الجامعة السورية الخاصة
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Cholestasis

- **Early features**
- Jaundice
- Dark urine
- **Pale stool**
- Itching

Late features

- Xanthelasma and xanthomas
- Malabsorption
  - Weight loss
  - Steatorrhoea
  - Osteomalacia
  - Bleeding tendency

Liver diseases

	HEPATOCELLUL JARAUNDICE	BILIARY OBSTRUCTION
ALT/AST	> ×6 folds	< ×6folds
Alkaline phosphatase	< ×2.5 folds	**>×2.5 folds**
Diagnostic likelihood	90%	80%

Causes of cholestasis jaundice

Primary biliary cirrhosis
Primary sclerosing cholangitis
Benign recurrent intrahepatic cholestasis

Alcohol
Drugs
Viral hepatitis
Autoimmune hepatitis
Cystic fibrosis
Severe bacterial infections
Post-operative
Hodgkin lymphoma
Pregnancy

cholestasis + Abdominal pain

- suggests

1-choledocholithiasis

2-pancreatitis

3-choledochal cyst.

Cholestasis + Jaundice is progressive

- **in--- Cancer**,

cholestasis + fluctuating JaundiceC

1-Sclerosing cholangitis

2-Pancreatitis

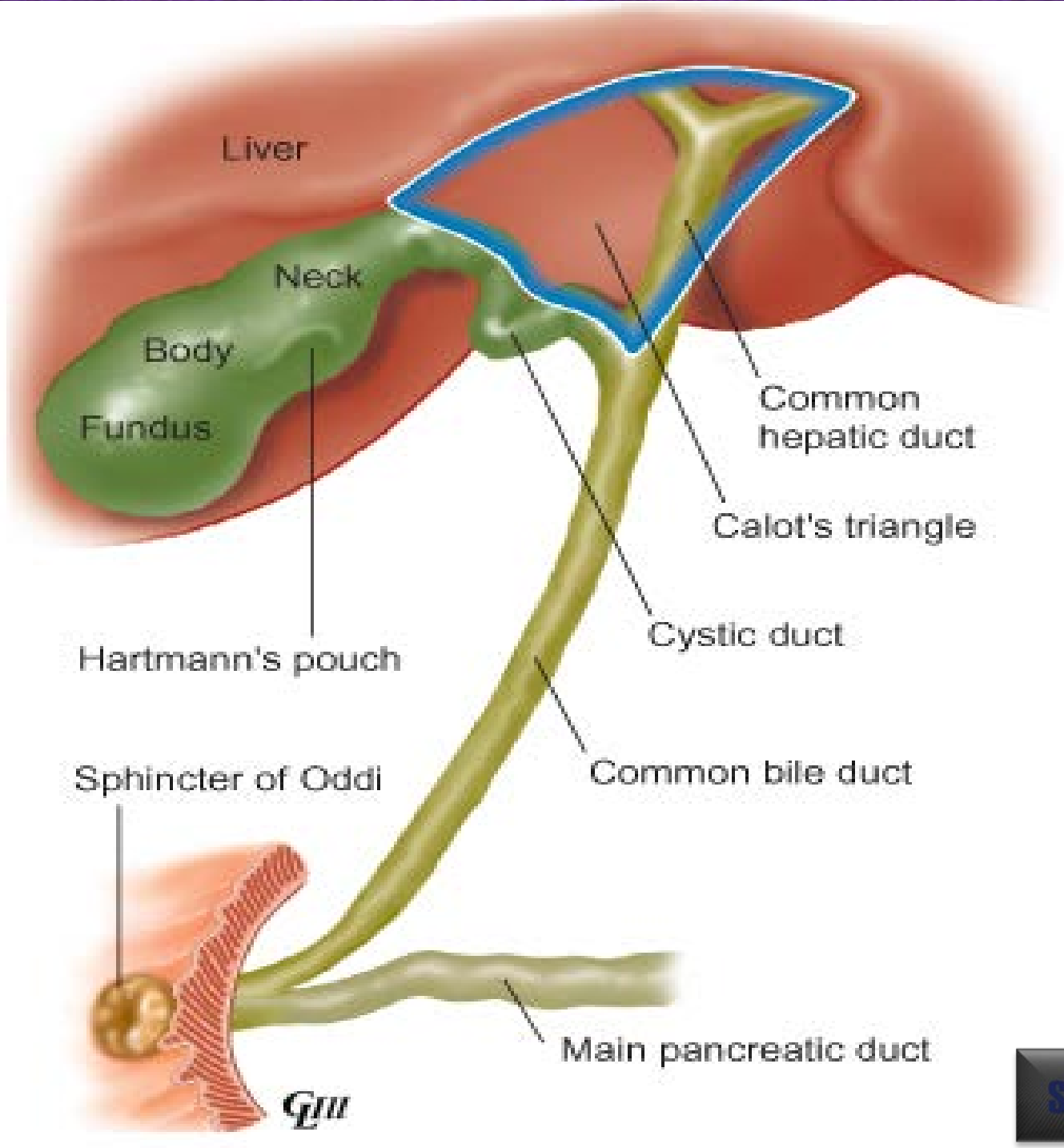
3-Stricture.

cholestasis

- Abdominal examination may reveal irregular hepatomegaly or masses in carcinoma.

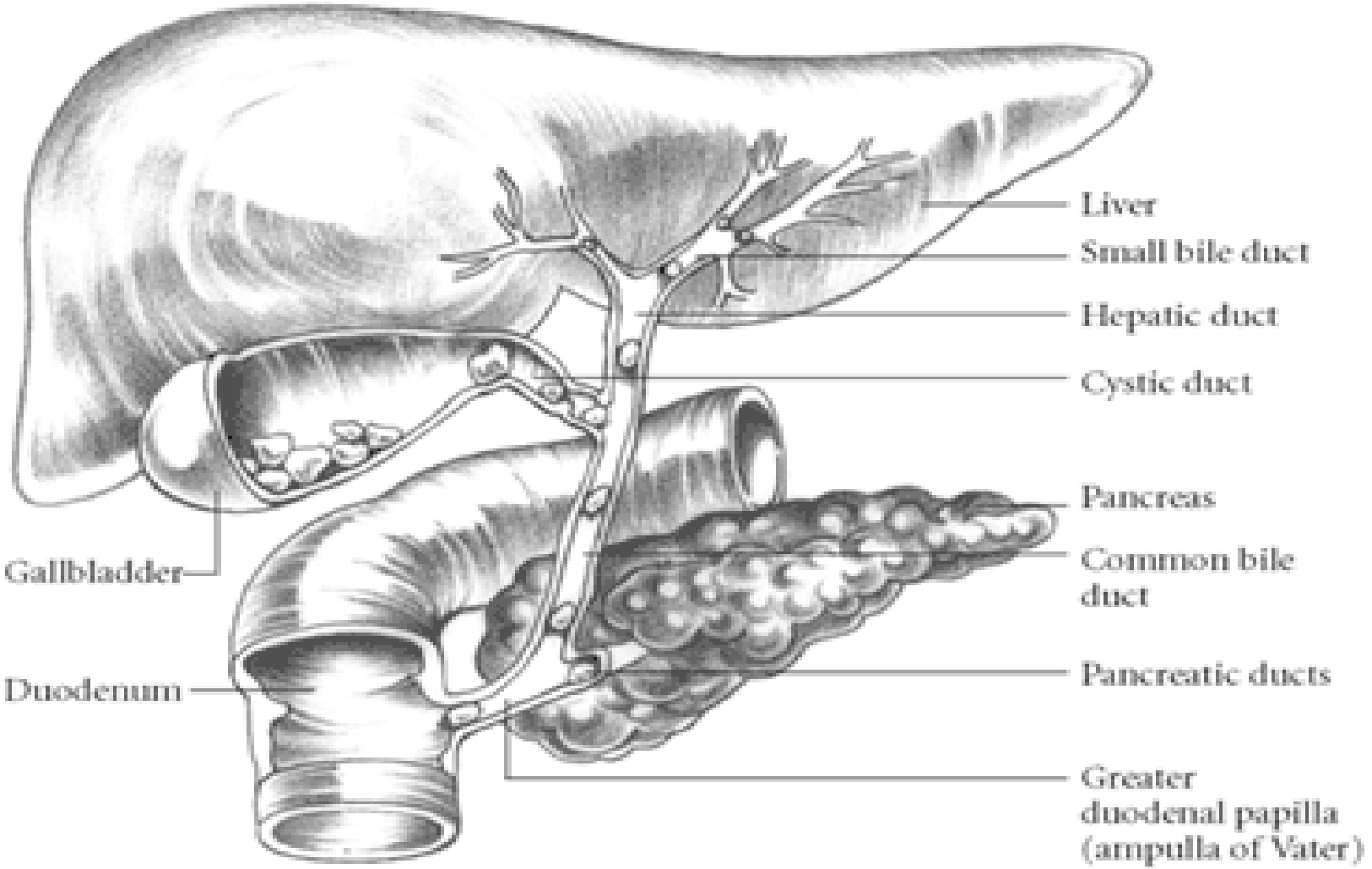
cholestasis

- Faecal occult blood suggests an Ampullary tumor


Liver
Neck
Body
Fundus
Common hepatic duct
Calot's triangle
Cystic duct
Hartmann's pouch
Common bile duct
Sphincter of Oddi
Main pancreatic duct

COMMON SITES OF CALCULI FORMATION

The illustration below shows sites where calculi typically collect. Calculi vary in size; small calculi may travel.



INCREASED ALP&GGT

ULTRASOUND

Dilated bile duct

- cholangiography
- MRCP or ERCP

IN INCREASED ALP&GGT ULTRASOUND EXAMINATION OF BILIARY TREE MUST BE DONE

Normal bile duct

- Consider liver biopsy
- Treat underlying disorder

IN THE CASE OF INCREASED ALP&GGT ULTRASOUND EXAMINATION OF BILIARY TREE MUST BE DONE

Normal bile duct

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- Treat underlying disorder

Dilated bile duct

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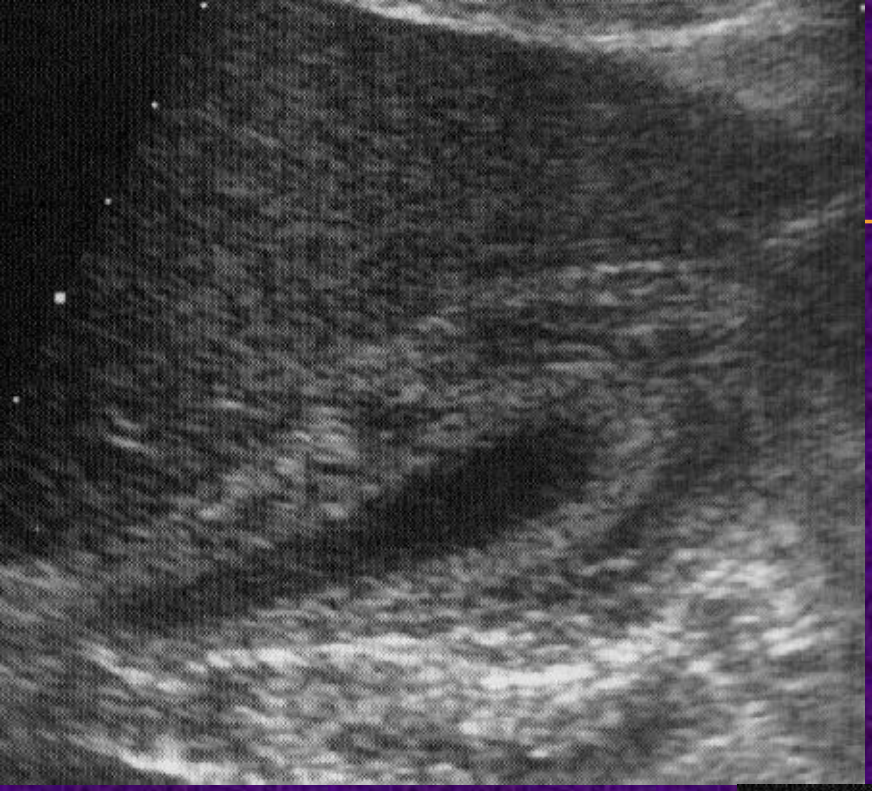
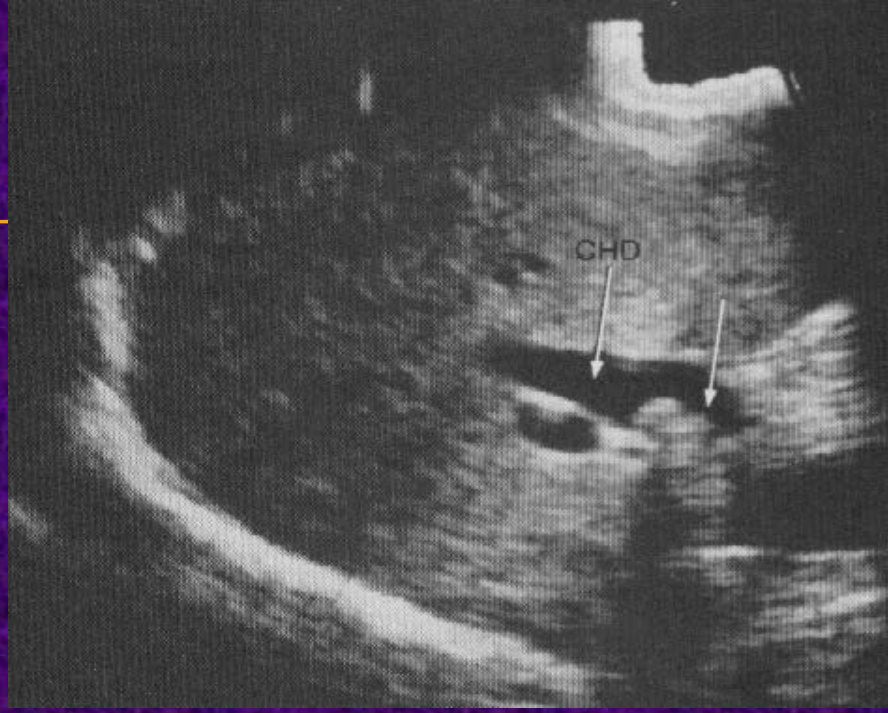
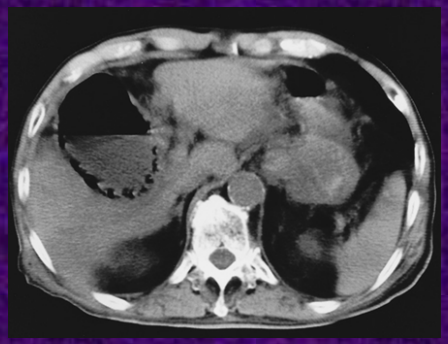
- MRCP or ERCP

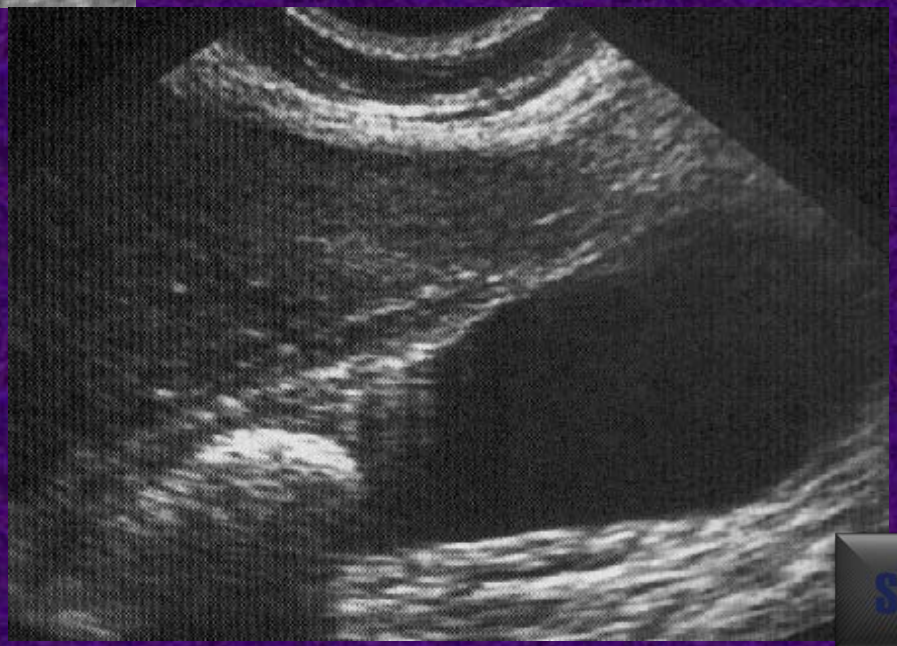
IMAGING

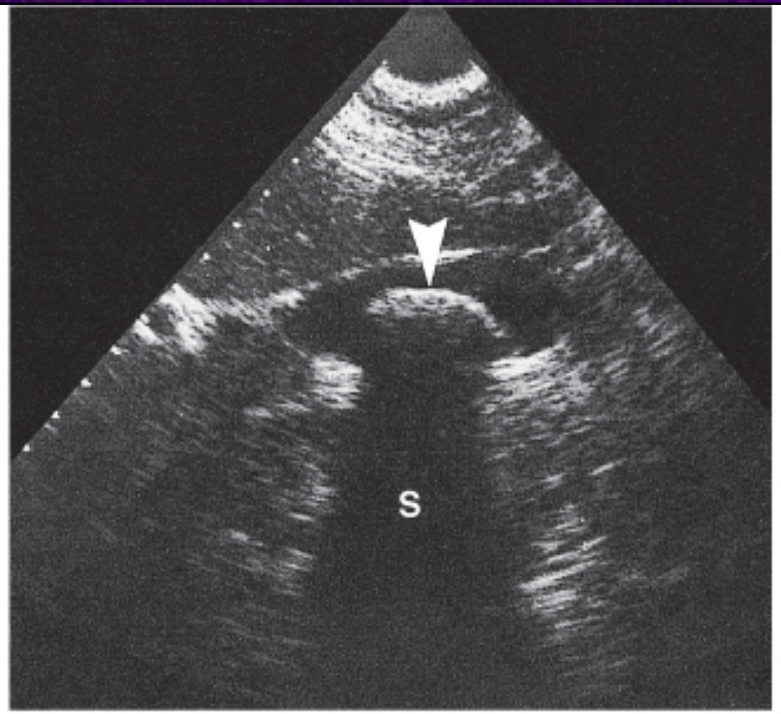
- **Ultrasound**
  - The state of biliary tree(dilated)and gallbladder(stones)
  - Presence of hepatic mass
- **CT/MRCP**
  - MRCP is superior for biliary tree
- Nuclear medicine: DISIDA scan/HIDA scan
  - Limited to patient with bilirubin of 20 mg/dL
  - Sensitive for the presence of acute cholecystitis
  - Presence of bile leak after surgery or ERCP.



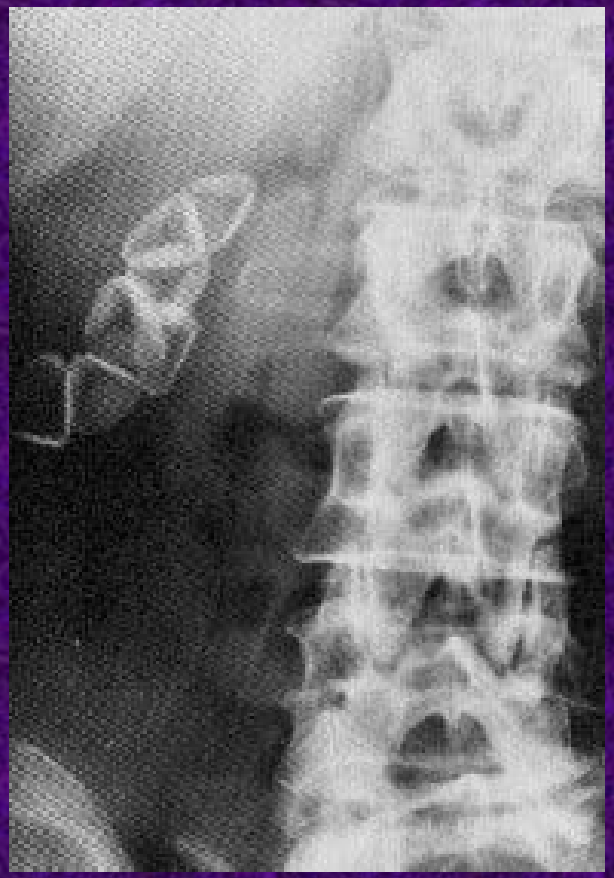

CHD







PLAIN –X-RAY OF ABDOMEN



Calcified gallstones

CHOLANGIOGRAPHY

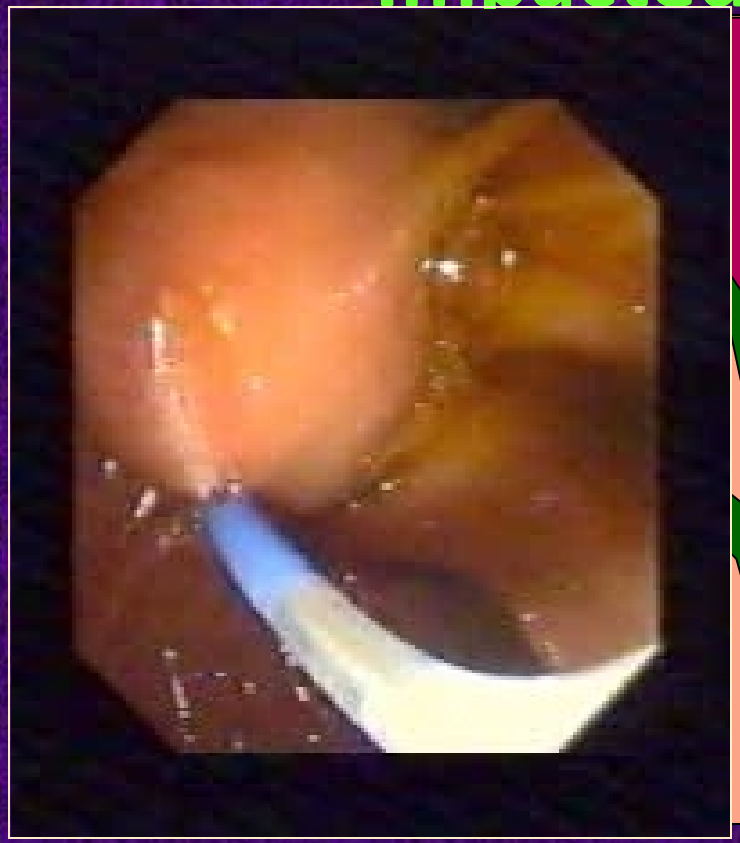
MRCP

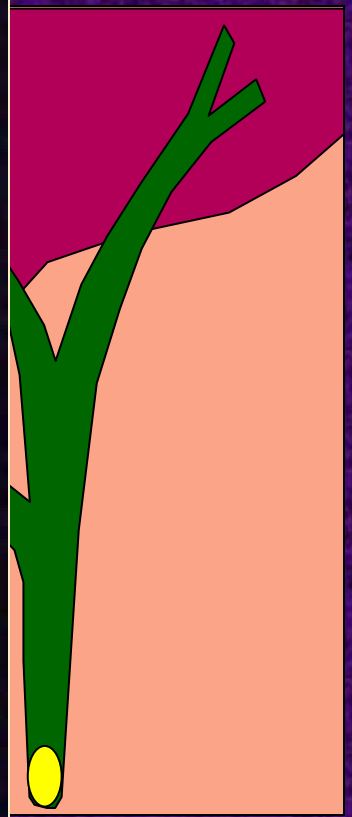
ERCP

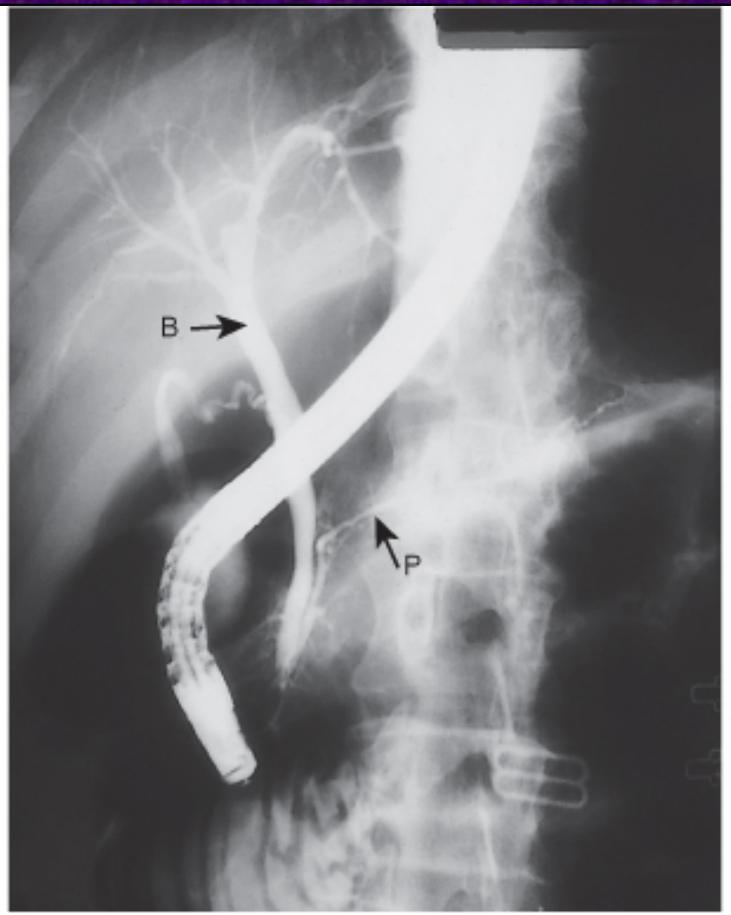
PTC.

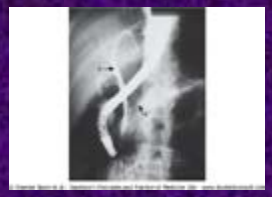
- PTC :does not allow the Ampulla of Vater or pancreatic duct to be imaged..

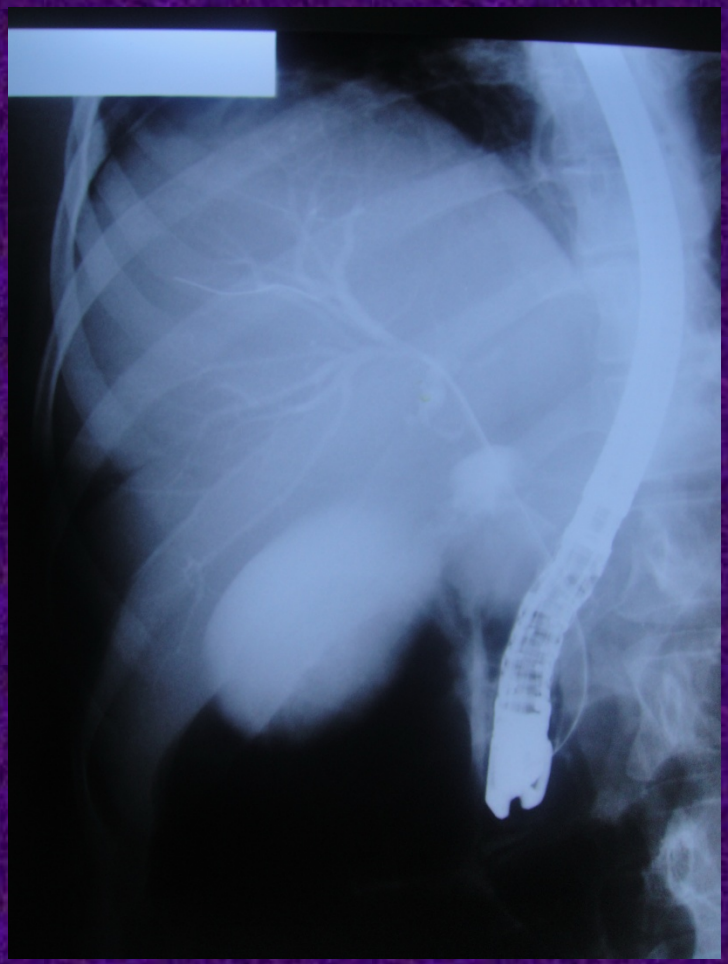
– Impacted Stone

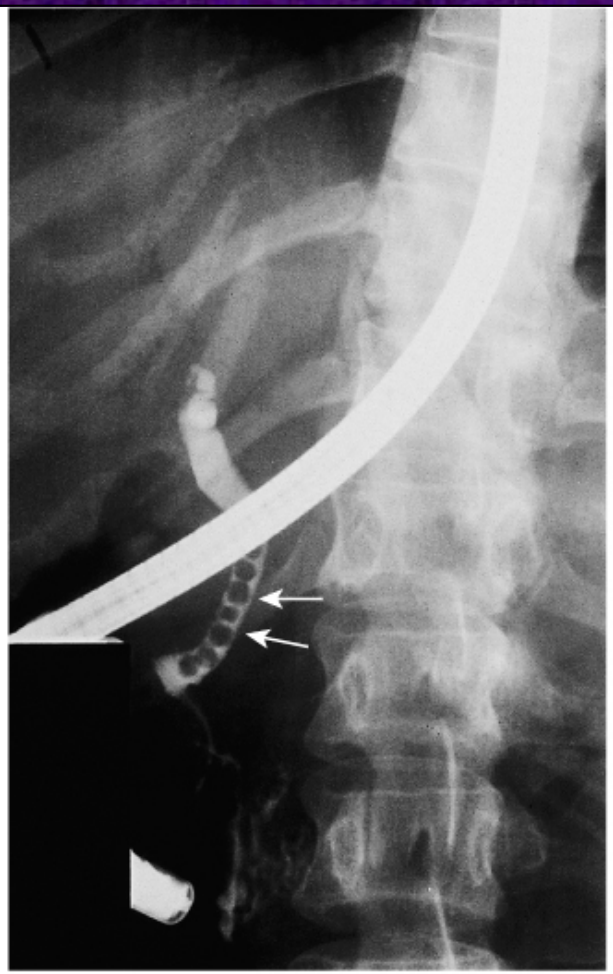


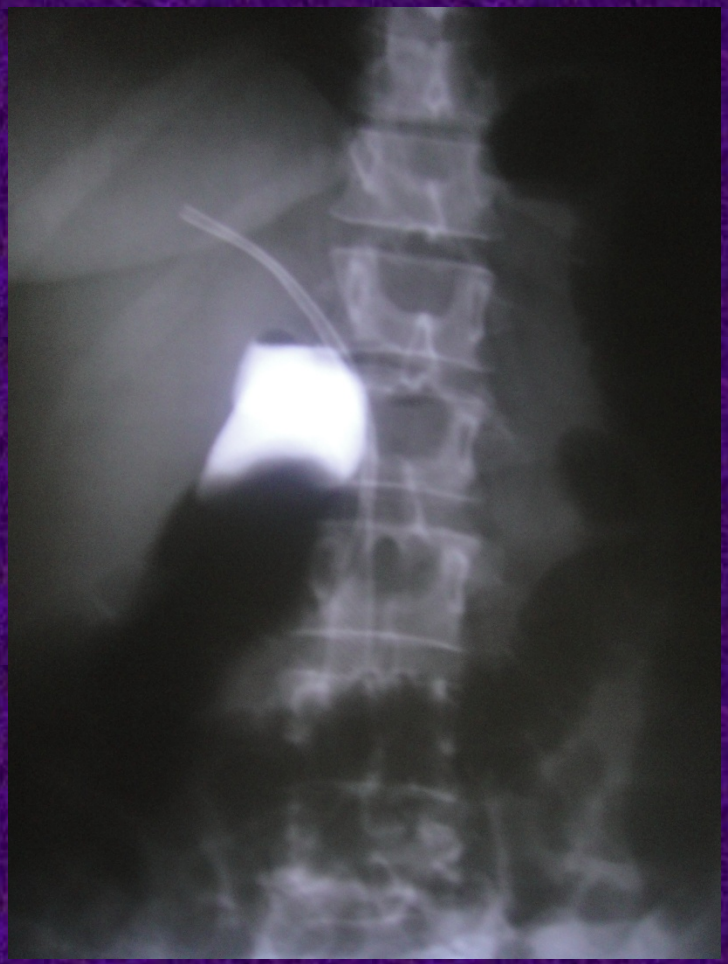


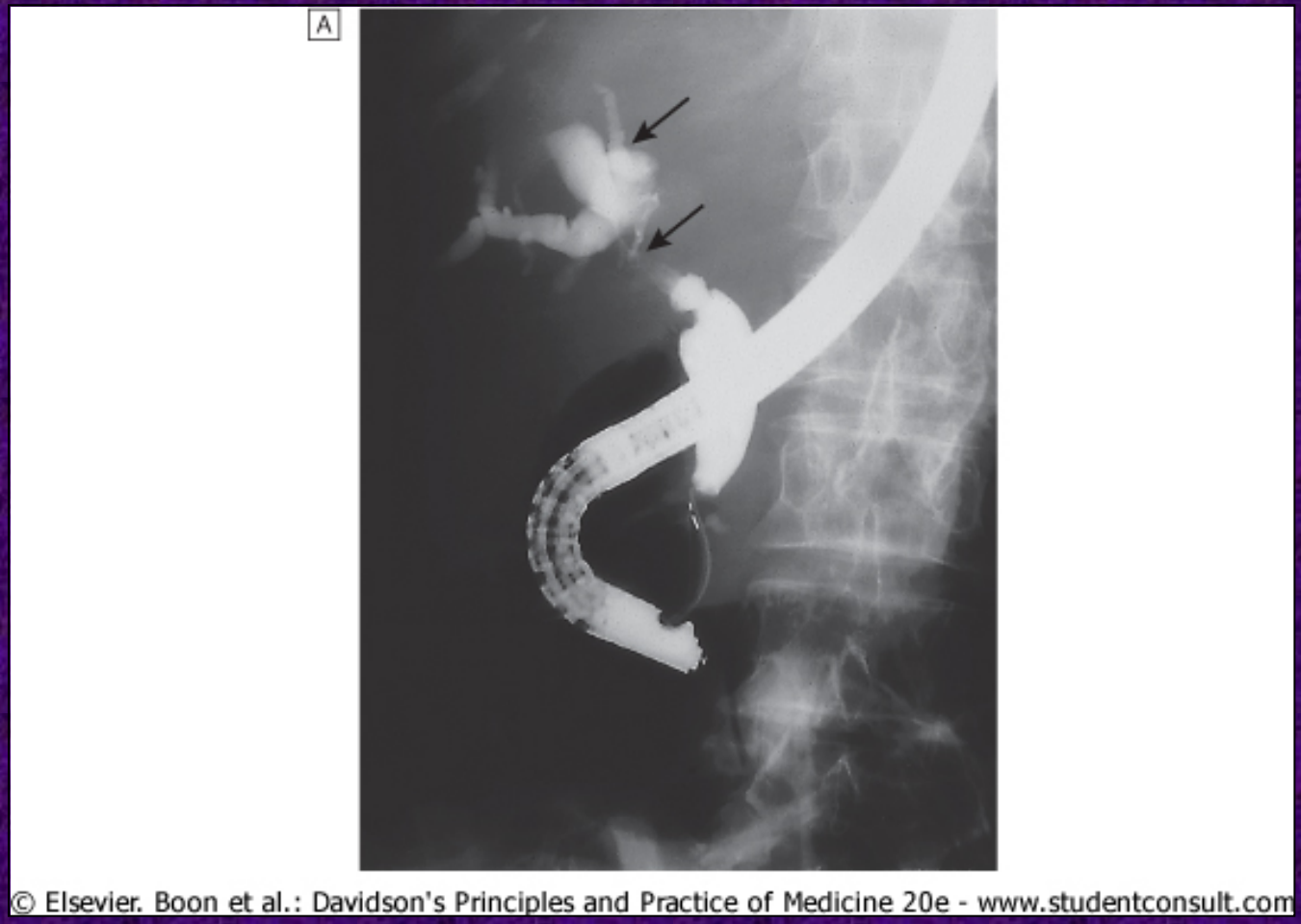


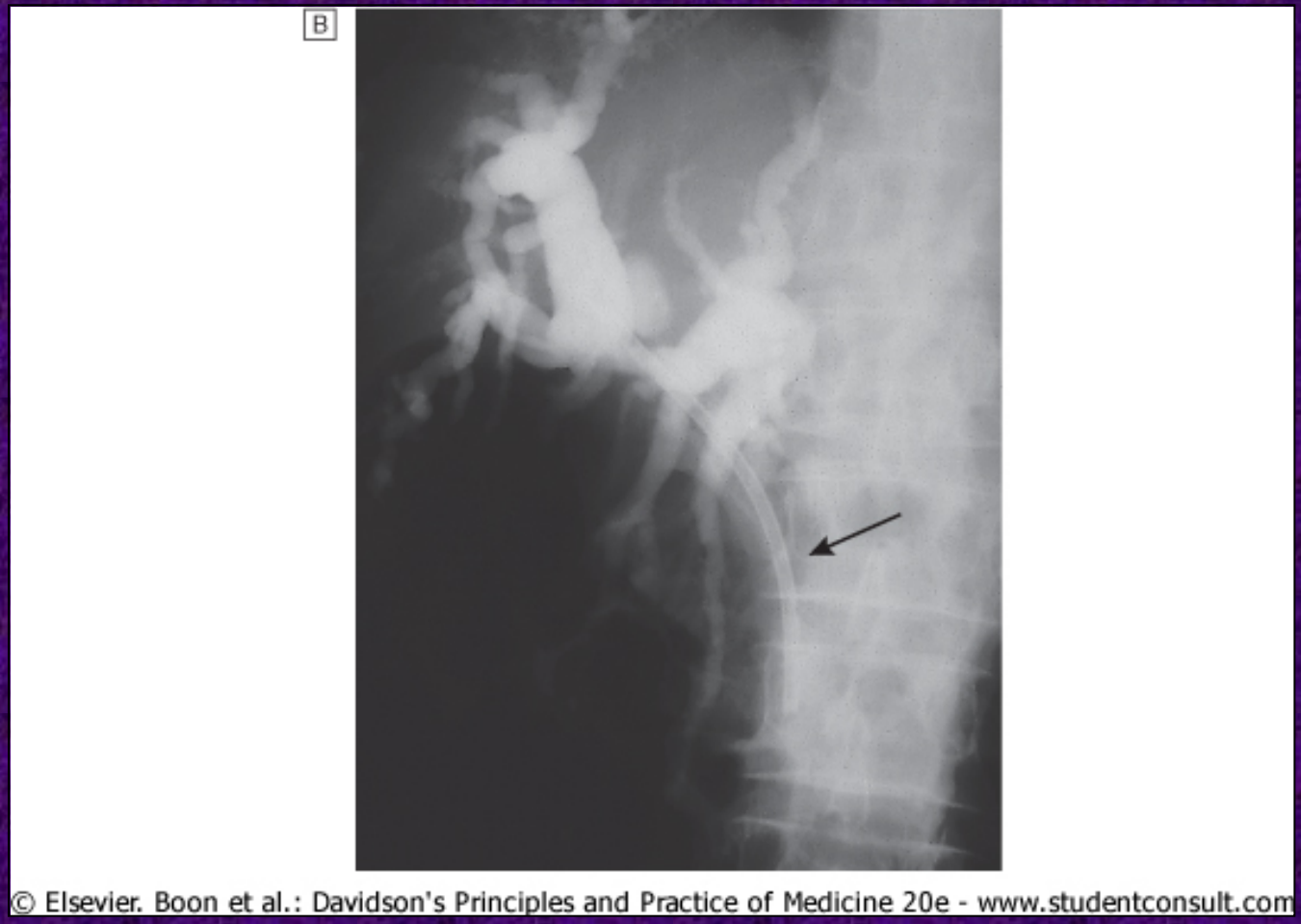


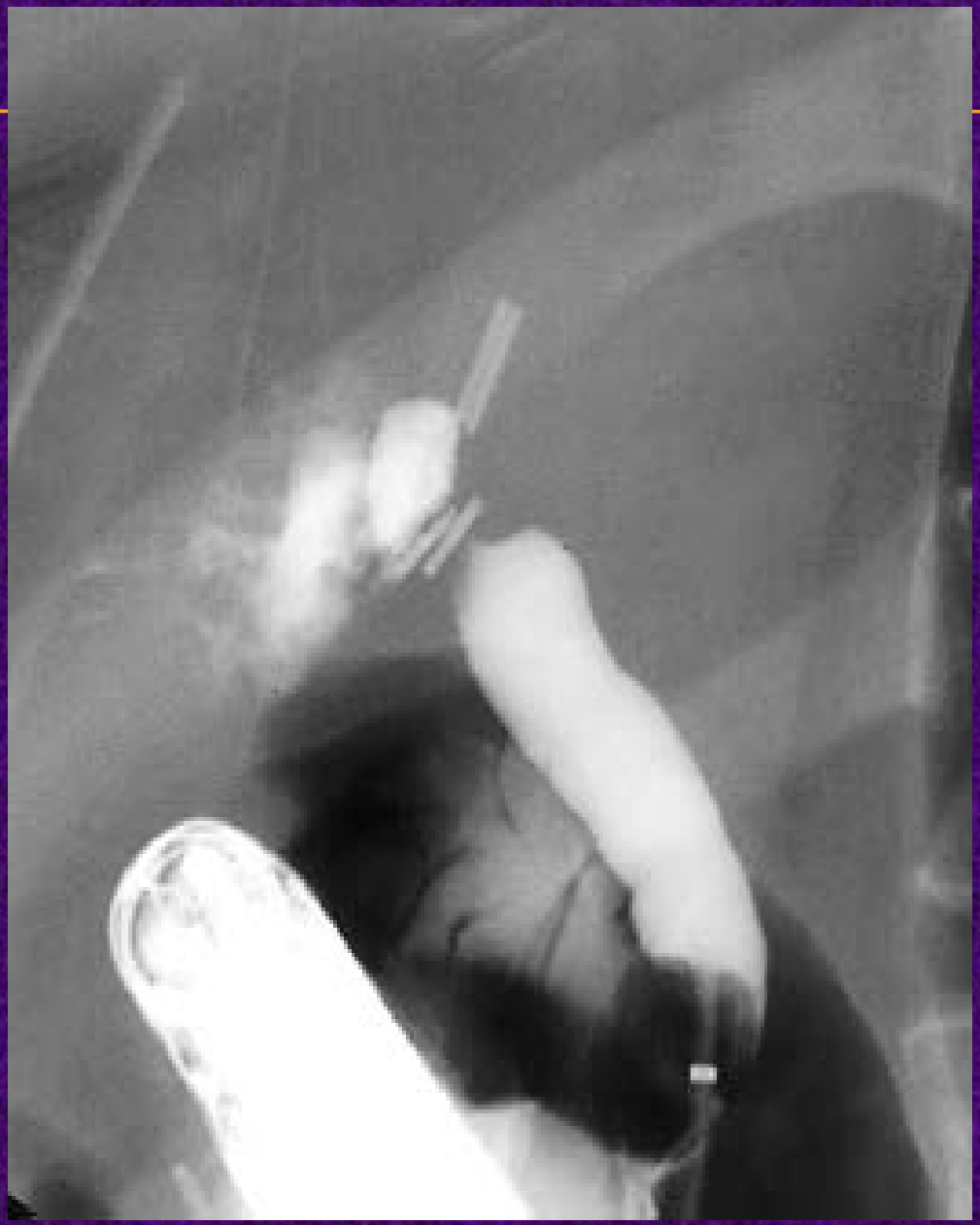


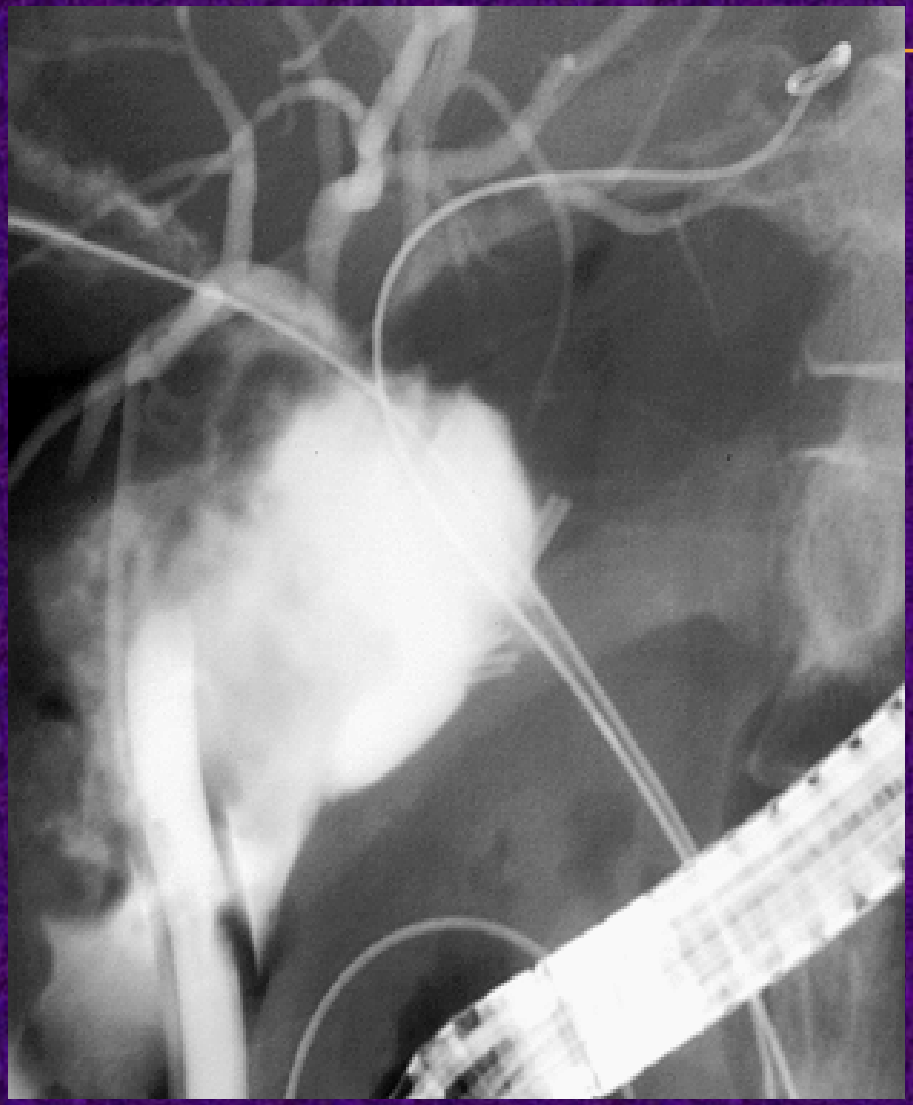


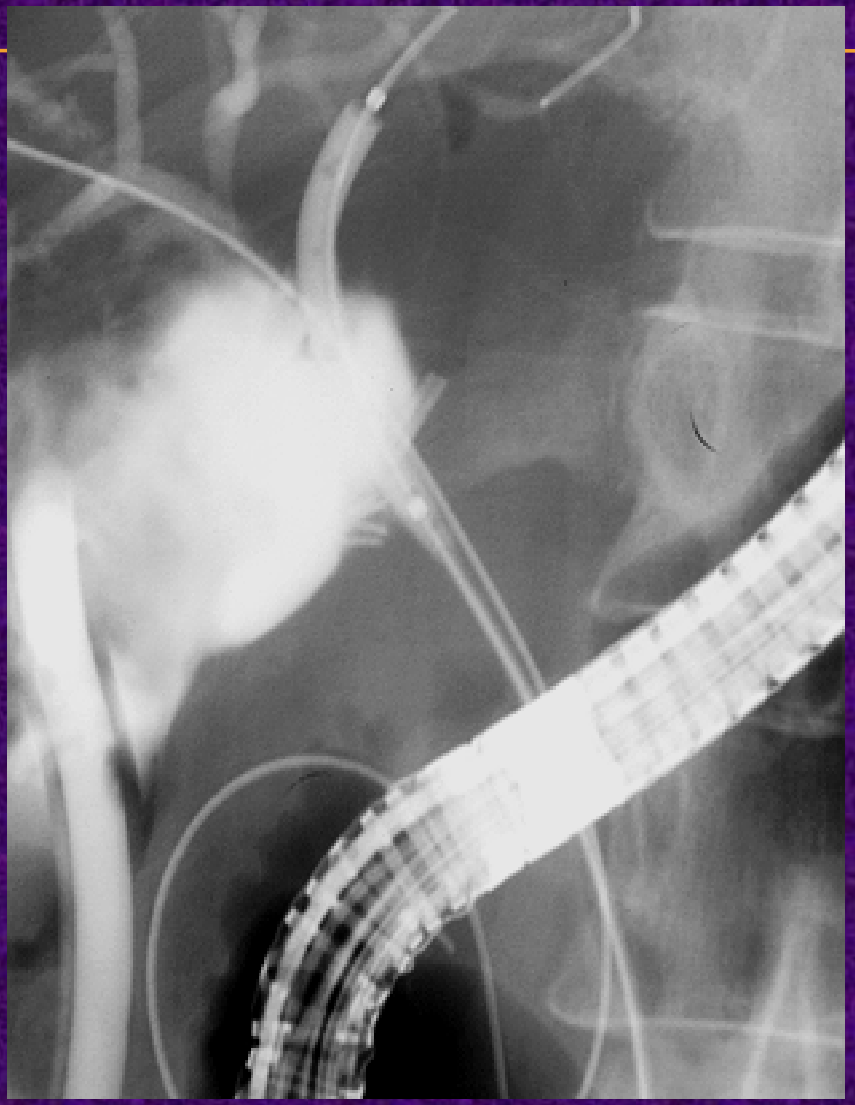


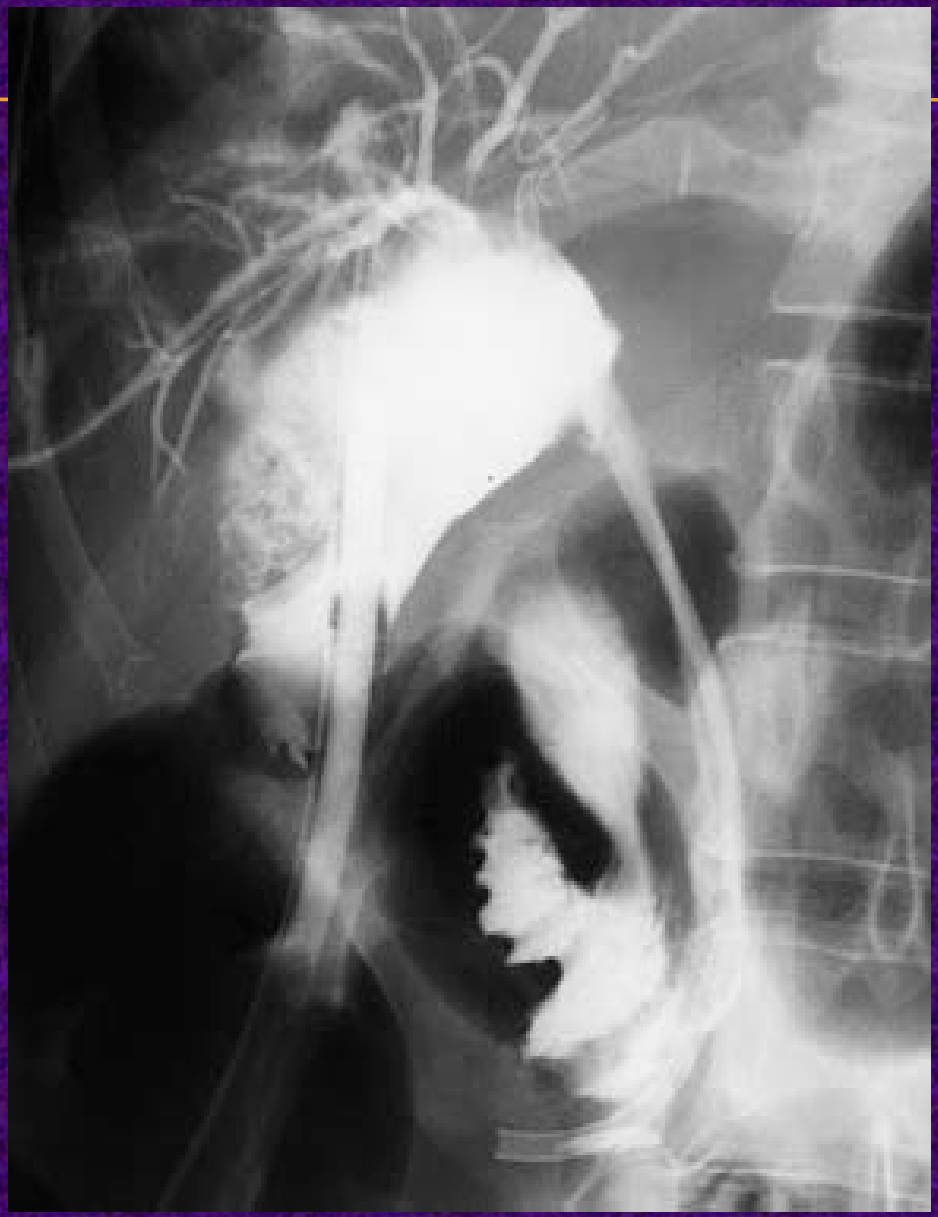




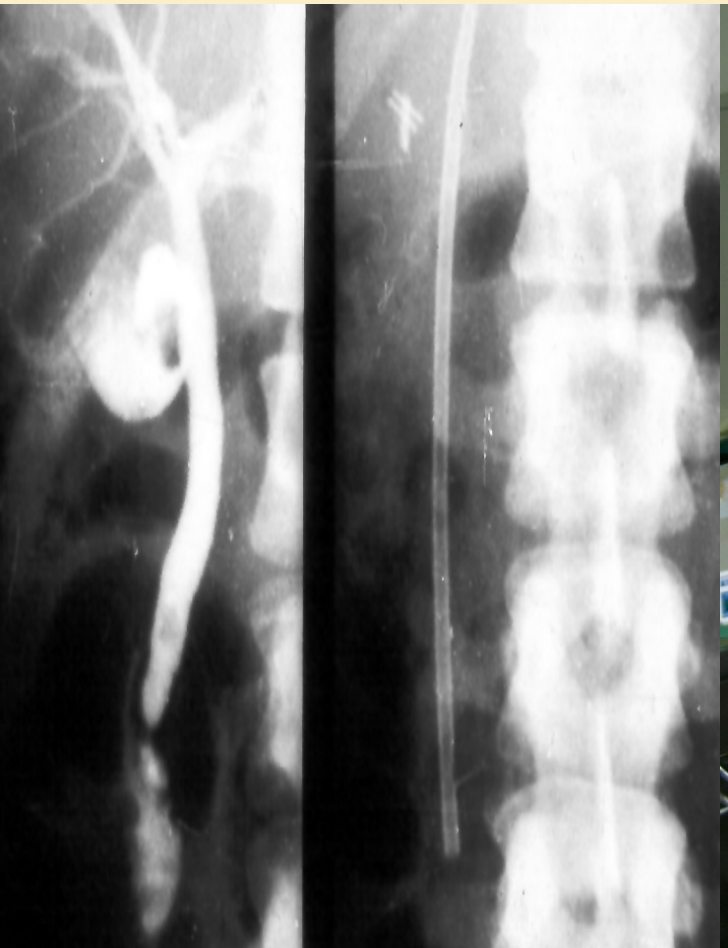


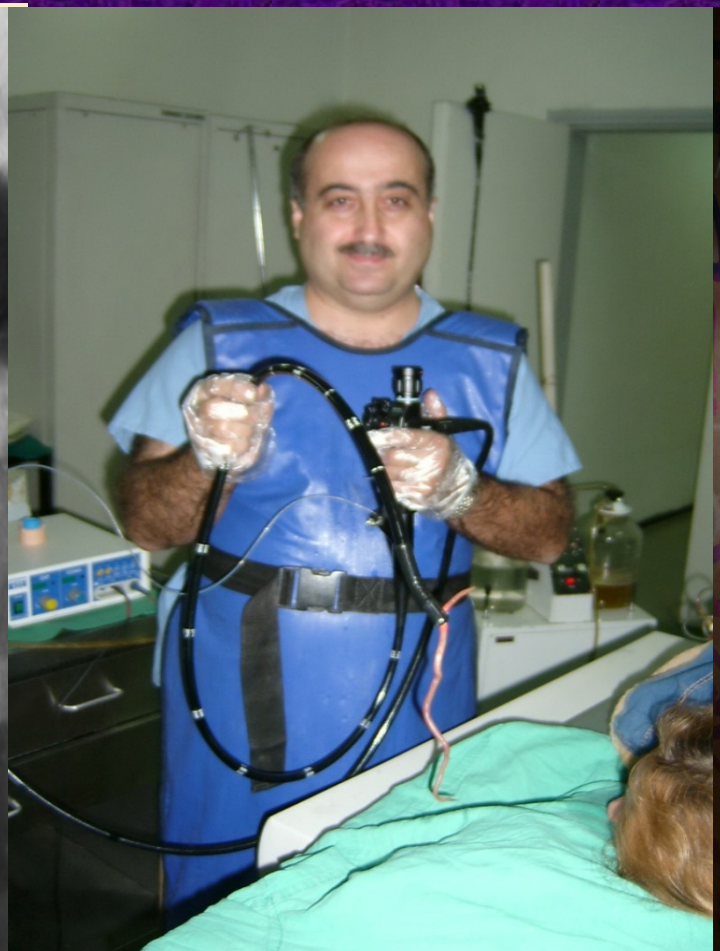


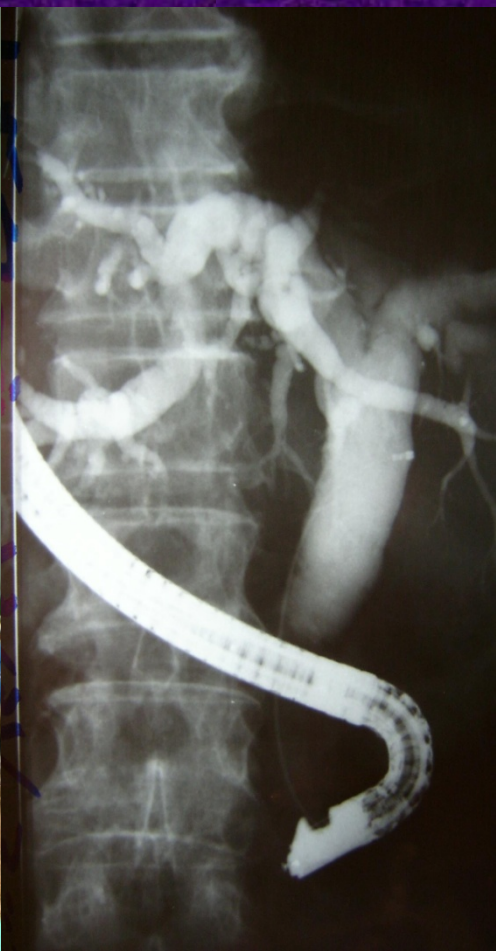




ERCP

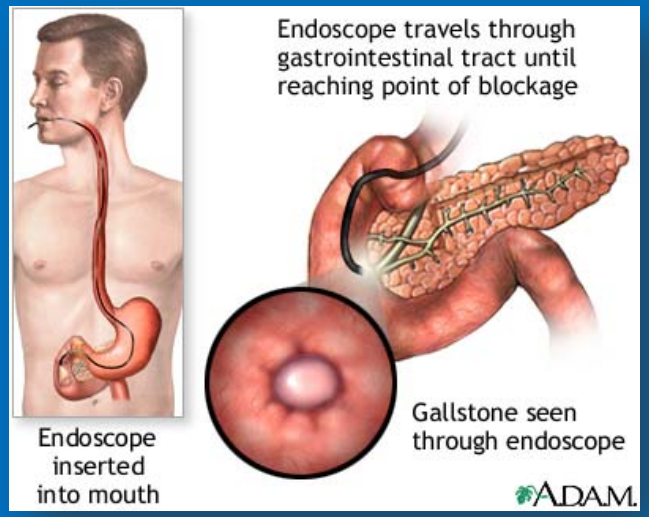






Complications:-

1. Bleeding
2. Pancreatitis
3. Perforation
4. Infection (cholangitis)

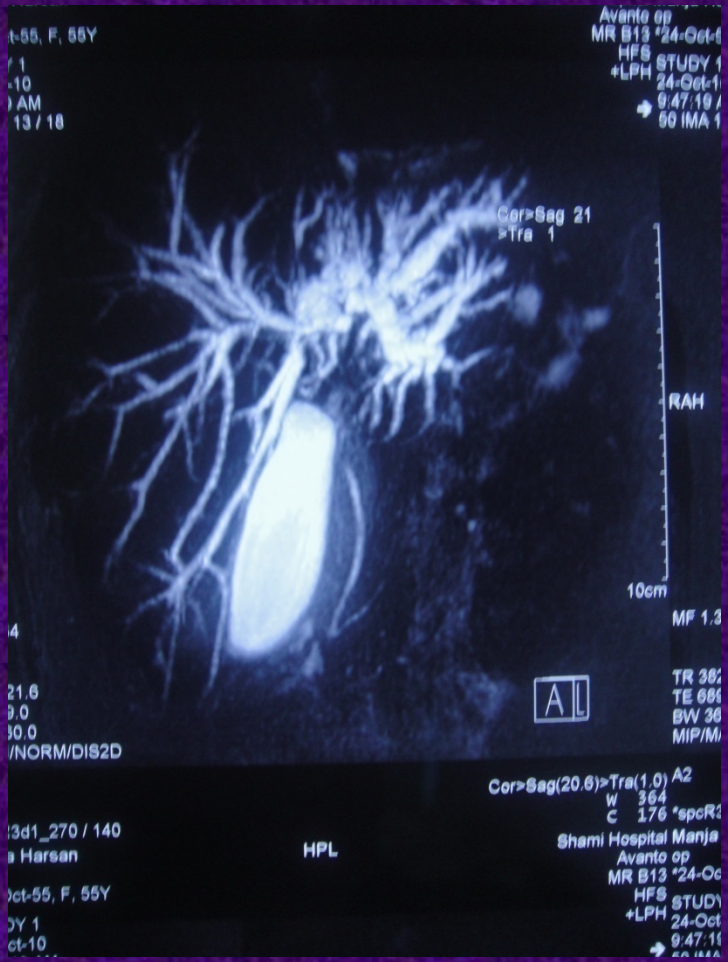


CHOLANGITIS

- Fever
- Rigors
- Pain

CHOLANGIOGRAPHY

- **MRCP** is as good as ERCP at imaging the biliary tree and does not have the same complications
(pancreatitis in 5% and 1% bleeding if a sphincterotomy is performed);
-
- it is therefore the diagnostic test of choice.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13 / 18
Cor>Sag 21
>Tra 1
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10cm
MF 1.3
TR 382
TE 68
BW 36
MIP/MA
AL
21.6
9.0
30.0
/NORM/DIS2D
Cor>Sag(20.6)>Tra(1.0) A2
W 364
C 176 *spcR3
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Harsan
HPL
Shami Hospital Manja
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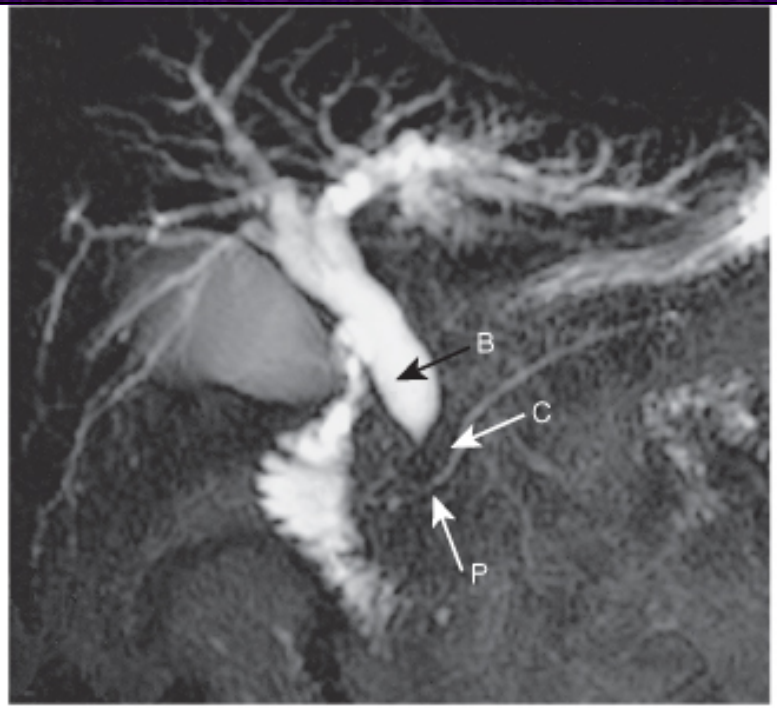
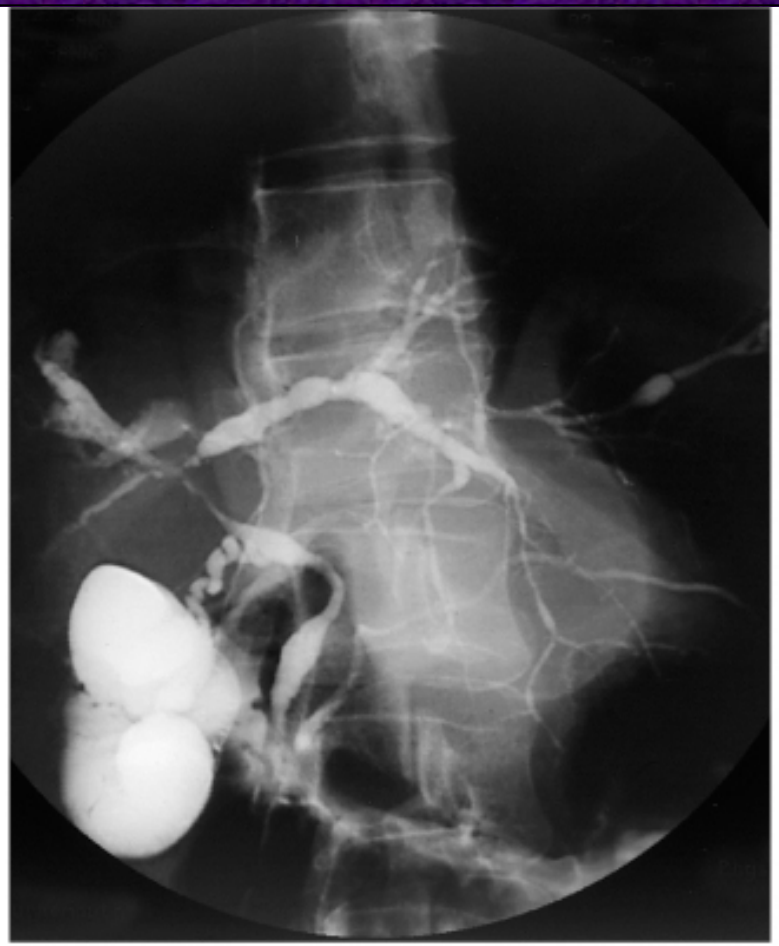
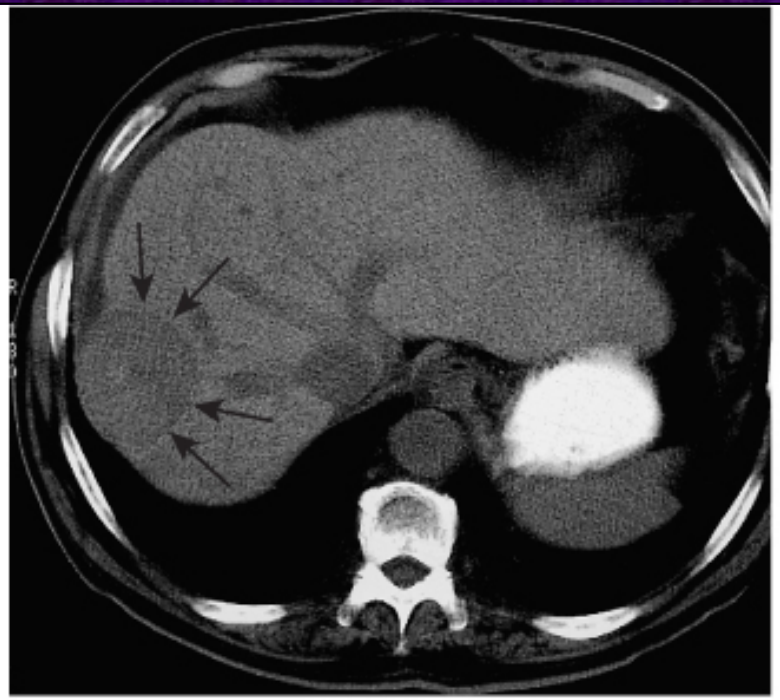
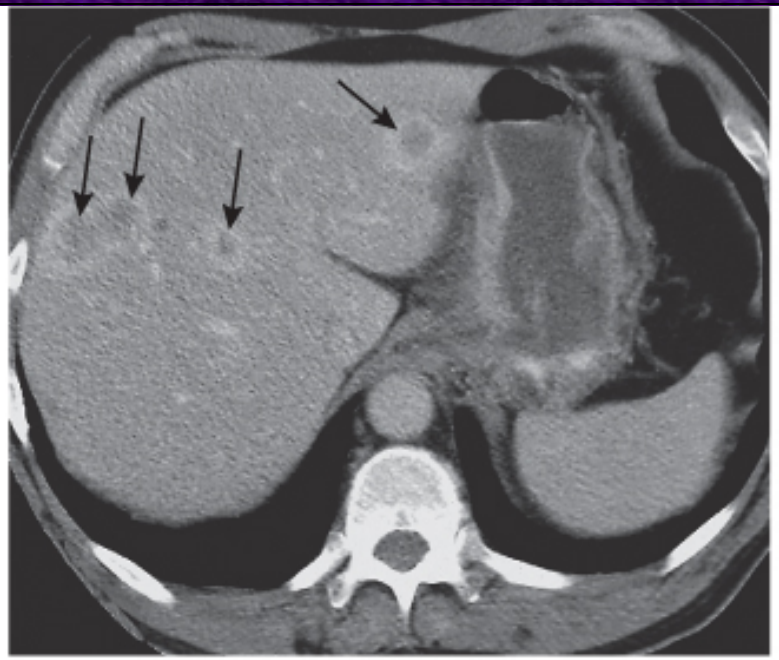
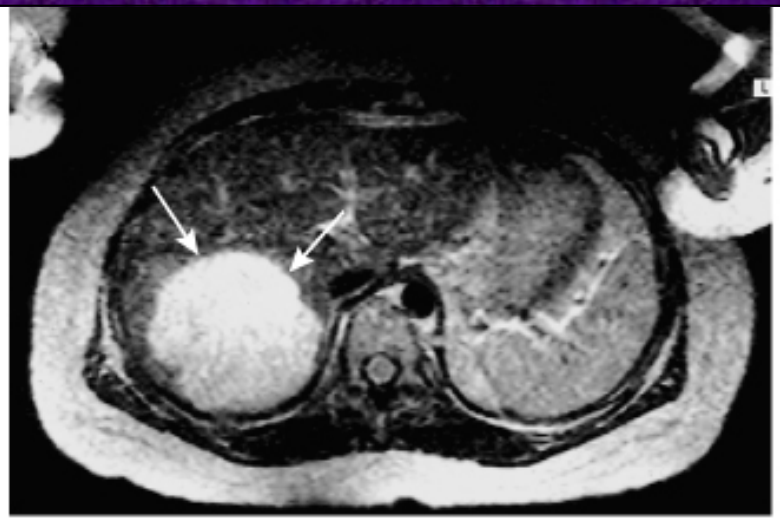
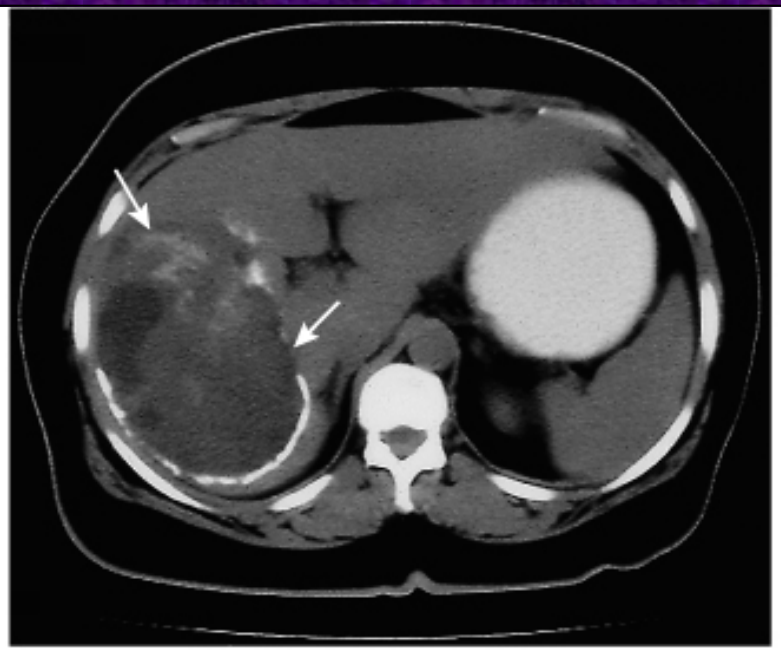


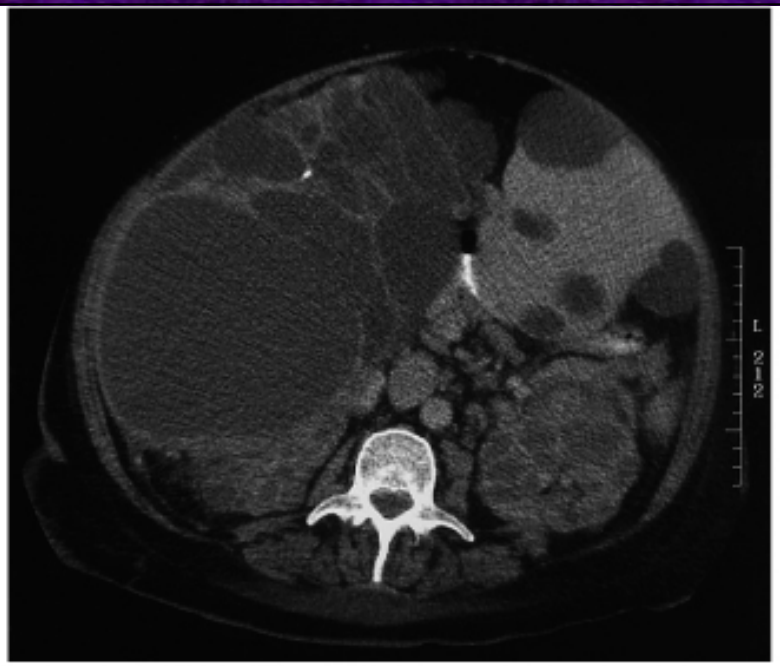


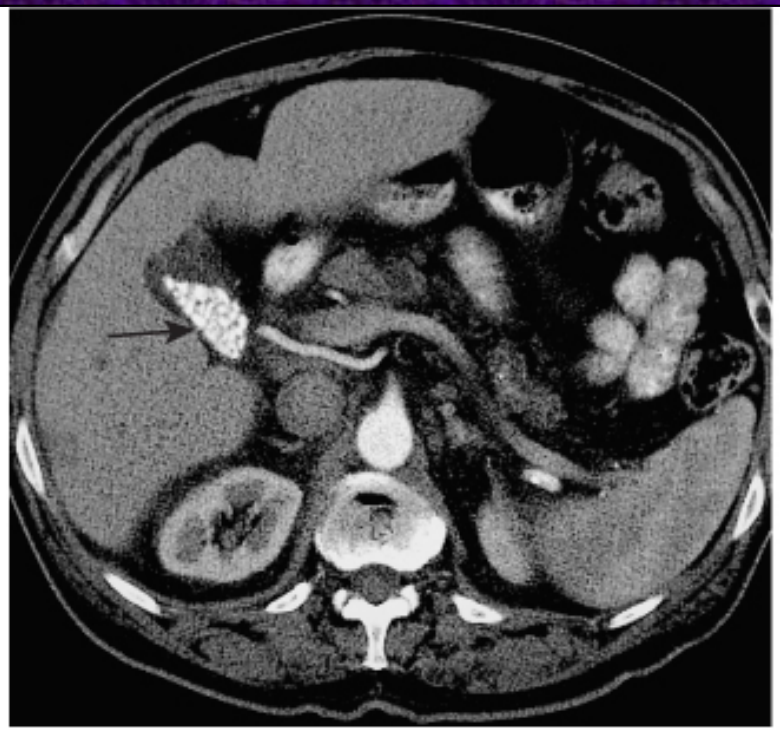


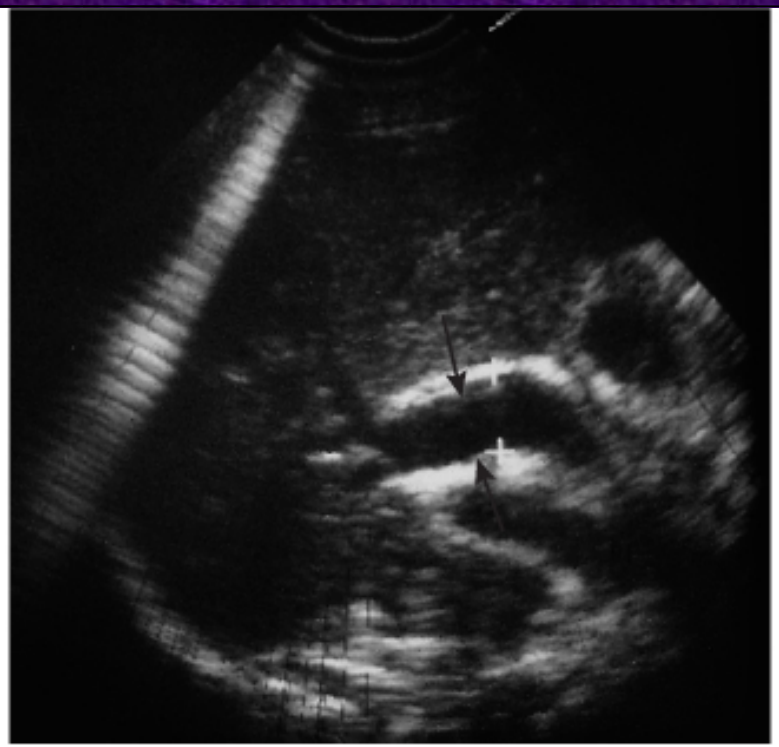




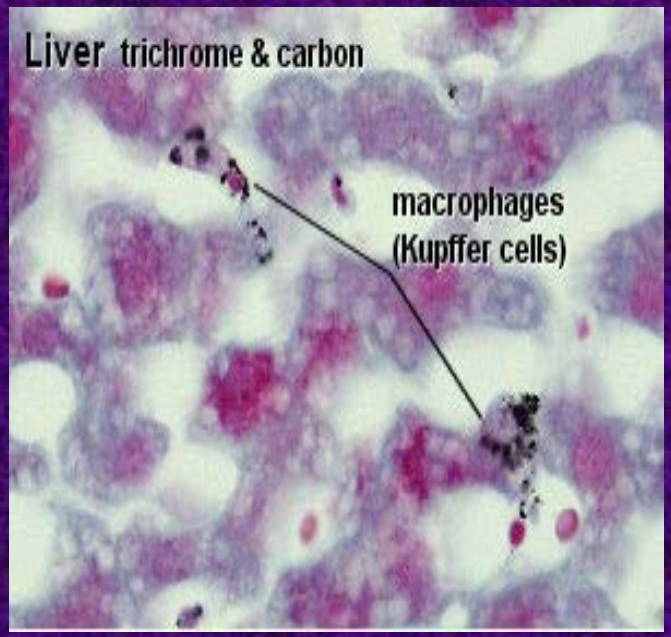


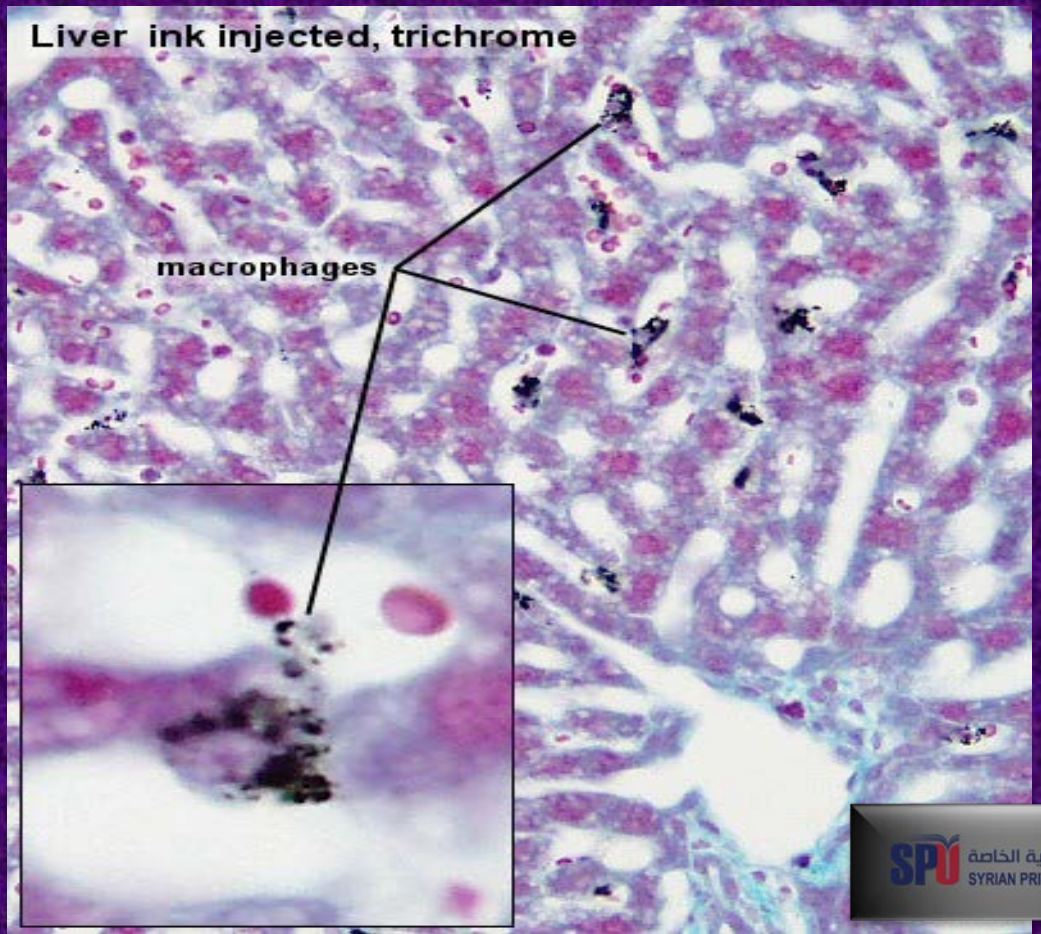






Kupffer cells constitute 80% of phagocytic capacity in the body: They remove aged &damaged RBC, bacteria, viruses, Ag-Ab complexes.
They also produce inflammatory mediators.

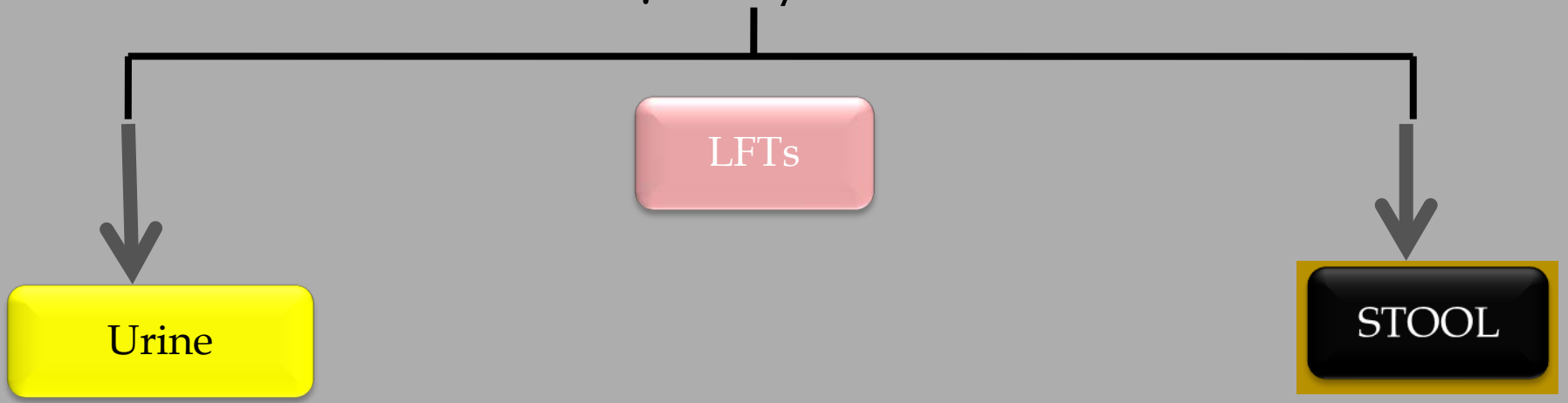




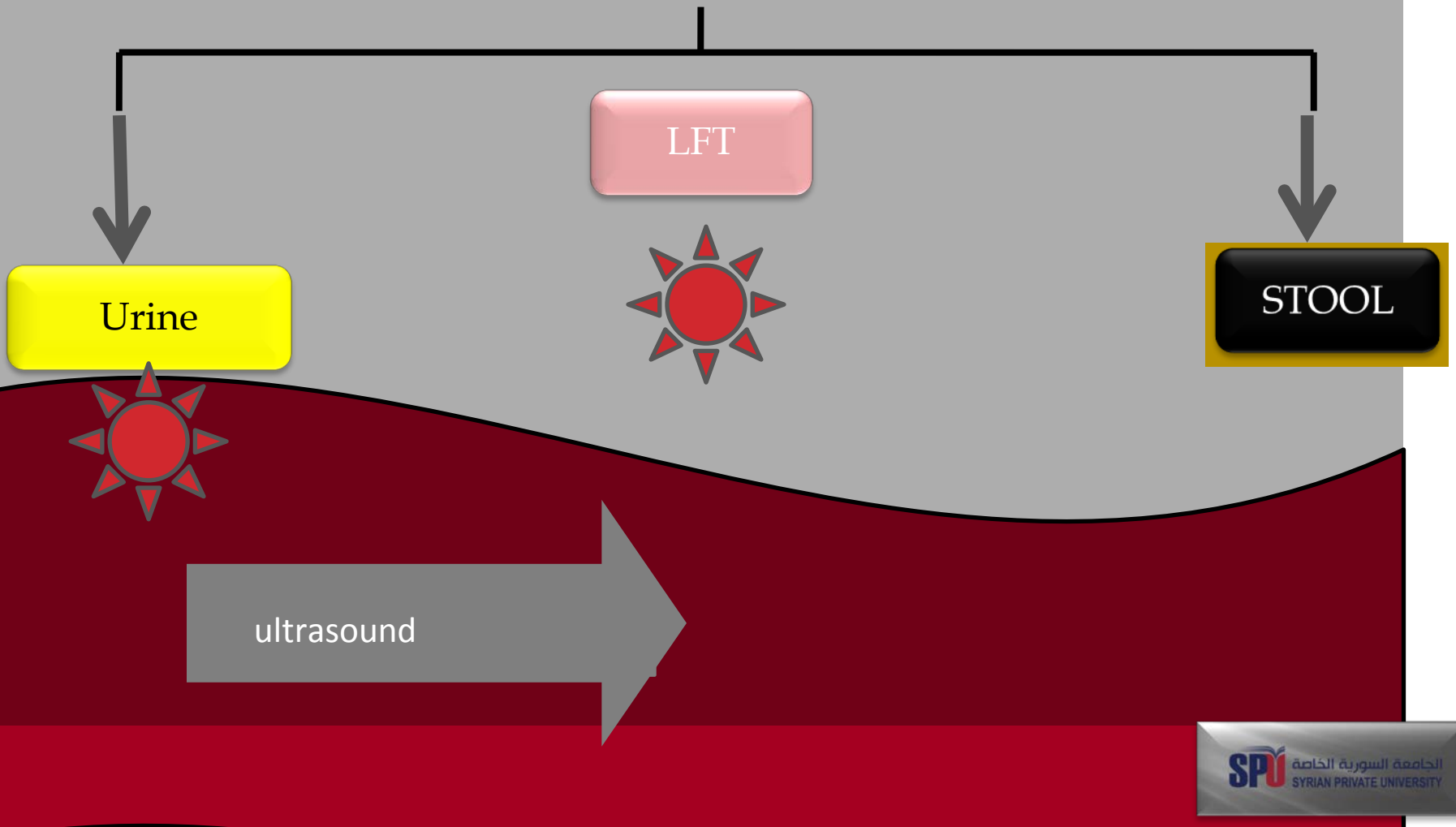
Approach to the Jaundiced Patient

History and examination

Jaundice is usually detectable when the plasma bilirubin exceeds 50 µmol/L

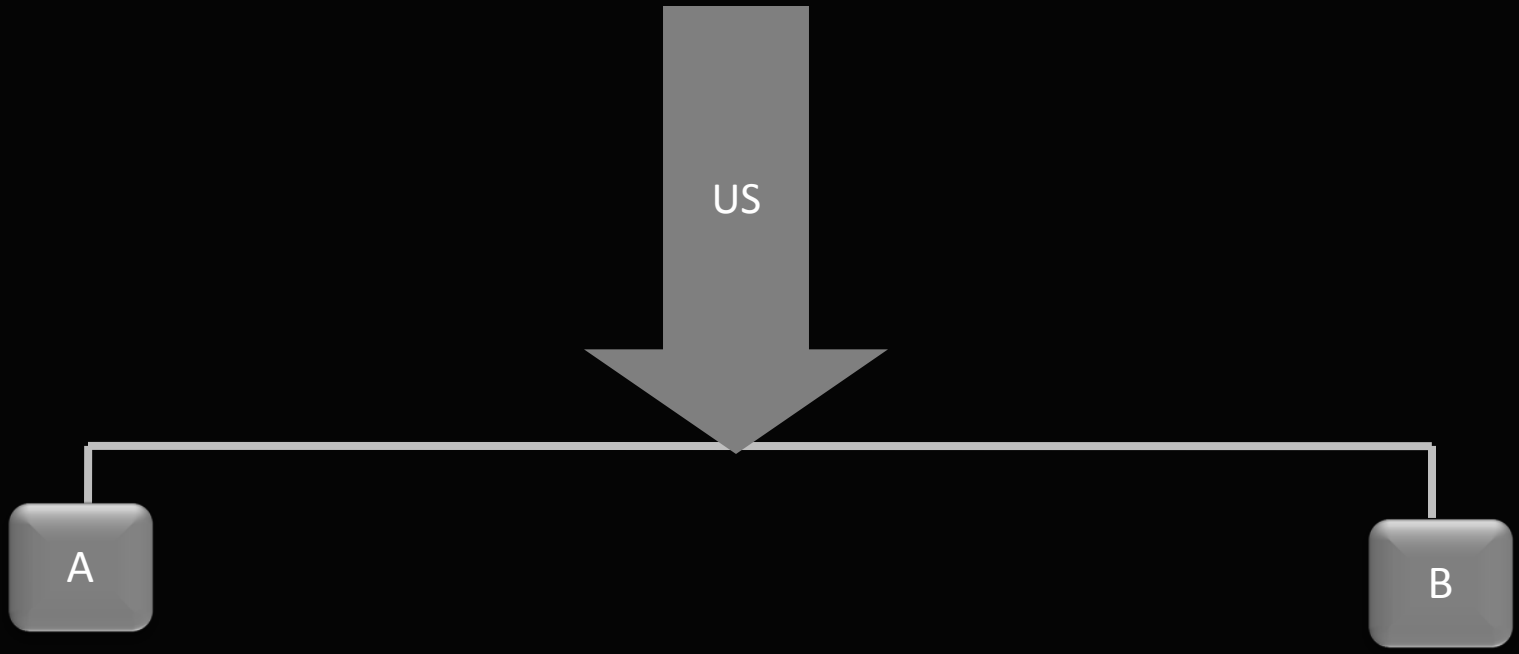


Conjugated bilirubin + abnormal LFTs



1

↑ Conjugated bilirubin + abnormal LFTs



1

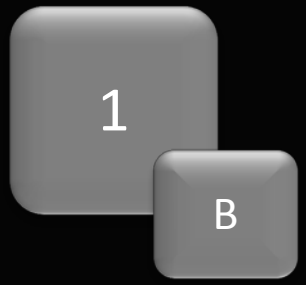
A

Biliary obstruction (i.e. dilated bile ducts)

Obstructional jaundice
(Greater elevation of ALP and GGT than the aminotransferases)

↓

Cholangiography
(MRCP or ERCP)



No evidence of Biliary disease

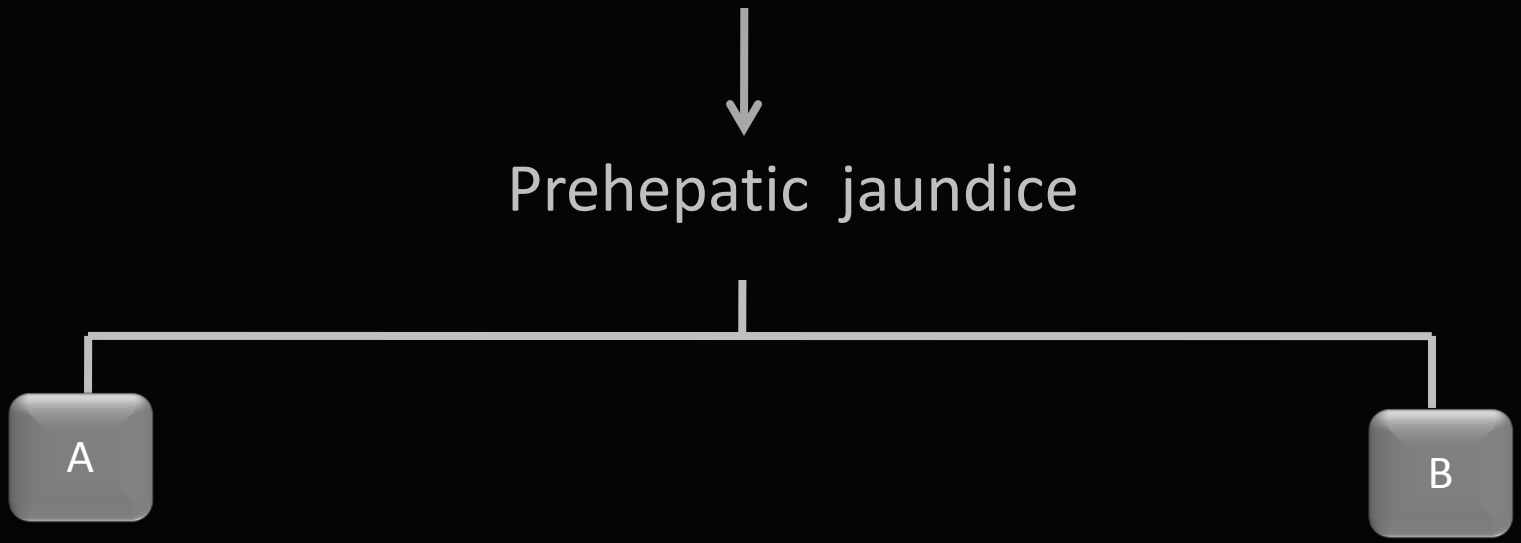
Hepatocellular jaundice

Acute jaundice + AST > 1000 highly suggestive of parenchymal liver disease due to :

- Infection
- Drugs
- ischemia

2

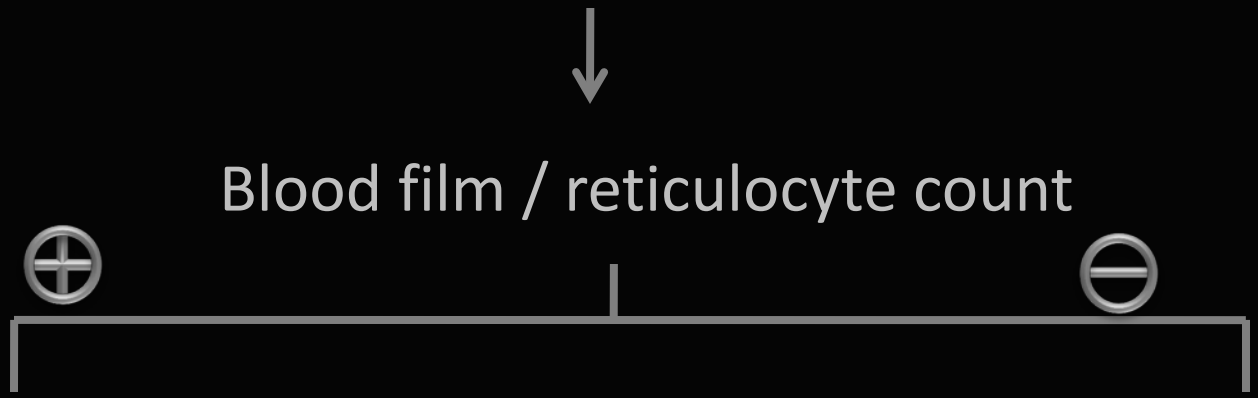
Urobilinogen present , Isolated bilirubin rise , and other liver biochemistry normal



2

A

Unconjugated bilirubin



Coombs test
+
haemolysis work – up
(Usually mild)

Gilbert's Syndrome
(The most common form of non-heamolytic hyperbilirubinaemia)