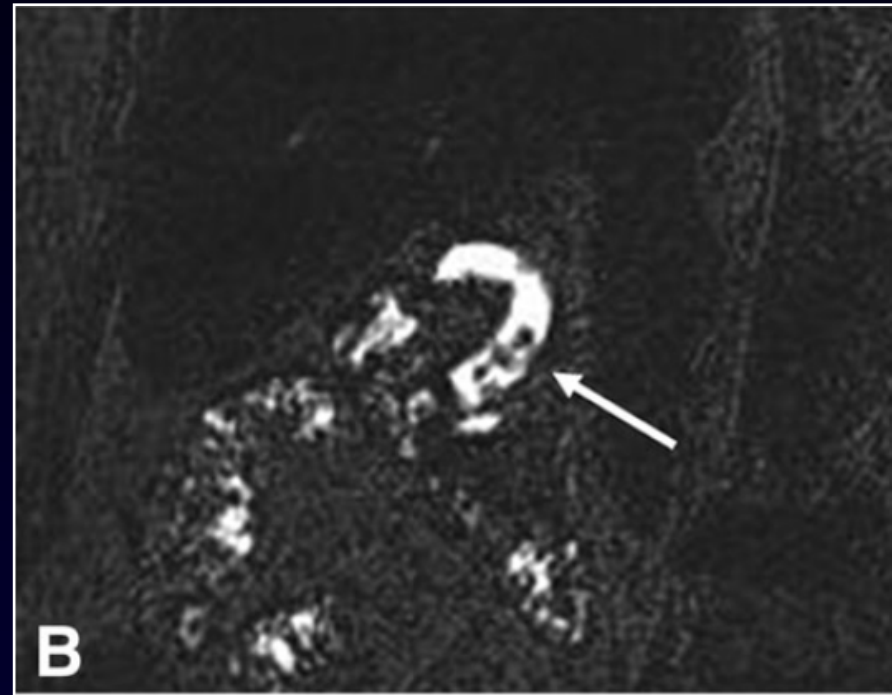
Gallstones



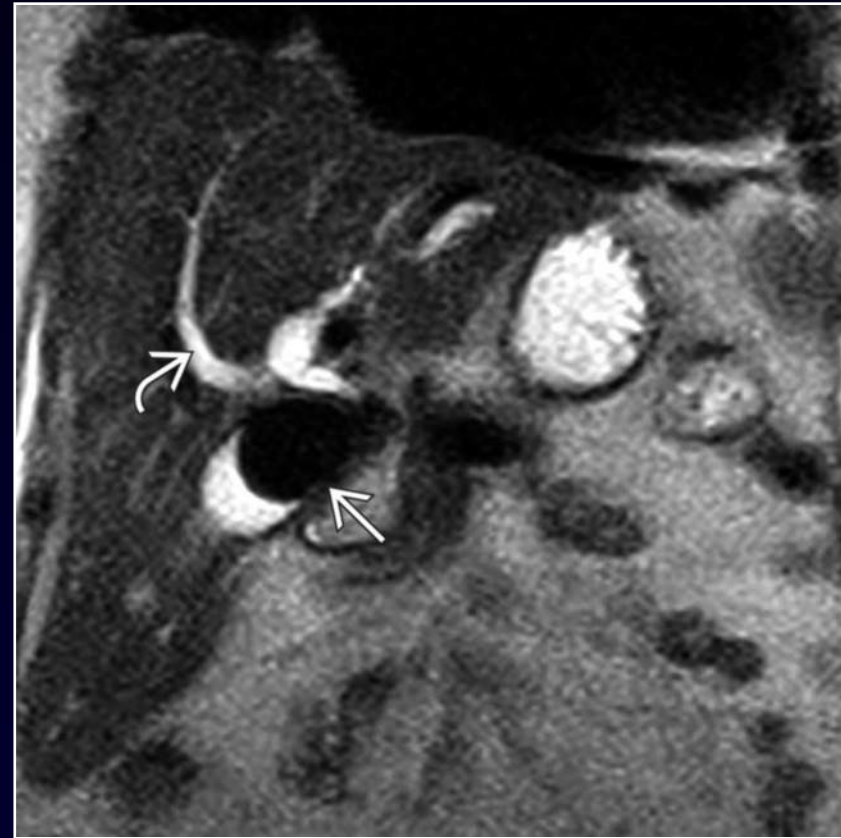
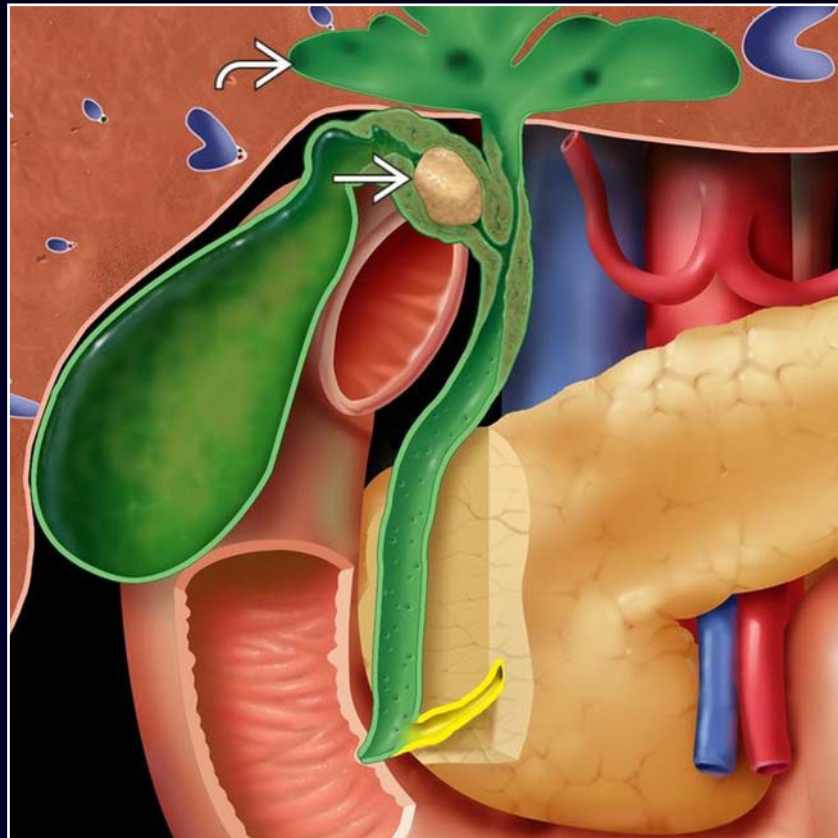
Gallstones



Gallstones



Mirizzi Syndrome



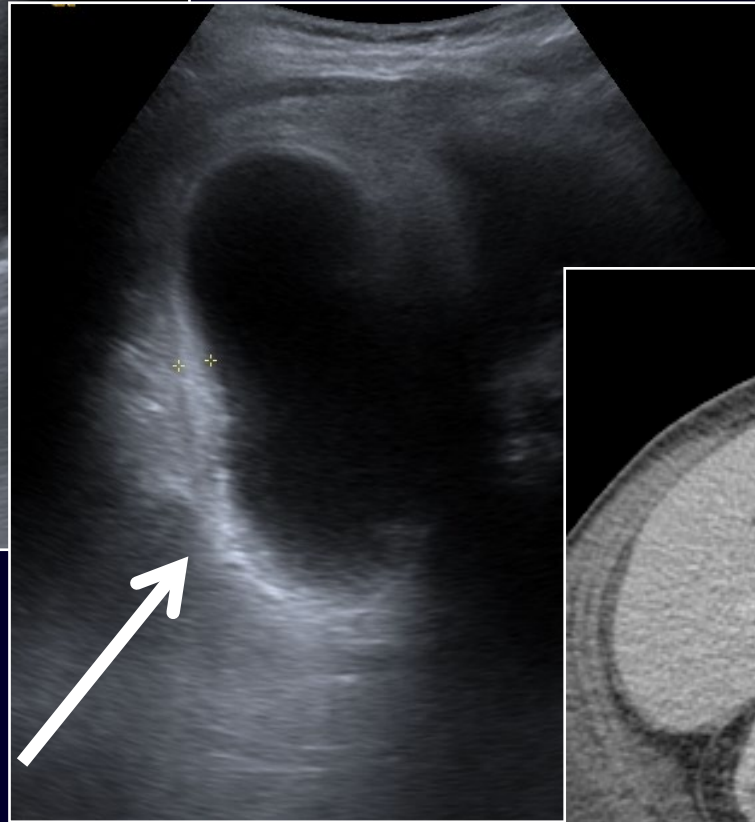
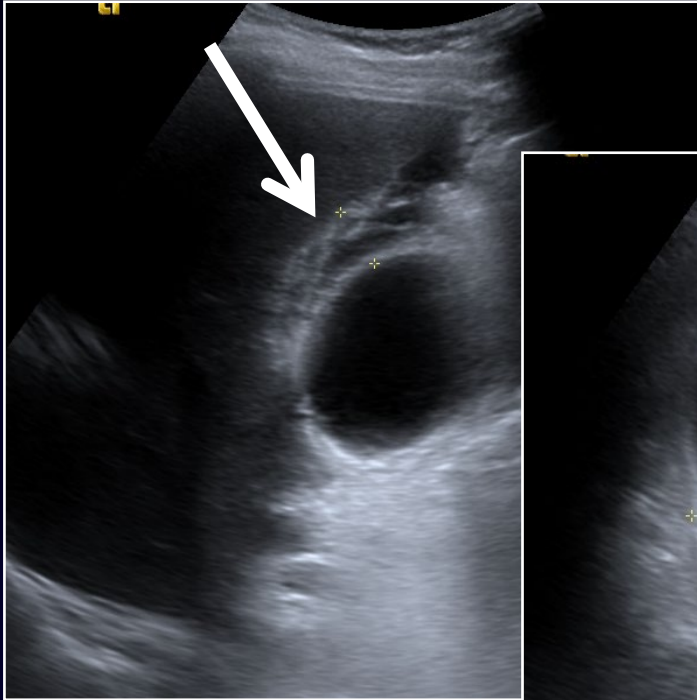
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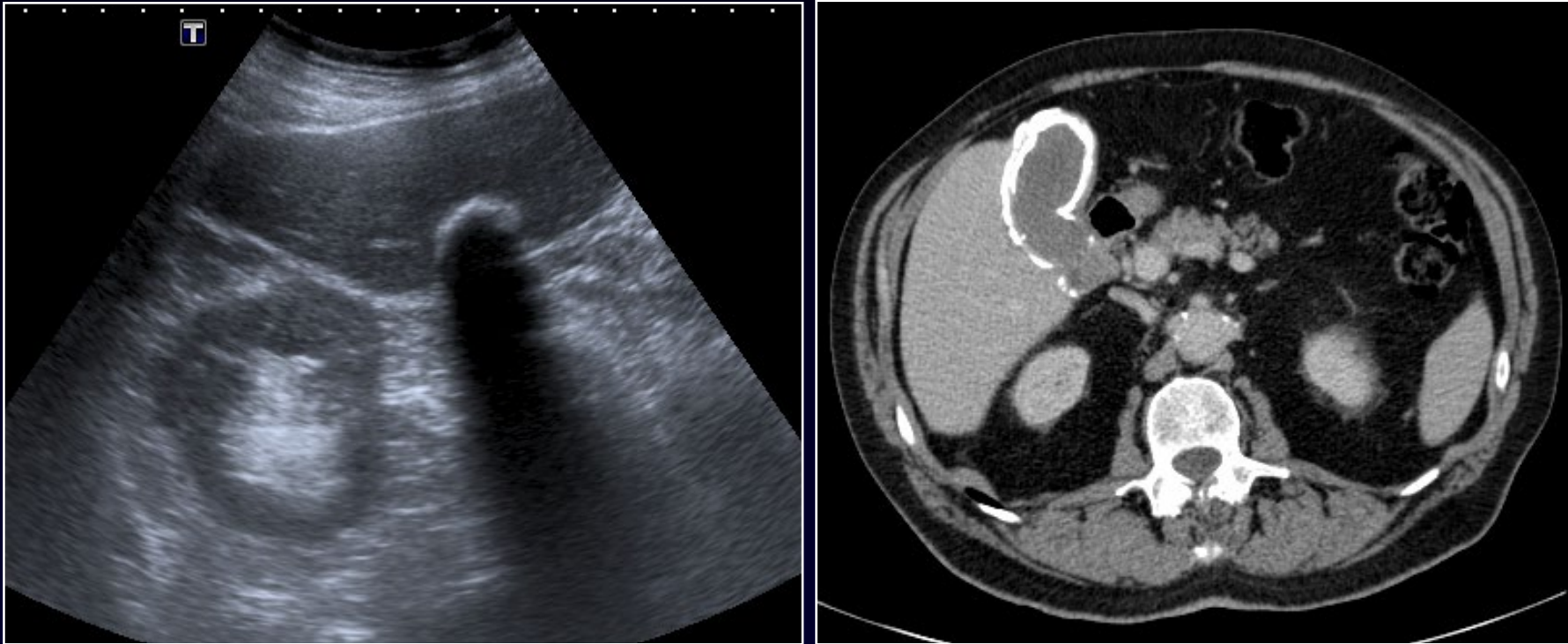
Cholecystitis

- 95% due to gallstones
→ obstruction of cystic duct
- RUQ pain, fever
- Gallbladder wall thickening ($>4\text{mm}$)
- Pericholecystic fluid
- Complication → perforation

Cholecystitis



Chronic cholecystitis



Porcelain gallbladder

Cholangitis

- Ascending cholangitis
 - due to ductal obstruction, post ERCP
- Less common: AIDS, post CTx
- Charcot's triad: jaundice, pain, fever
- Complication → abscess

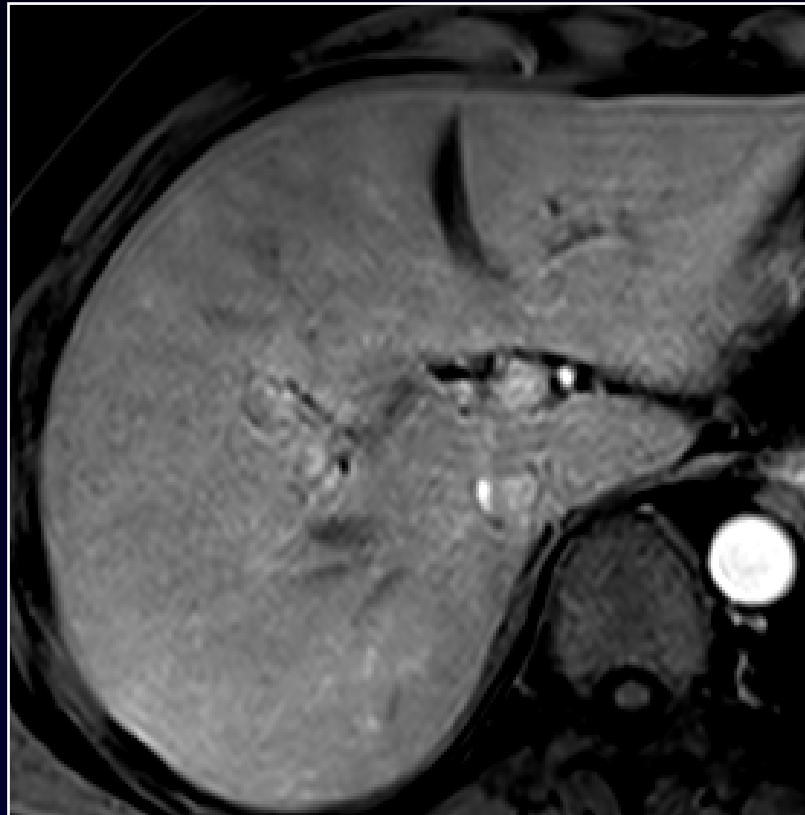
Cholangitis – CT (art.)



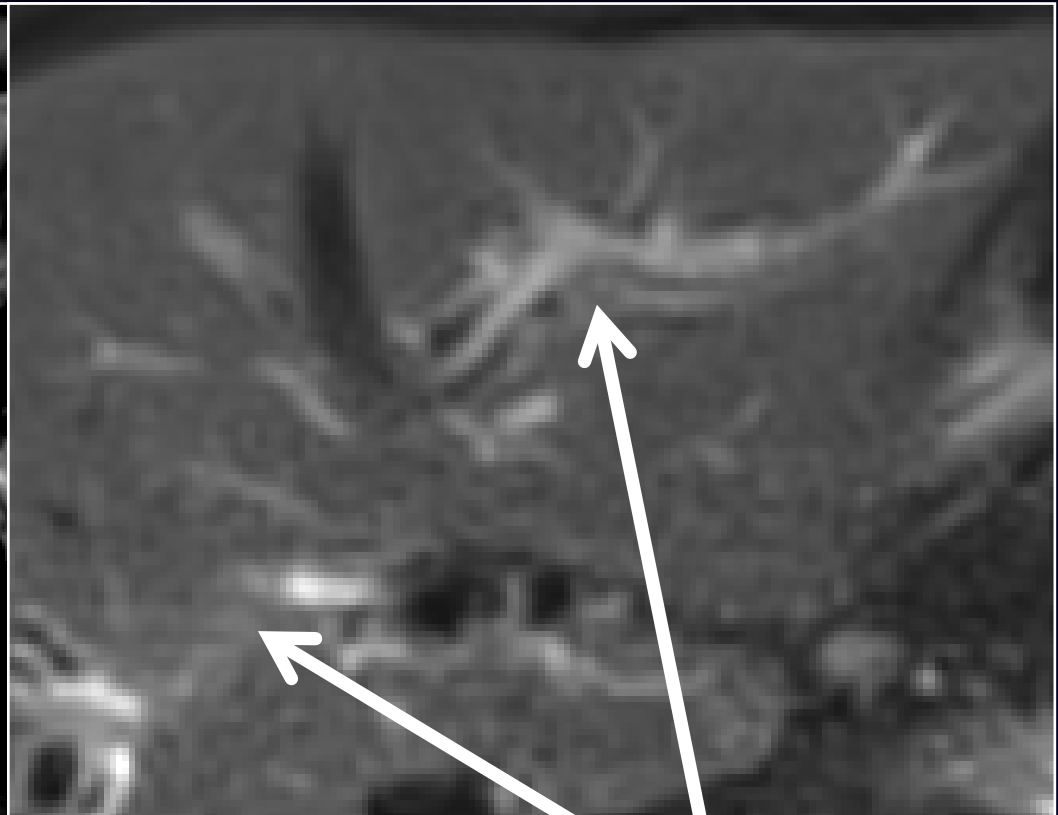
abscess

pericholangic
enhancement

Cholangitis - MRI



T1w art



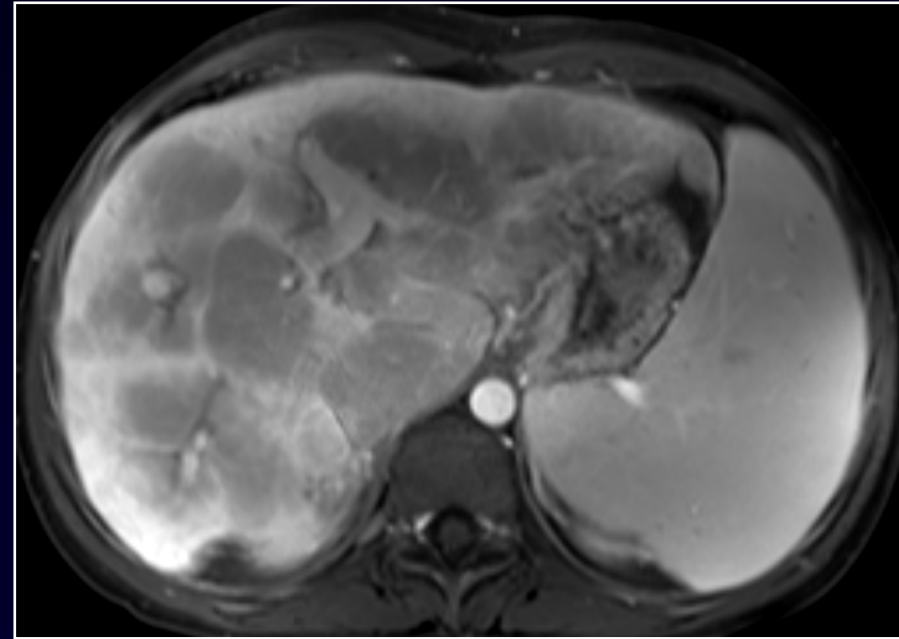
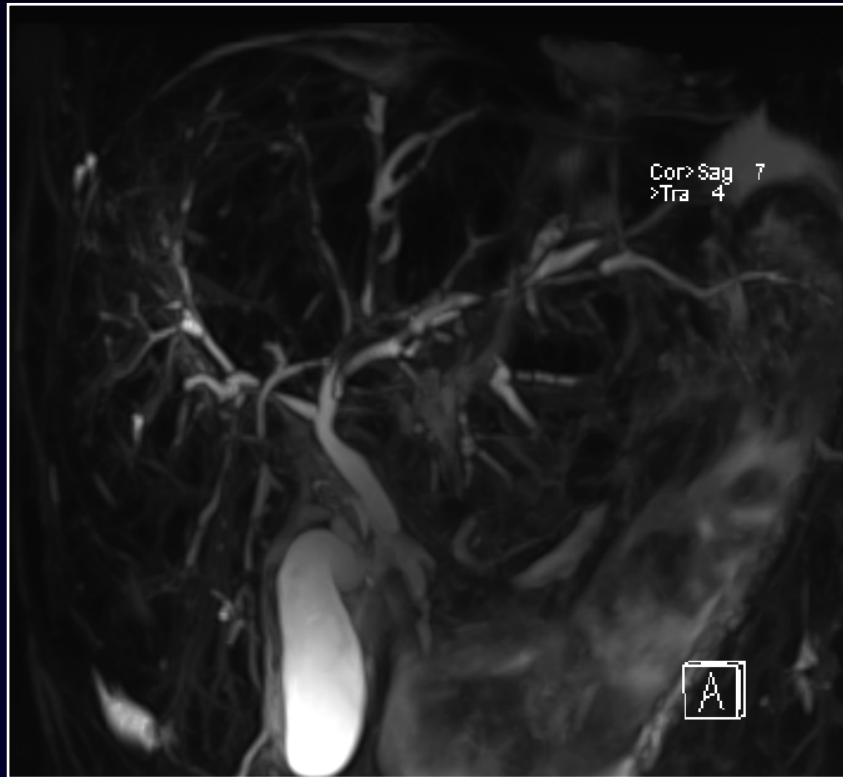
T2w

periportal
edema

PSC

- Autoimmune diseases
- Alternating segments of dilatation / stenosis → “beaded appearance”
- Associated with Ulcerative colitis
- Complication → cirrhosis, CCC

PSC



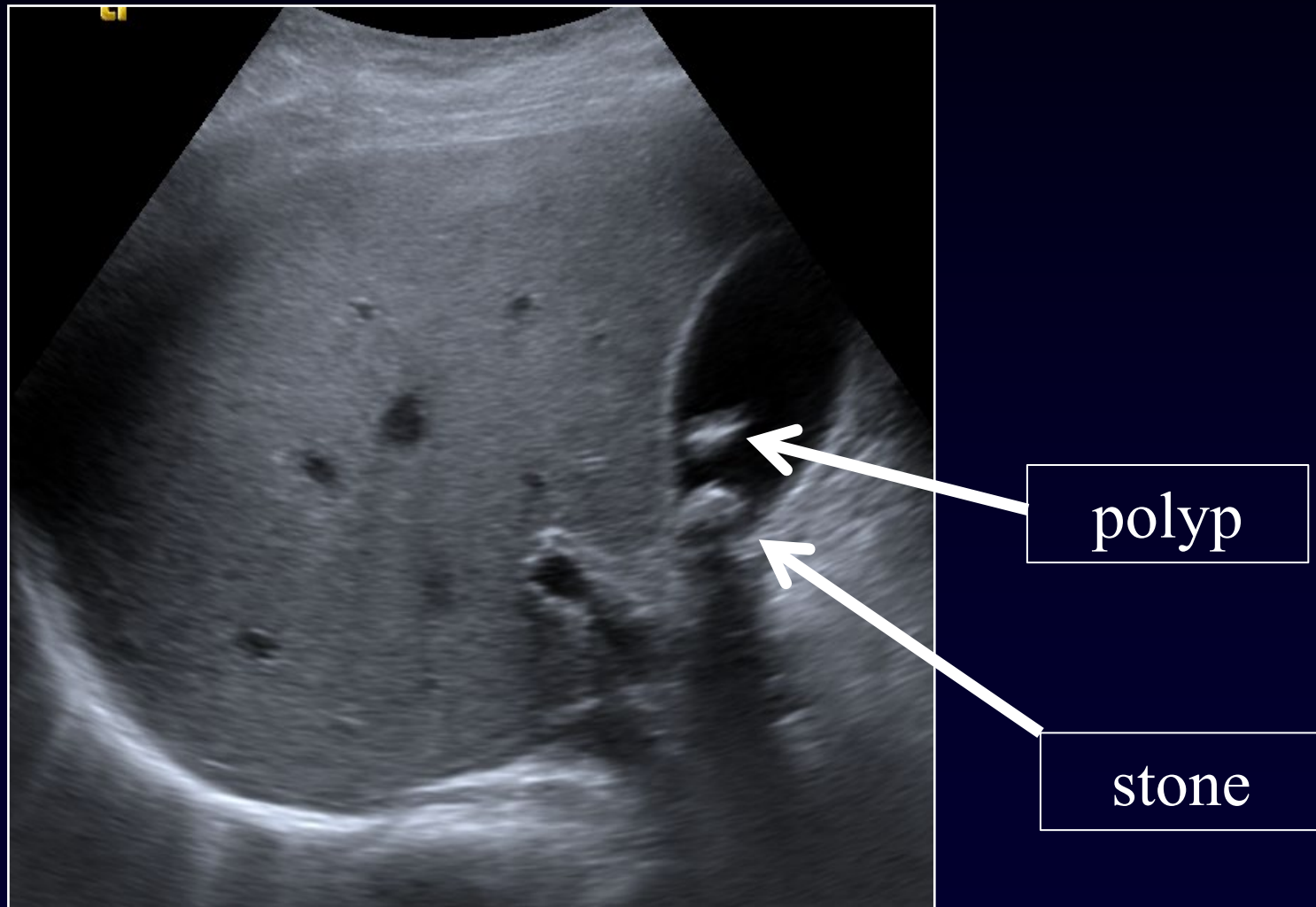
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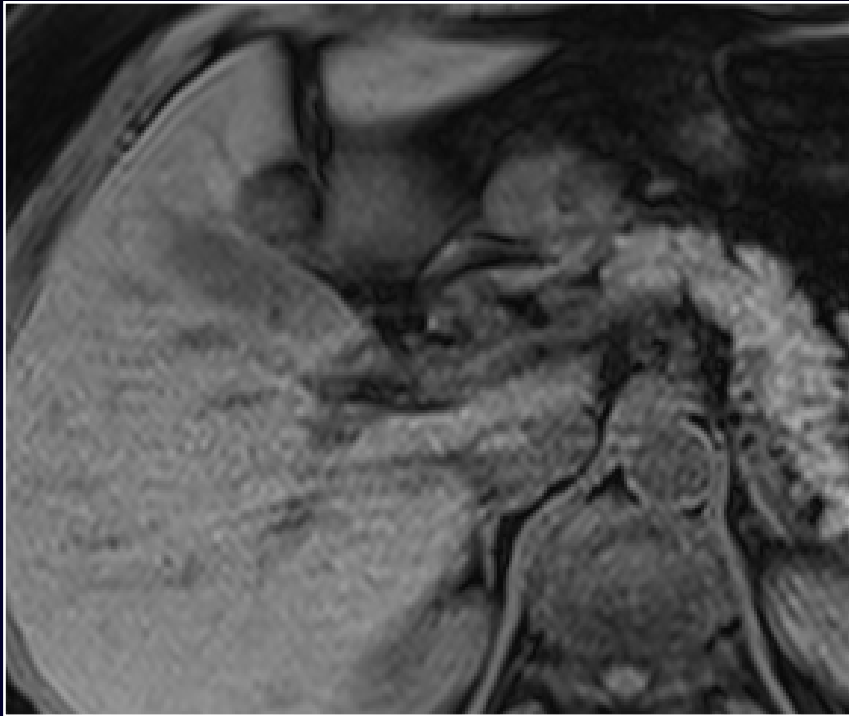
Polyps

- Contrast enhancement → DD stone
- Stones aggregate on dependent part of gallbladder
- < 10mm: follow-up
- > 10mm: cholecystectomy

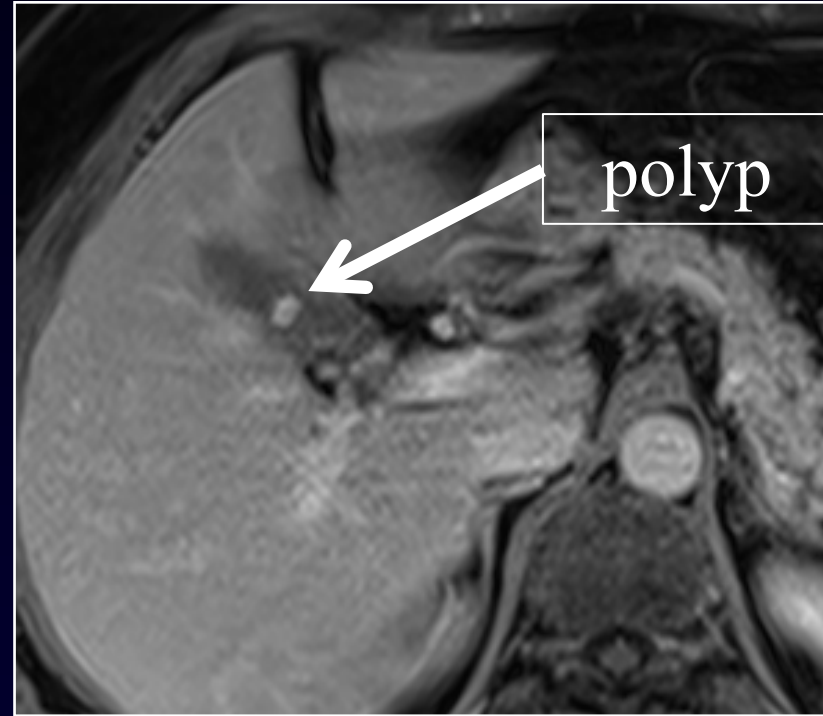
Polyp - Ultrasound



Polyp - MRI

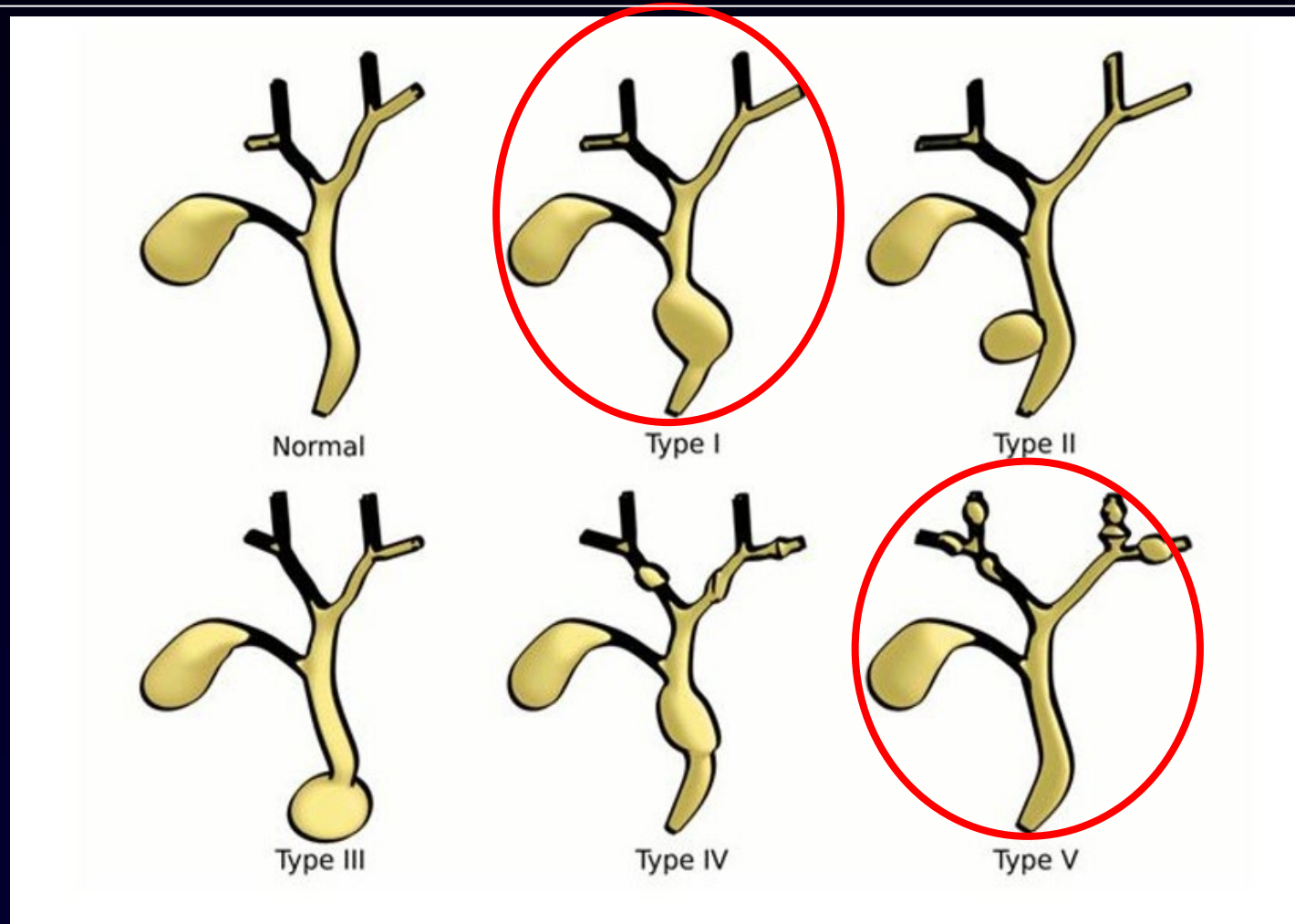


T1w pre

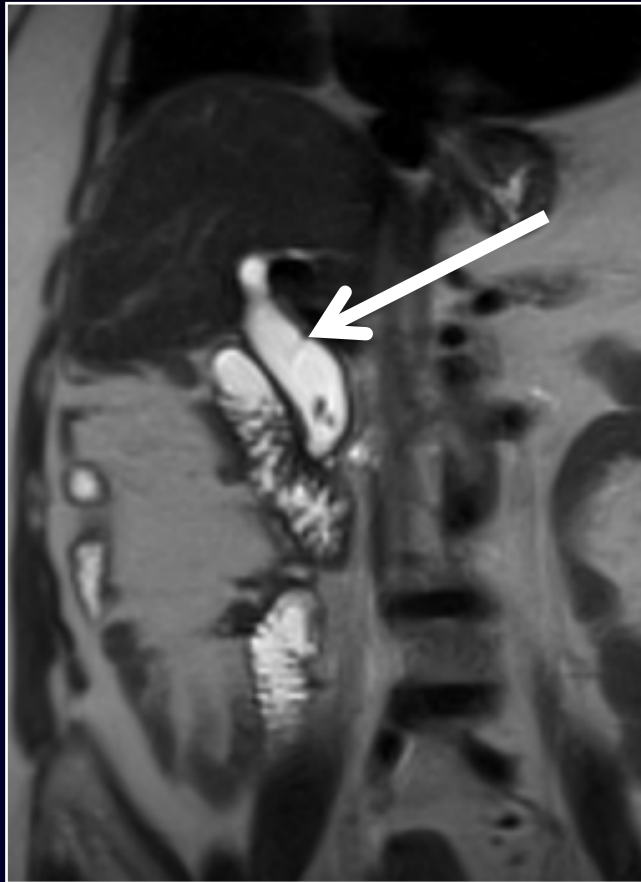


T1w post

Cystic lesions: Todani classification

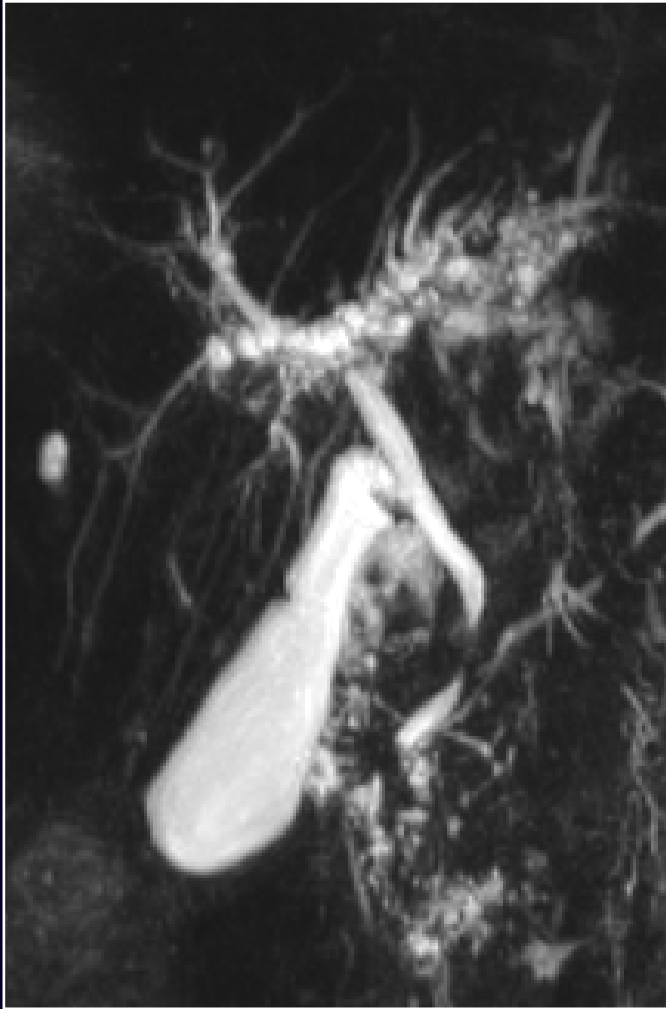


Choledochal cyst (Todani I)



- Most common cystic lesion (80%)
- Malignant transformation (10%)
- Surgical excision

Caroli disease (Todani V)



- Congenital
- Cysts communicate with biliary tree
- Cholangitis, cirrhosis
- Malignant transformation (7%)
- Liver transplantation

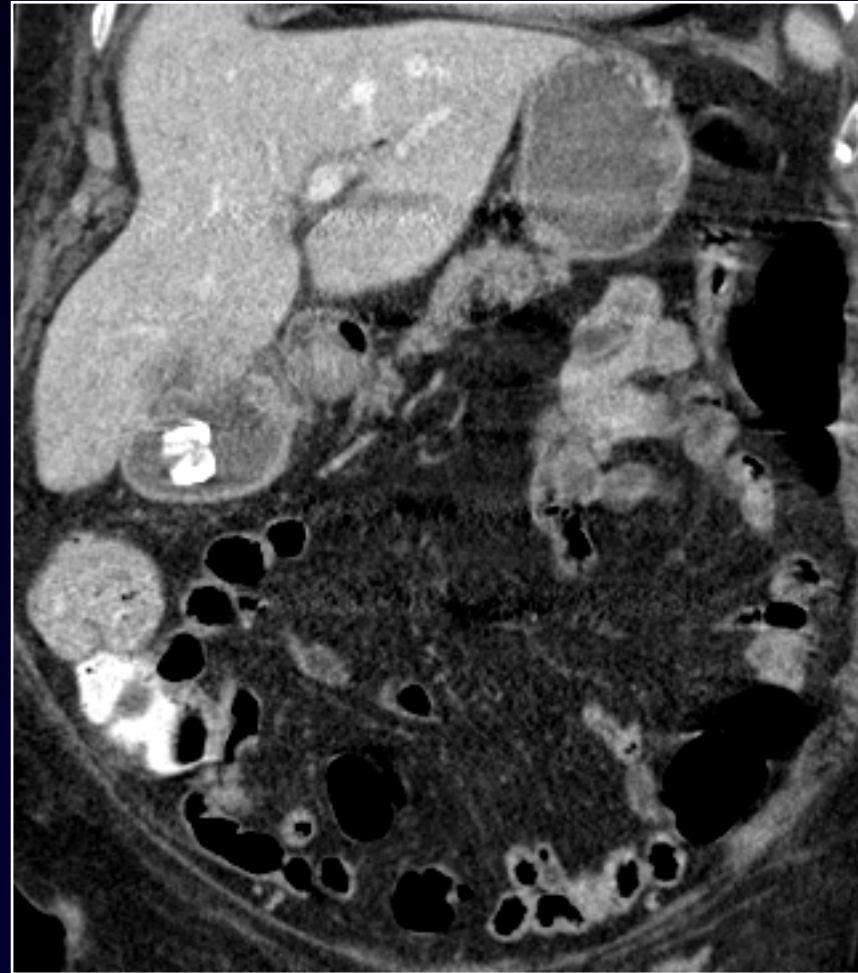
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Gallbladder Adenocarcinoma

- Underlying chronic cholecystitis / gallstones
- Infiltration of liver / bile ducts
- Lymph node mets in porta hepatis
- 5 year survival: 4%

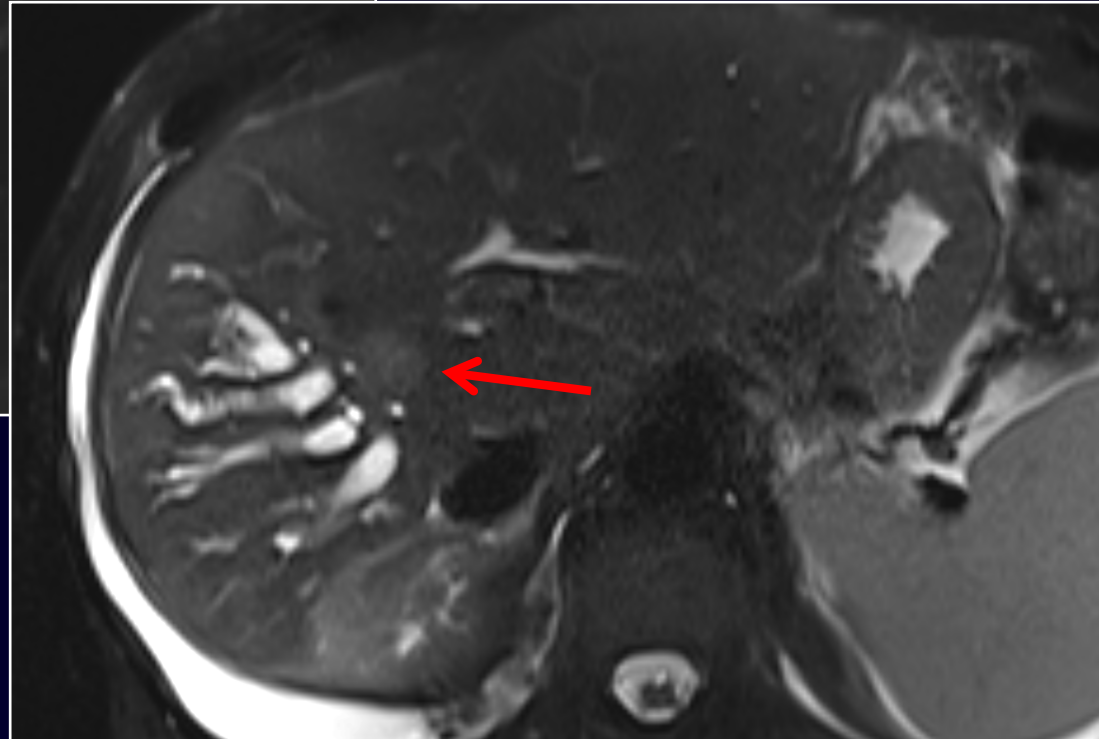
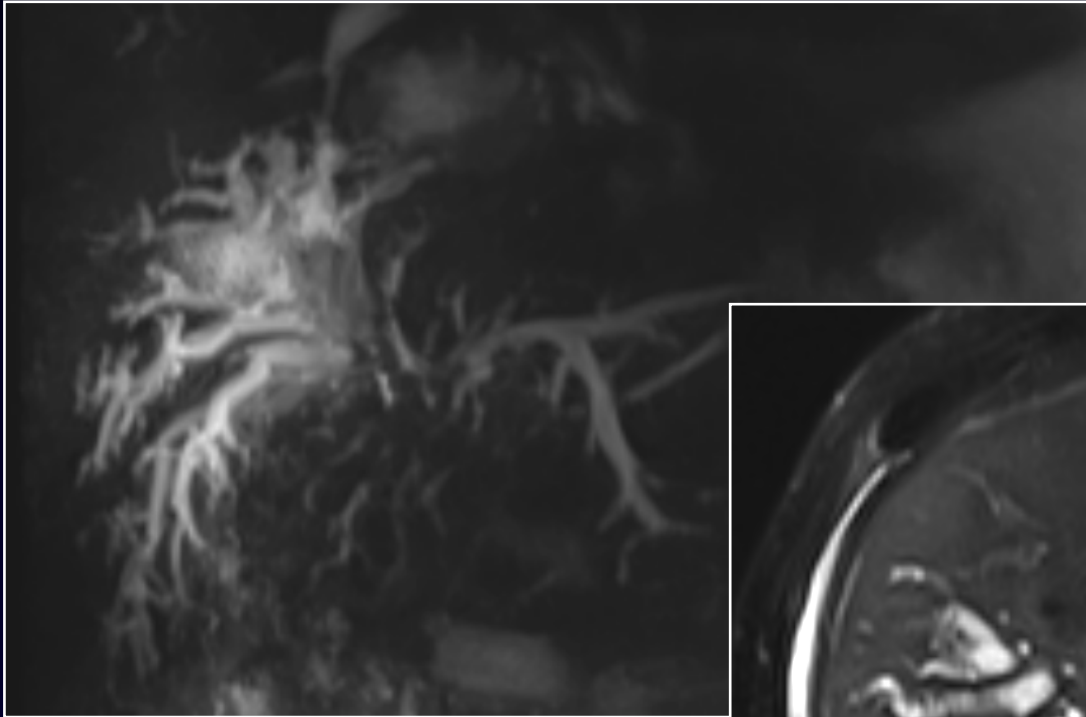
Gallbladder Adenocarcinoma



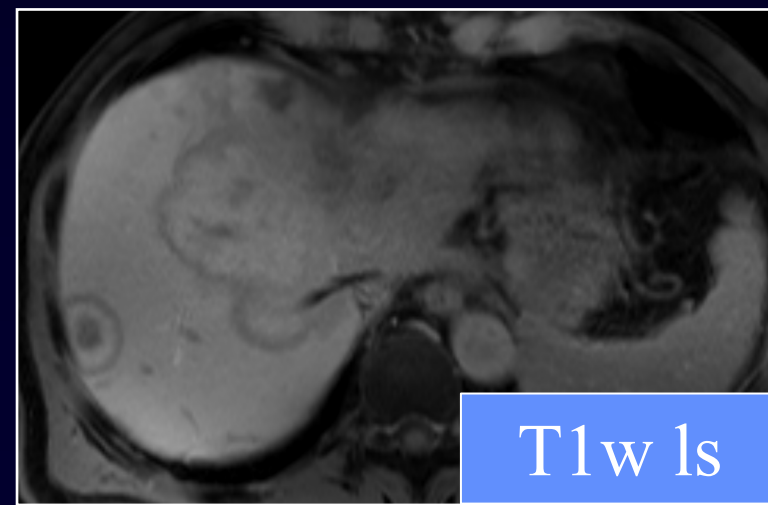
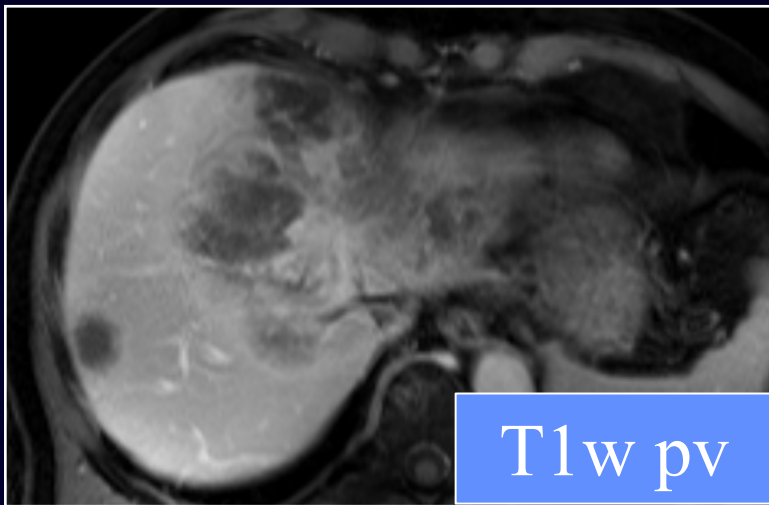
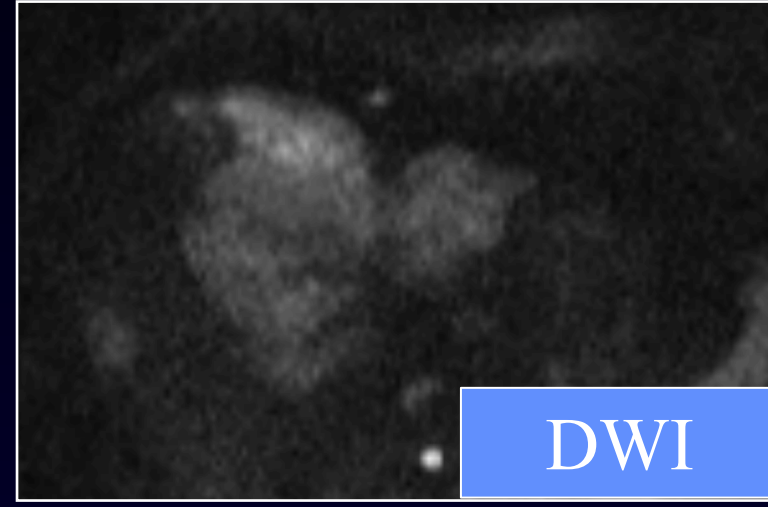
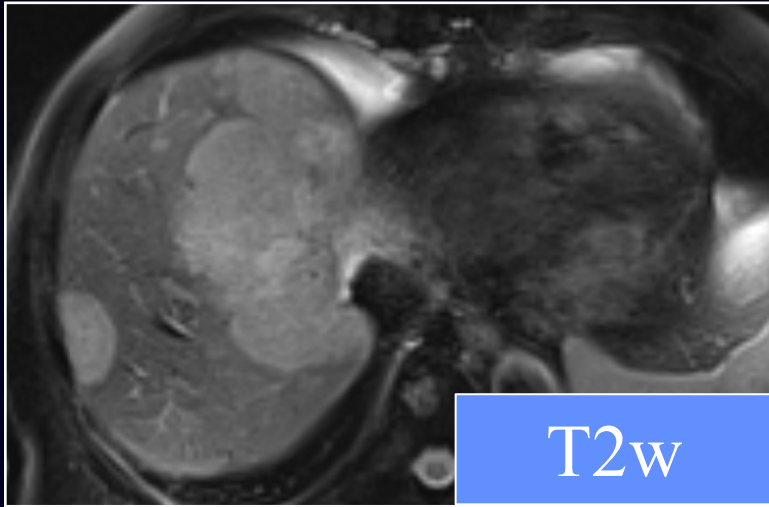
Cholangiocellular Carcinoma

- Intrahepatic or extrahepatic
- Pre-existing bile duct disease
- Stenosis of bile ducts → dilatation
- Slow contrast enhancement from periphery towards center
→ DD hemangioma

CCC

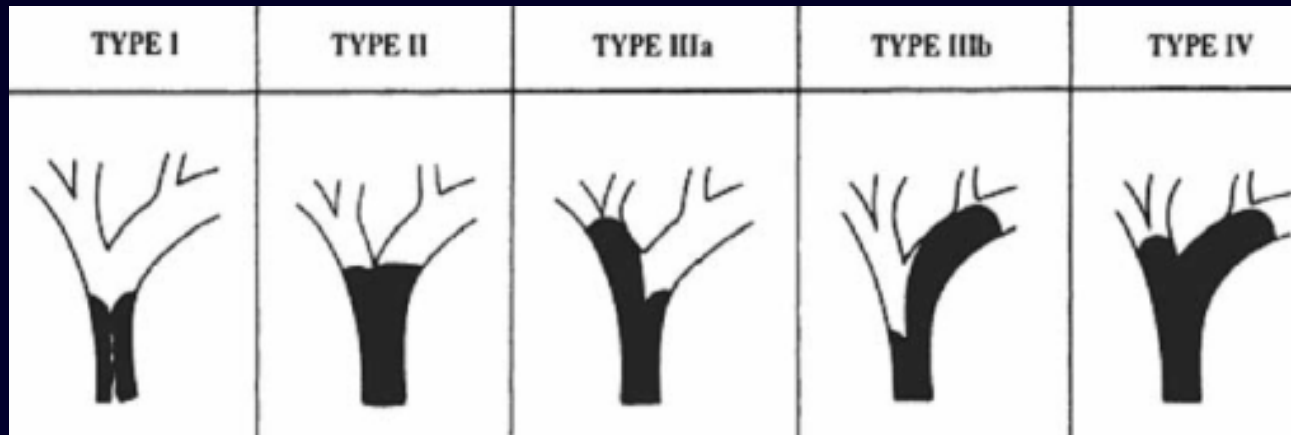


CCC

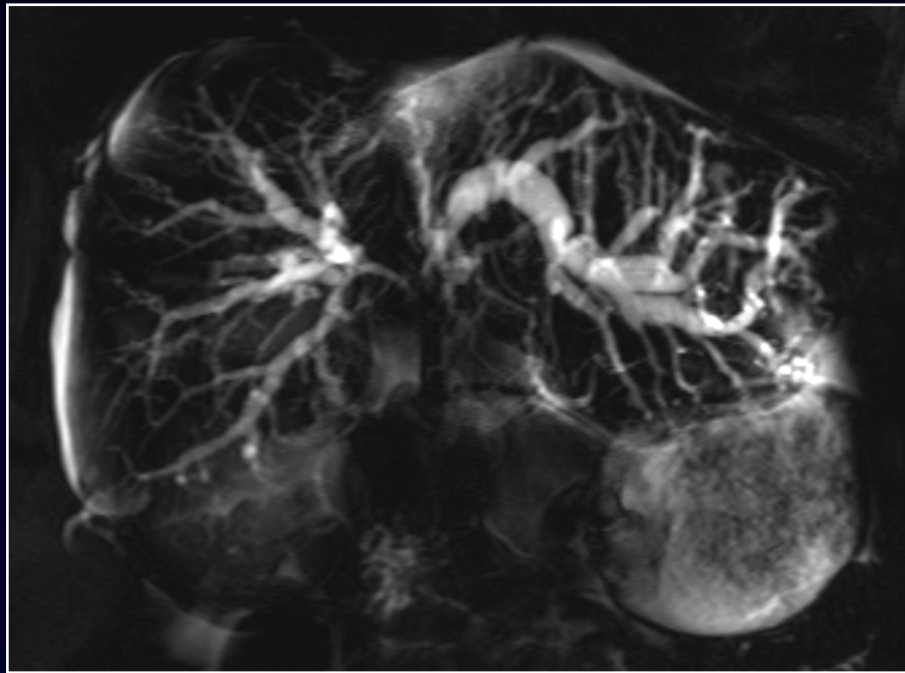


Klatskin tumor

- CCC at the confluence of right and left hepatic ducts
- Often only indirect signs (dilatation)
- Bismuth classification



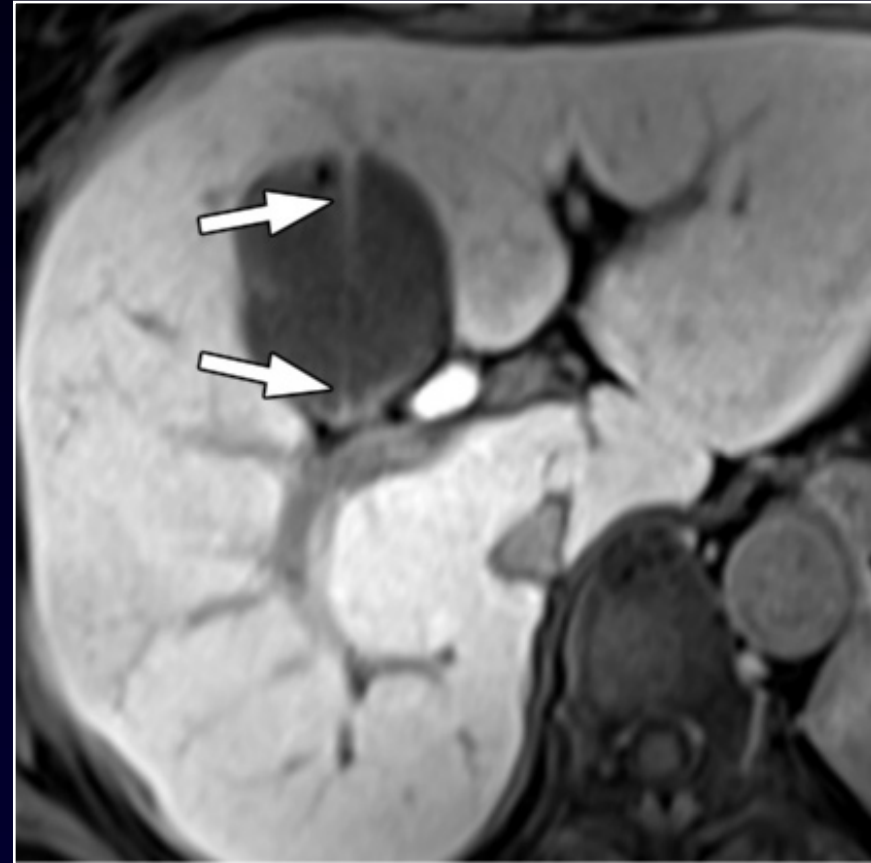
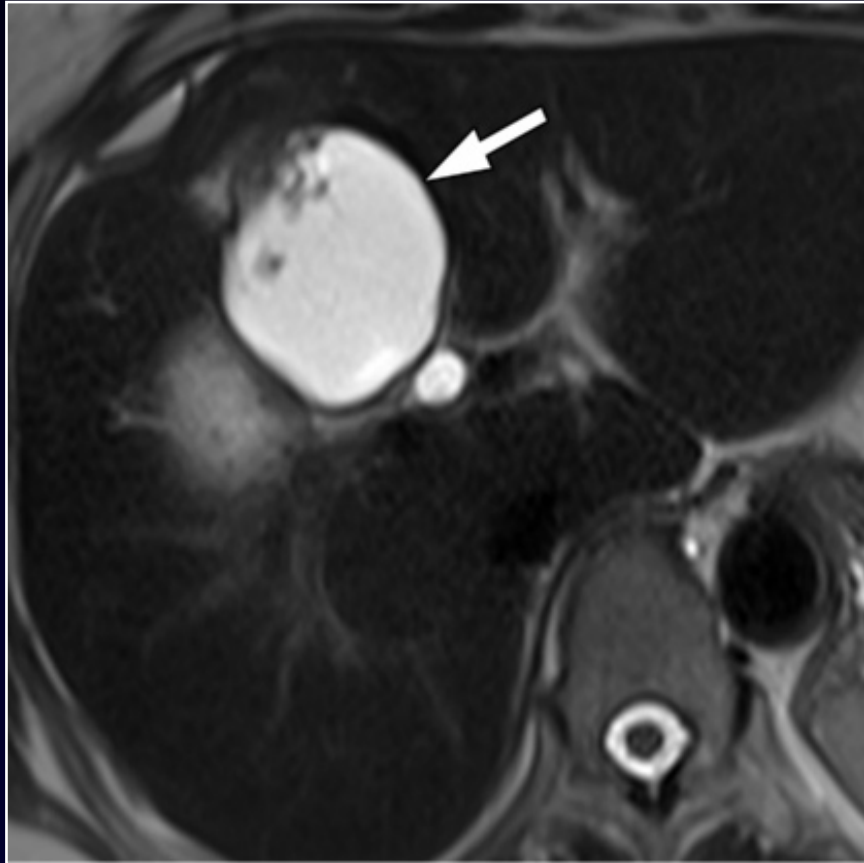
Klatskin Tumor



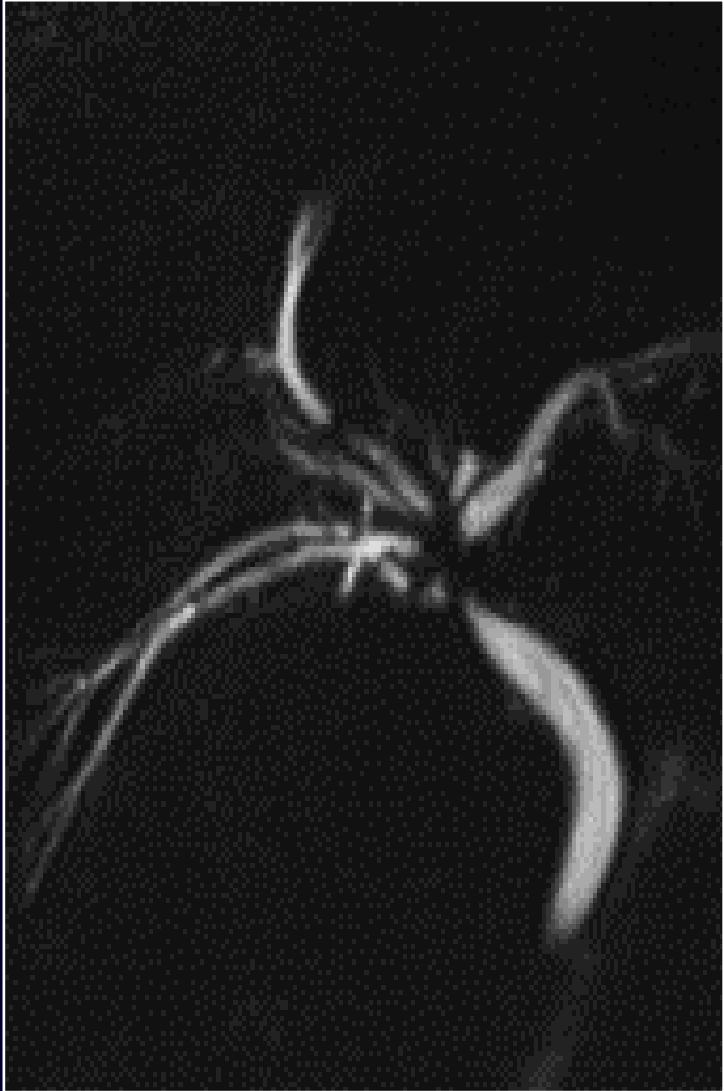
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Biliary leaks



Post liver transplantation



- ITBL =
ischemic type
biliary lesions
- Arterial blood supply
→ Bile ducts prone
to ischemia

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