

# Interpretation of Liver Function Test

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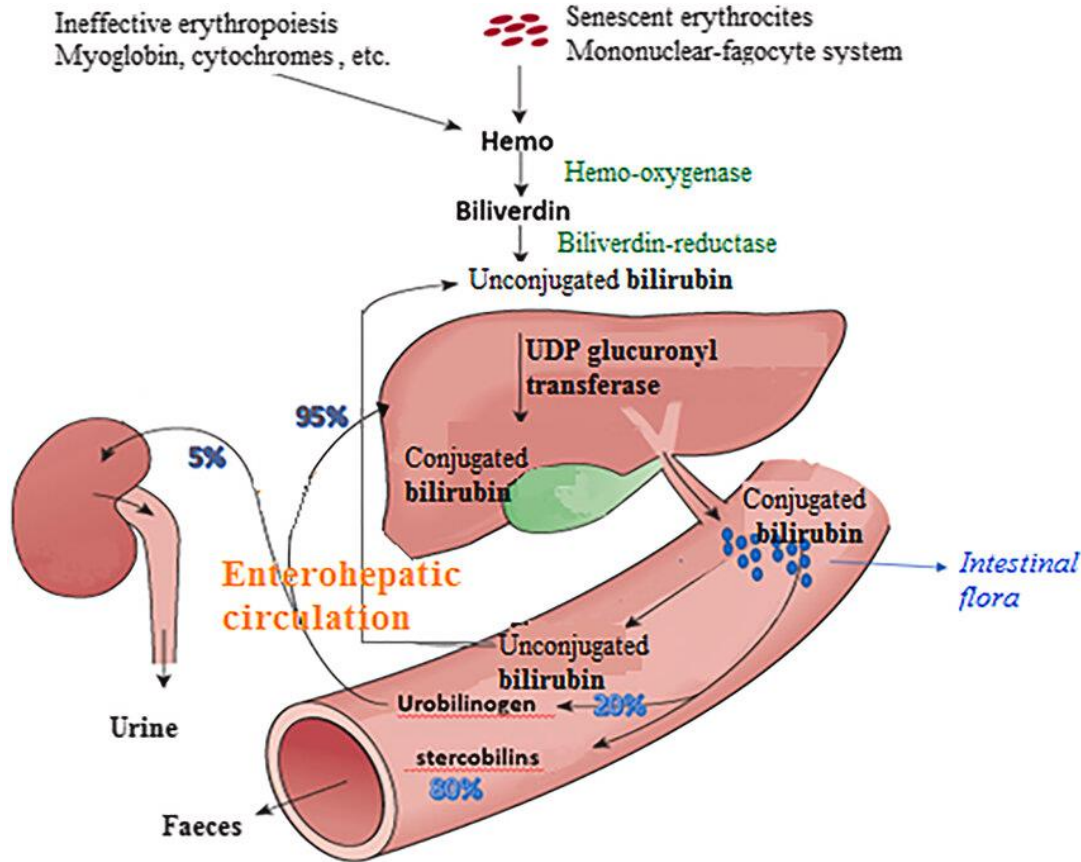


# Breakdown of Presentation

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- Metabolism of Bilirubin
- Interpretation of Liver Function Test
- Assessment

# Metabolism of Bilirubin



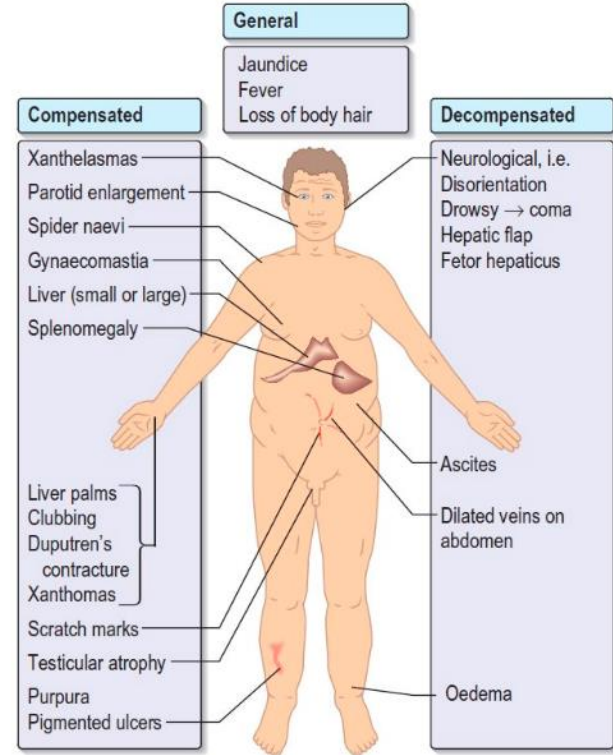
# Synthetic Function

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- Albumin
- INR
- Bilirubin

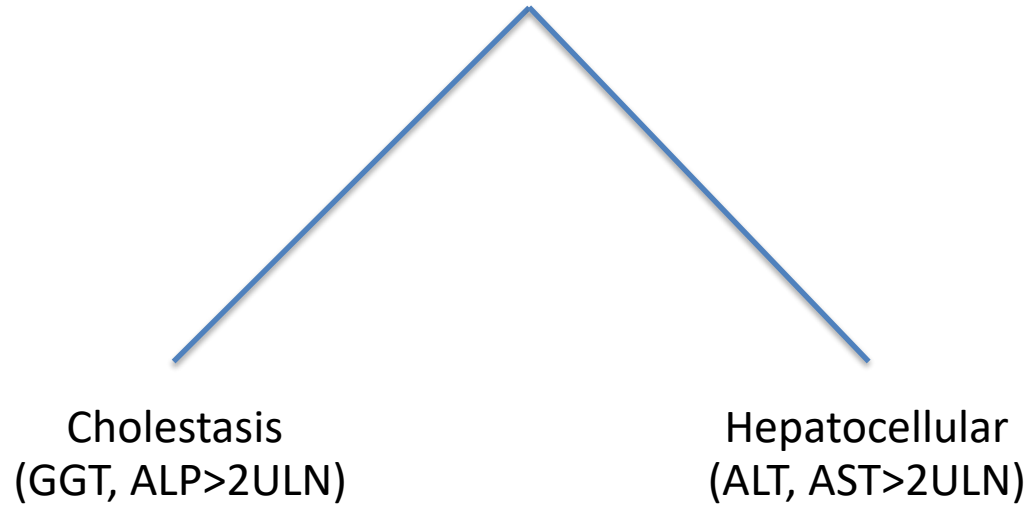
# History and Physical Examination

- Drug History
- Family History
- IBD
- Weight Loss
- Signs of Chronic Liver Disease



Physical signs in chronic liver disease.

# Abnormal LFTs



# Causes of Hepatocellular Jaundice

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- Drugs, alcohol, viral hepatitis, NAFLD, AIH

## Cholestatic Jaundice

- Hepatic tumors
- Pancreatic tumors
- Choledocholithiasis
- Bileduct stricture
- Ampullary CA

# Pre hepatic Causes

- Sickle cell anaemia
- Gilbert's syndrome
- Haemolytic anaemia



# Hepatocellular Picture

- Check LDH
- ALT:LDH ratio  $< 1.5$  – Drug induced liver injury, Ischemic hepatitis
- ALT:LDH ratio  $> 1.5$  – Viral hepatitis
- Sensitivity 94% and specificity 88%

## Isolated Rise of Enzymes in LFT

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- GGT-Alcohol, diabetes mellitus, fatty liver
- Alk P-Paget's disease, RH, PBC
- Alk P & GGT- Ca colon with mets

# Hepatitis Screen

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- Viral Screen – HbsAg, HCV, HIV1,2
- Metabolic screen – ferritin, TS, Ceruloplasmin, Alpha1 anti tripsin
- Auto anti-body screen – AMA, ANA, anti LKMA, PANCA

# DILI

- Cholestasis – ARB, Co Amoxiclave, TAD, Erythromycine
- Cirrhosis – Methotrexate
- Hepoto cellular – Diclofenic, AZT, Paracetamol, Statin

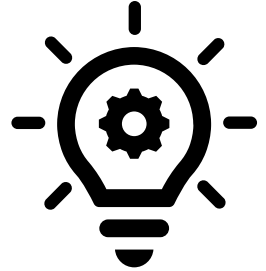
# Pregnancy and abnormal LTFs

- Acute viral hepatitis
- Hyper emesis gravidam – 1<sup>st</sup> trimester
- IHCP – 2<sup>nd</sup>/3<sup>rd</sup> trimester – Elevated bile acids
- Acute fatty liver of pregnancy – 3<sup>rd</sup> trimester – High INR
- Low glucose
- HELLP syndrome – 3<sup>rd</sup> trimester or postpartum

## Tips

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- Transaminitis?
- AST: ALT Ratio 2:1 – Alcohol hepatitis
- High AST & ALT only – muscle injury – check CK
- High AST and amylase with abdo pain – gall stone pancreatitis
- Super high AST and ALT – acute viral hepatitis, paracetamol overdose  
acute bile duct obstruction



## When to Transfer Patient to Hospital?

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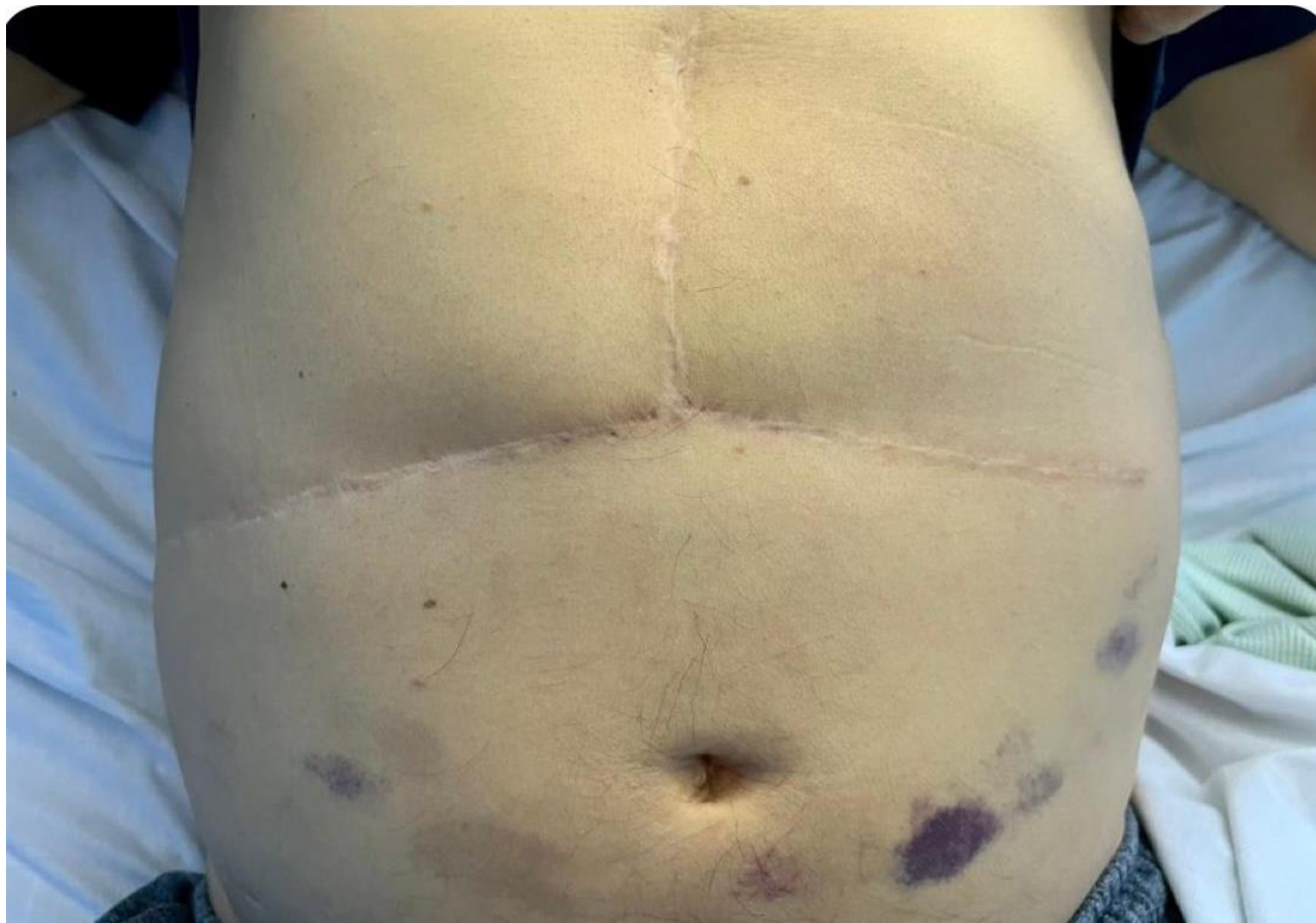
- Every patient with jaundice
- ALT & AST >2ULN
- Abnormal LFTs with pregnancy and IBD

# Summary

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- History and Physical examination
- Cholestatic or hepatocellular picture
- ALT:LDH ratio
- Hepatitis screen
- Medication
- Transfer patient to specialist







# Thank you