

1. CA 19-9

Ward	Surgical OPD
D.O.B/Age	03/06/1936

Lipase **9640** U/L 13 – 60 (Result checked/analysed in dilution)

Hepatic enzymes suggestive of a mixed picture.

Request form: Jaundice ?NBL

Unable to obtain history. Questions to consider:

Presenting complaint: Weight loss, jaundice, yellowing of the sclera and/or skin, pruritis, vomiting, change in the colour of stool and/or urine, early satiety, epigastric fullness.

Past medical history: Any chronic illnesses e.g. diabetes, hypertension, epilepsy, HIV etc

Family history: especially GI malignancy. **Social history:** Diet, smoking, alcohol consumption, illicit drug use.

Vital signs: assess haemodynamic status

Gen: jaundice, scratch marks, any signs of wasting, mental status, pallor, oedema, clubbing, lymphadenopathy, fetor hepaticus

Abdo: signs of liver disease (spider naevi, caput medusa, ascites), hepatomegaly or cirrhosis, epigastric fullness, hepatic flap.

Full system examination of remaining systems.

Bedside tests: Glucose, urine dipstick, ABG

Sodium 136 mmol/L [136 – 145]

Potassium 4.1 mmol/L [3.5 – 5.1]

Urea	7.2 mmol/L	[2.1 – 7.1]	
Creatinine	181 umol/L	[49 – 90]	
Total bilirubin	106 umol/L	[5 – 21]	
Conjugated bilirubin	87 umol/L	[0 – 3]	
Alanine transaminase (ALT)	200	U/L	[7 – 35]
Aspartate transaminase (AST)	165	U/L	[13 – 35]
Alkaline phosphatase (ALP)	365	U/L	[42 – 98]
Gamma-glutamyl transferase (GGT)	519	U/L	<40
Alpha-feto protein (AFP)	3.8 ug/L		[0.0 – 7.0]
Carcinoembryonic Ag (CEA)		1.4	ug/L
	0.0 – 5.0		
CA 19-9			83 H
kU/L		0 – 34	

Urine dipstick: Unknown, but may be useful in assessing renal tubular integrity.

Final diagnosis

?pancreatic non-benign lesion

?gastric malignancy in pancreas

?gallstone pancreatitis

- Most tumour markers are made by both normal cells and cancer cells, but they are made in larger amounts by cancer cells. A tumour marker may help to diagnose cancer, plan treatment, or find out how well treatment is working or for recurrence. It is recommended however that tumour markers should not be used for diagnosis but rather for monitoring of patients.
- Normally synthesised by human pancreatic and biliary

duct cells, as well as gastric, colon, endometrial and salivary epithelia. As a tumour marker, it is used for adenocarcinoma of the pancreas ($\uparrow$ in 80% of cases), but the rise is too late to be useful in early disease.

- High dose hook effect can affect immunoassays giving falsely lowered result. This can be overcome with dilution.