

# Hepatology referral pathways for GPs

## 1 Scope

For use within hepatology.

## Contents

- |    |  |    |
|----|--|----|
| 2. | <a href="#">Liver blood tests and what they mean</a> | p2 |
|    | <a href="#">Acute and chronic liver screen</a>       | p2 |
| 3. | <a href="#">Hepatology A&amp;G FAQs</a>              | p3 |

## Common reasons for referral

- |     |   |     |
|-----|---|-----|
| 4.  | <a href="#">Raised ALT +/- GGT</a>                                | p4  |
| 5.  | <a href="#">Non alcoholic fatty liver disease (NAFLD) pathway</a> | p5  |
| 6.  | <a href="#">Alcohol-related liver disease (ArLD) pathway</a>      | p6  |
| 7.  | <a href="#">Isolated asymptomatic raised bilirubin</a>            | p7  |
| 8.  | <a href="#">Raised ALP and normal ALT</a>                         | p7  |
| 9.  | <a href="#">Combination of LFT abnormalities</a>                  | p8  |
| 10. | <a href="#">Raised ferritin</a>                                   | p8  |
| 11. | <a href="#">Abnormal liver imaging</a>                            | p9  |
| 12. | <a href="#">Hepatitis B</a>                                       | p10 |
| 13. | <a href="#">Hepatitis C</a>                                       | p10 |
| 14. | <a href="#">Referral pathways</a>                                 | p11 |

### 2 Liver blood tests and what they mean

Test	Normal range	What does it mean?	Actions if abnormal
ALT	7-40	Hepatocellular injury	<a href="#">Raised ALT</a>
Bilirubin isolated raised	<21	Gilberts Haemolysis	<a href="#">Isolated asymptomatic raised bilirubin</a>
Bilirubin with abnormal LFT		Liver or biliary pathology	Refer (routine vs urgent acc to values)
Alkaline Phosphatase (ALP)	30-130	Biliary disease (if raised GGT) Bone disease Pregnancy (placenta) Acute phase response	<a href="#">Raised ALP and normal ALT</a>
Gamma glutamyl transferase (GGT)	Male 0-73 Female 0-38	Non-specific – can reflect alcohol intake, non-alcoholic fatty liver or biliary disease if associated with raised ALP	Follow relevant pathway
Prothrombin time (PT)		Elevated with impaired synthetic function or biliary obstruction	Refer if could be liver related
Albumin	35-50	Non-specific, but may represent impaired synthetic function if low	Refer if could be liver related
Ferritin		Not necessarily iron overload	<a href="#">Raised ferritin</a>
Reduced platelets		Can be a feature of cirrhosis with portal hypertension	Refer if could be liver related

<p><b>Chronic liver screen</b>                  U/E, LFT, FBC, PT, FIB-4 if suspected NAFLD                  Hepatitis B &amp; C serology                  Liver autoantibodies                  Serum immunoglobulins                  Ferritin                  Alpha-1 antitrypsin level                  Random glucose, HBA1c, lipids if ?NAFLD                  If under 50 caeruloplasmin</p>	<p><b>Acute liver screen</b>                  LFT, FBC, PT                  Hepatitis A, hepatitis B and hepatitis E serology (IgM &amp; IgG), EBV and CMV                  Liver autoantibodies                  Serum immunoglobulins                  If under 50 caeruloplasmin</p>
--	---

<p><b>Hepatitis B screen</b>                  Chronic liver screen plus:                  HBV DNA                  Hepatitis A IgG                  HIV screen</p>	<p><b>Hepatitis C screen</b>                  Chronic liver screen plus:                  HCV RNA and genotype                  Hepatitis A IgG                  HIV screen</p>
--	---

### 3 Hepatology A&G FAQs

**Result**

**What it means**

<b>BLOOD</b>	
ALP raised with normal GGT	Not likely to relate to liver, more likely bony origin
Bilirubin (isolated raised )	Likely Gilbert's if nil else to suggest liver disease, normal Hb, 'split' bilirubin predominantly unconjugated. NB may have family history
Caeruloplasmin 0.17-2.0	Unlikely to be significant if no other pointers to Wilson's disease
Ferritin raised/normal tf sat	Common in NAFLD, Alcohol-related liver disease (ArLD)
FIB4 <1.3 (<2.0 over age 65)	Can be requested on T-Quest. Use for NAFLD assessment only. Means low risk of significant fibrosis. Not valid < age 35 or > age 75
FibroScan < 7 kPa (NAFLD)	Means low risk of significant fibrosis in NAFLD
FibroScan < 8 kPa (Alcohol)	Means low risk of significant fibrosis in Alcohol-related liver disease
Hepatitis C Ab positive	Past exposure - requires HCV RNA to assess for active infection
HepBcAb +ve /HepBsAg -ve	Previous exposure, natural immunity, not chronic infection
IgA raised	Common in NAFLD, ArLD – not concerning in itself
SmA/ANA Weak positive	This will always be non-specific, common in NAFLD. Not a concern if IgG normal.
<b>IMAGING</b>	
Focal lesion on US	If likely benign but report not definitive – repeat at CUH if done elsewhere otherwise A&G
Gallbladder polyps	Refer to 'HPB surgery' for advice / follow their guidance

**4 Isolated raised ALT (+/- GGT)**

THINK about and address Risk Factors

- Metabolic syndrome
- Diabetes
- Alcohol
- Risks for viral hepatitis (ethnicity, IV drug use)
- Medication
- Vigorous exercise (check CK)

ALT > 300 at any stage → [Acute liver screen](#) , urgent CUH USS → [Urgent referral](#)

**Features of significant liver disease at any stage**  
(eg possible cirrhotic appearance, splenomegaly, raised bilirubin/PT, low platelets) → [Routine referral](#)

ALT >150 Repeat 2/52  
ALT <150 Repeat 4/52

ALT remains >150 → USS and [Chronic liver screen](#) → [Routine referral](#)

ALT <150 → USS and [Chronic liver screen](#)

ALT normal

↓

Reinforce lifestyle advice/monitor

Do all the features below apply?  
NO hepatomegaly/splenomegaly  
NO cirrhosis/portal hypertension  
Normal chronic liver screen

NO → [Routine referral](#)

YES

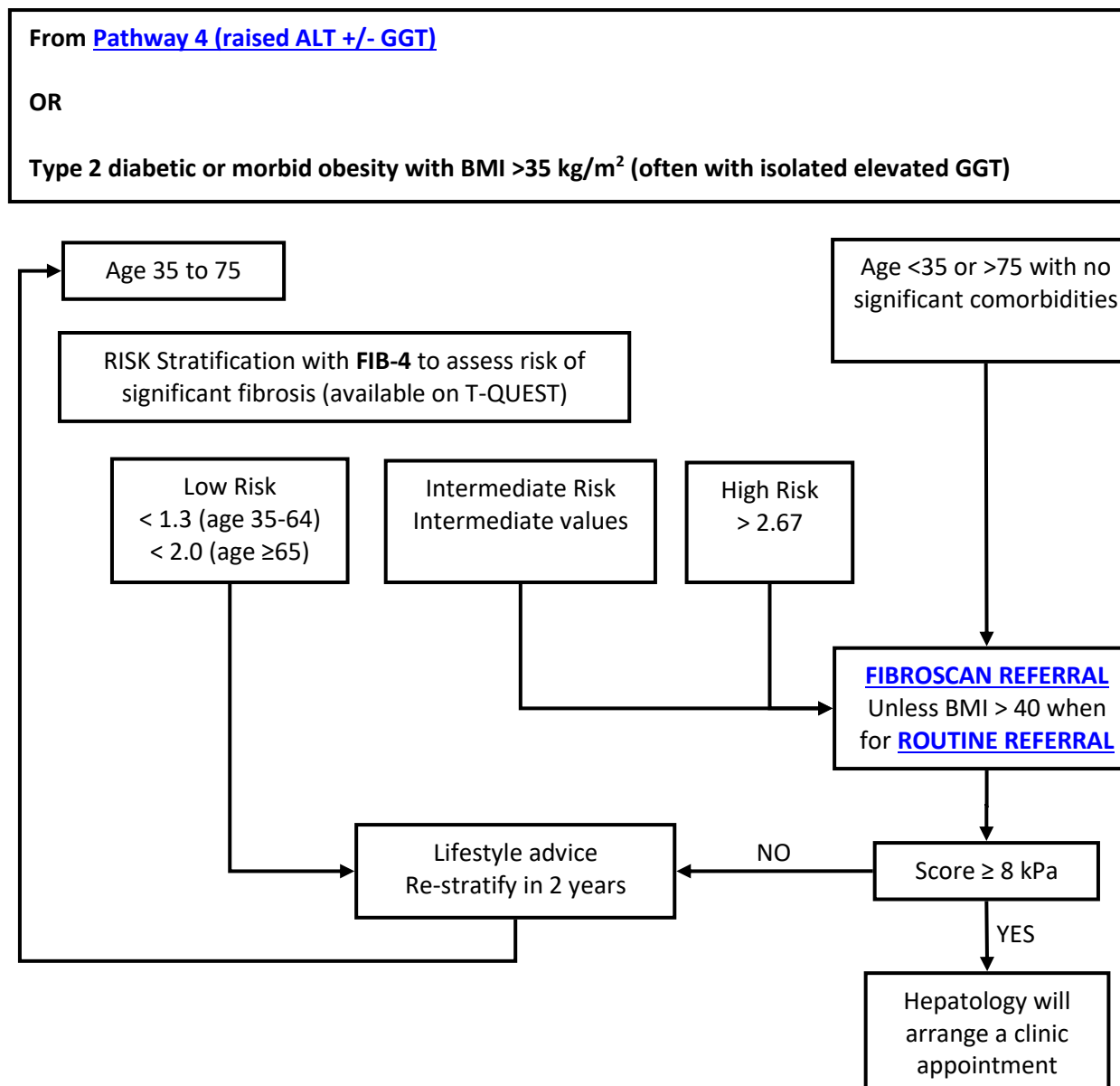
> 14 units alcohol per week

NO → [NAFLD pathway](#)

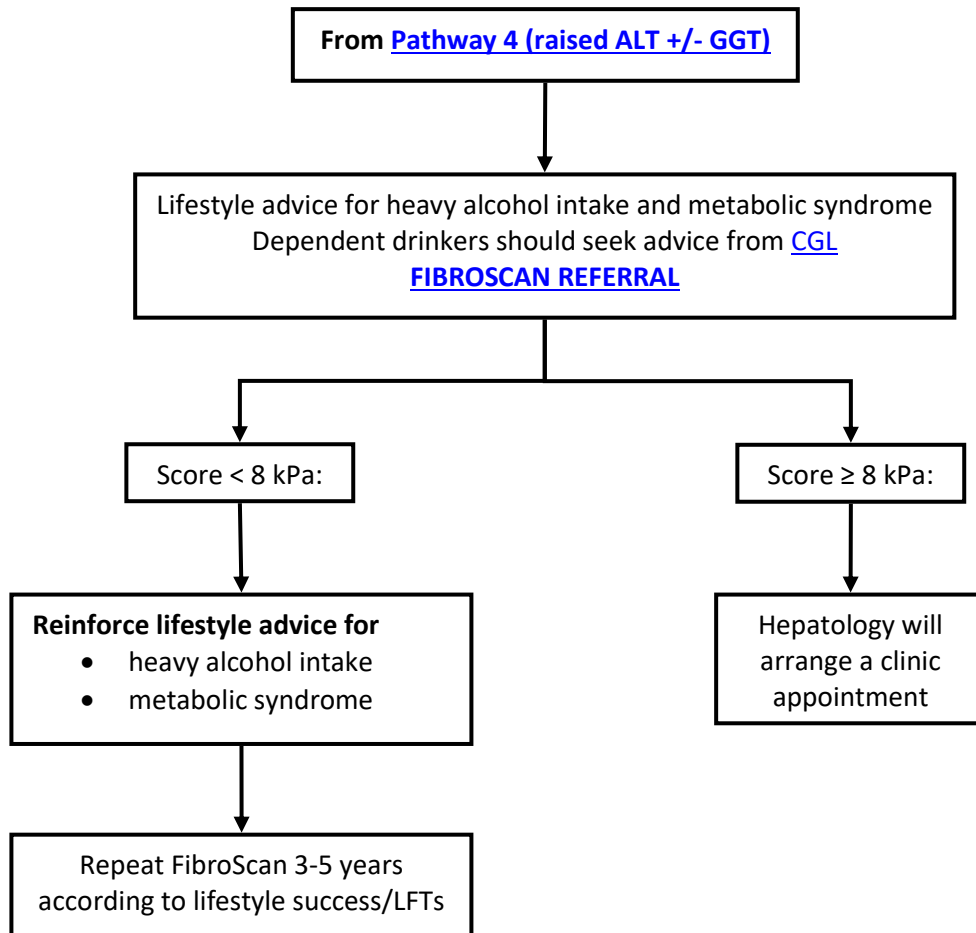
YES

[Alcohol related liver disease pathway](#)

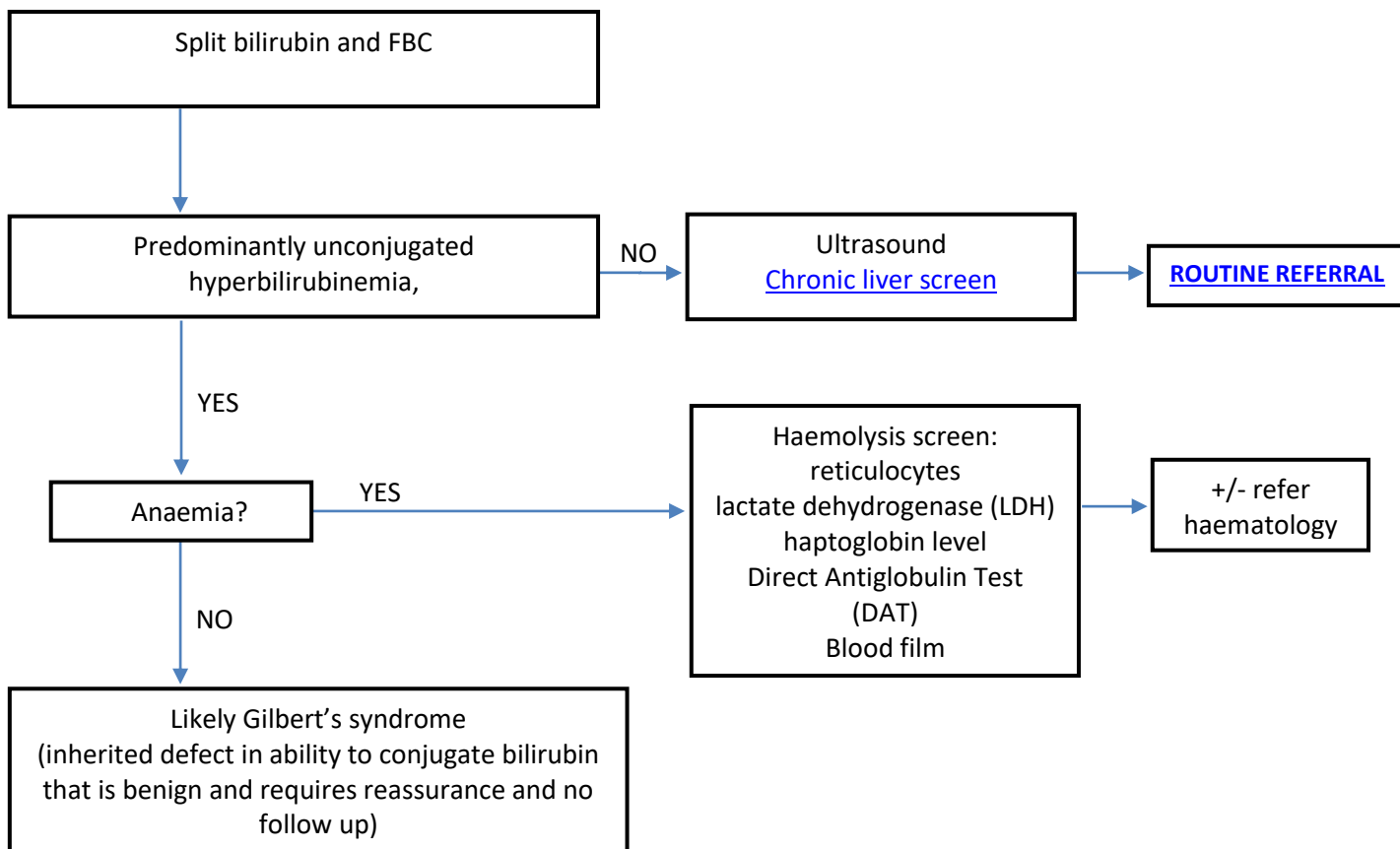
### 5 Non Alcoholic Fatty liver Disease (NAFLD) pathway



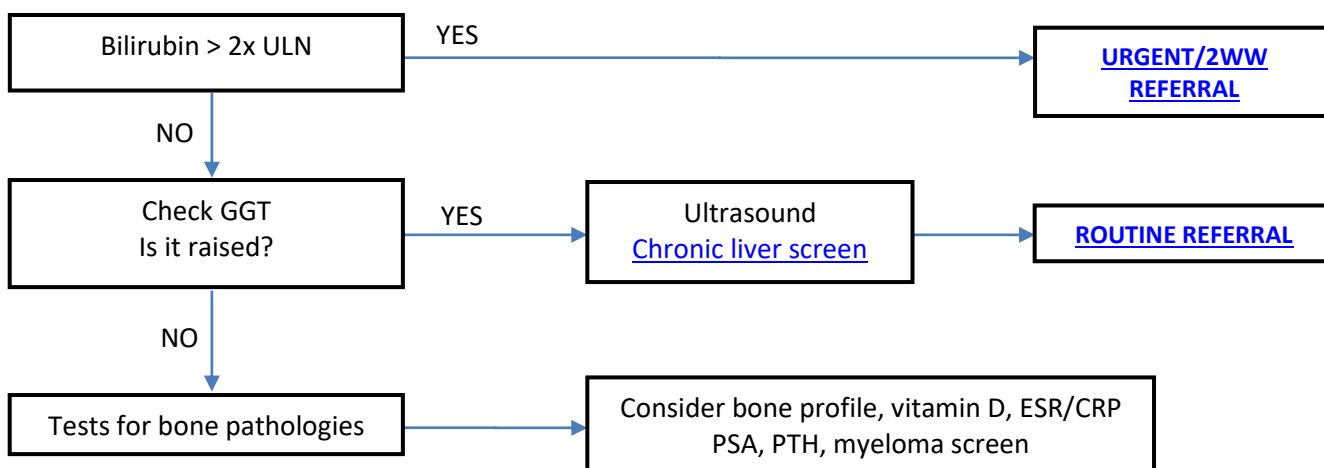
**6 Alcohol-related Liver Disease (ArLD) pathway**



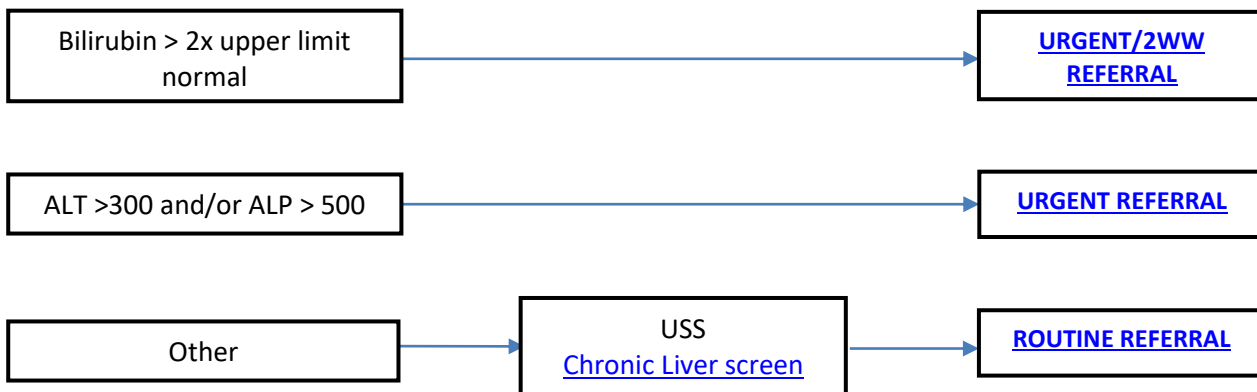
### 7 Isolated asymptomatic raised bilirubin



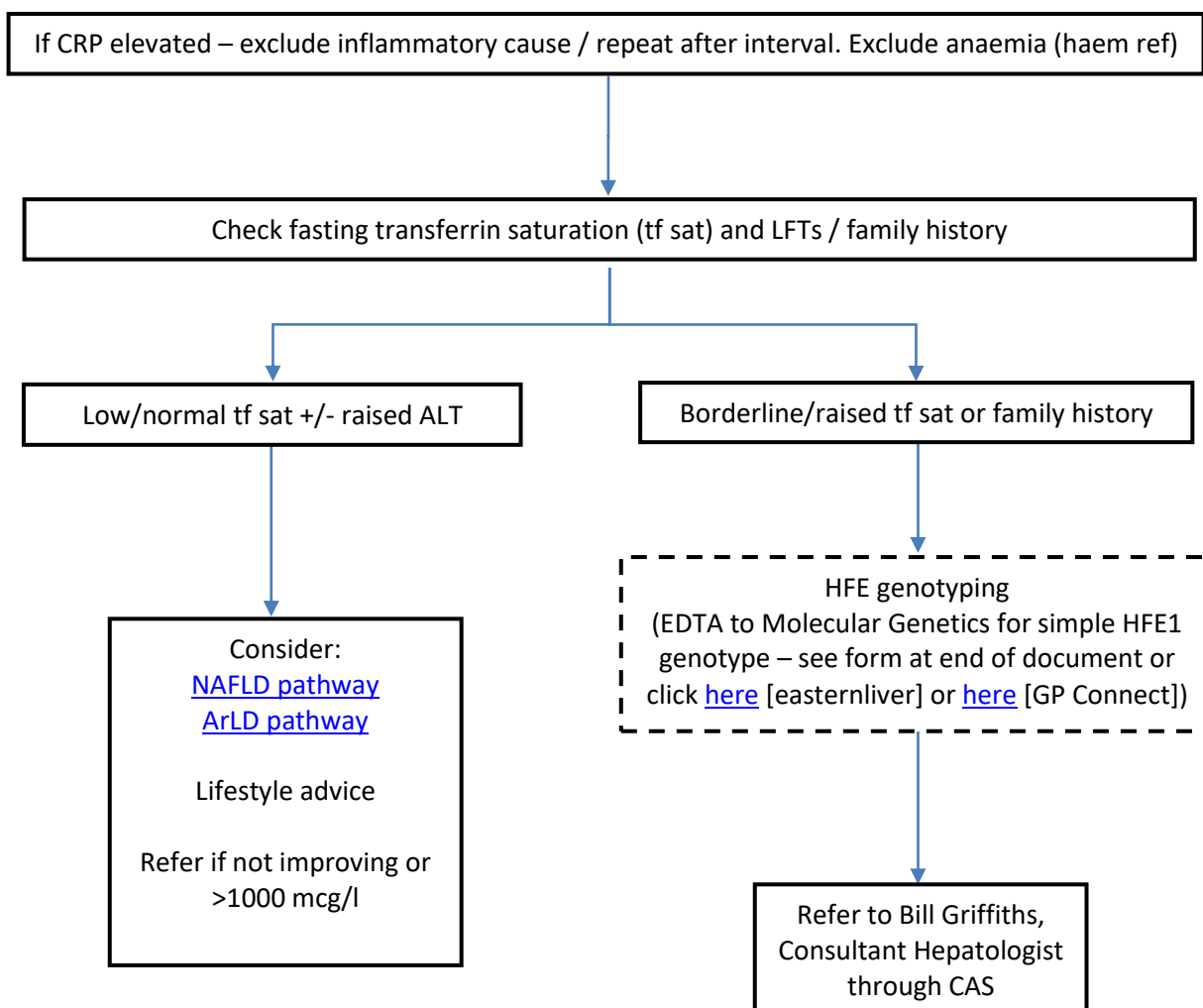
### 8 Raised ALP and normal ALT



### 9 Combination of LFT abnormalities

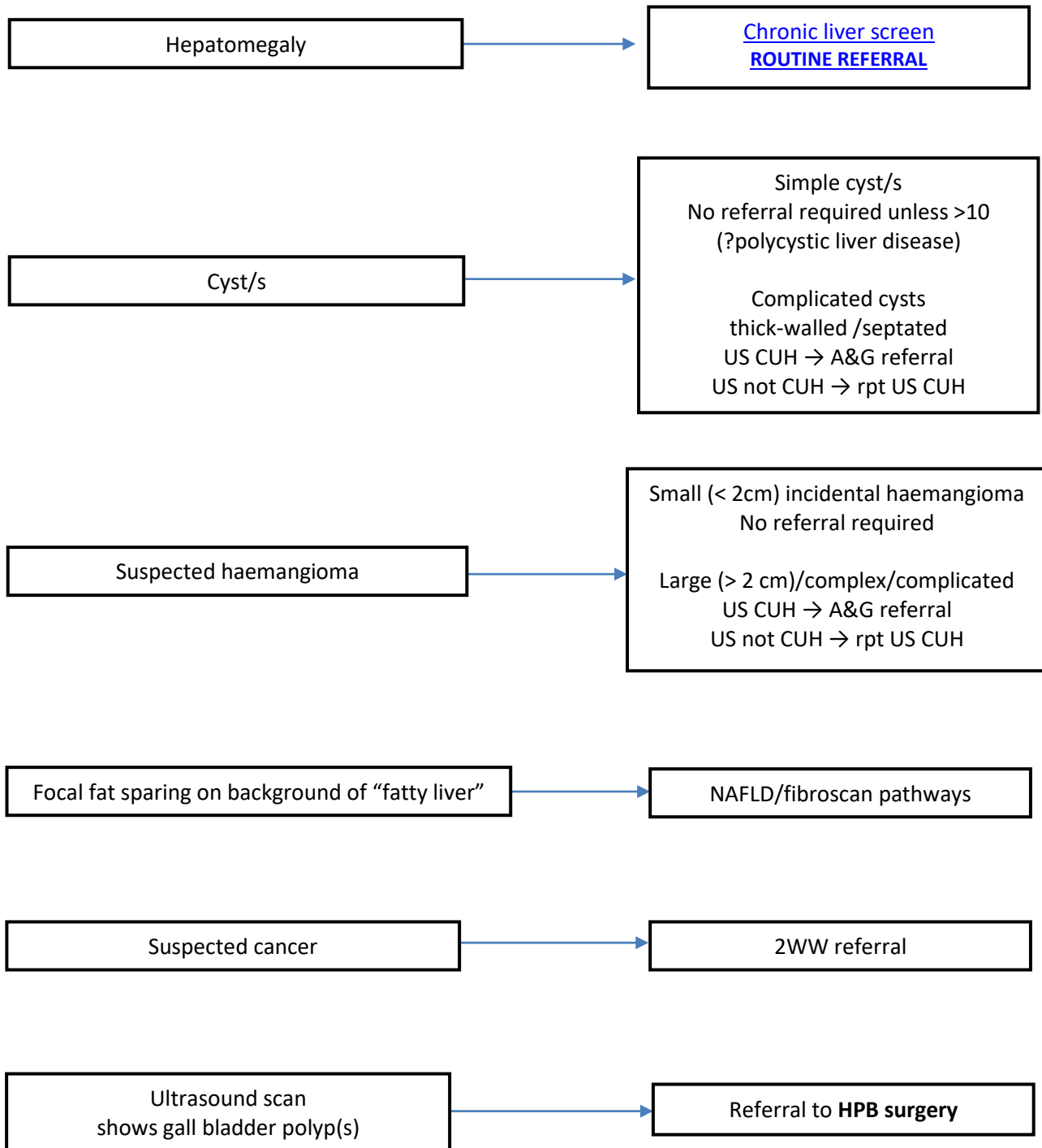


### 10 Raised ferritin

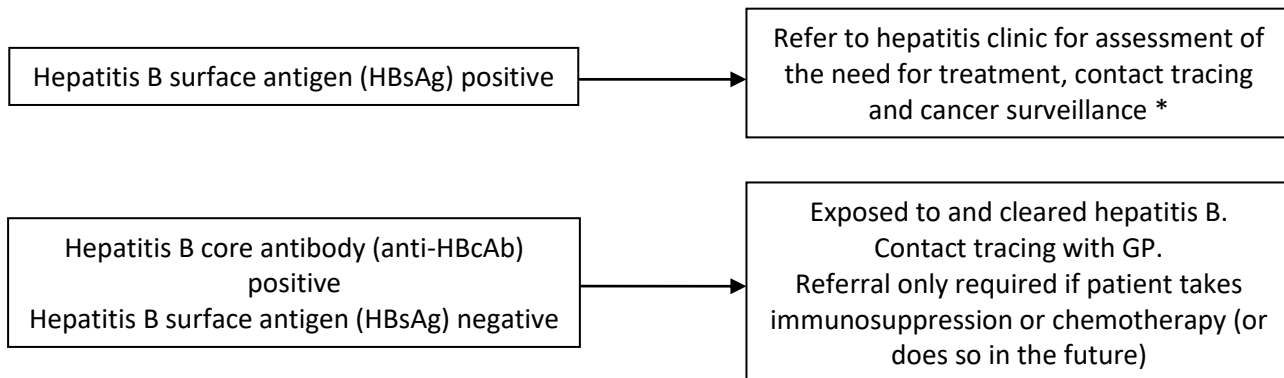




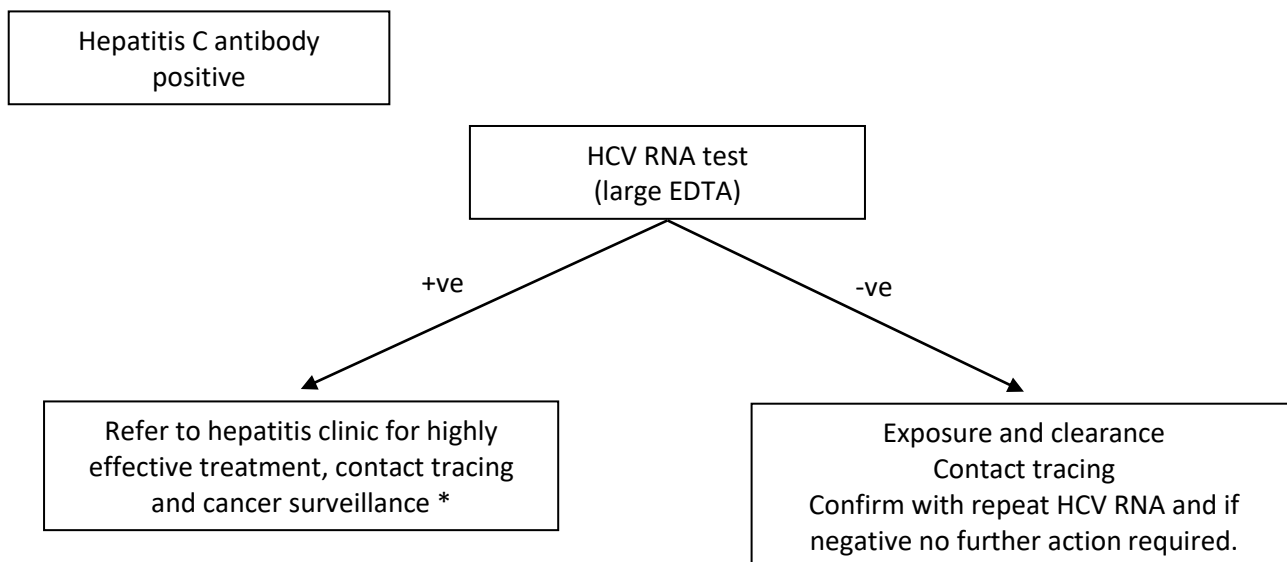
11 Abnormal liver imaging



**12 Hepatitis B**



**13 Hepatitis C**



**\* Pre-clinic workup:** (see T-Quest Groups)  
**For HBV and HCV:** Chronic liver screen plus HIV and hepatitis A immunity serology  
**For HCV:** HCV RNA and genotype (large EDTA tube)  
**For HBV:** HBV DNA (large EDTA tube)

## 14 Referral pathways

Urgency	Conditions	Proforma
<b>2WW REFERRAL</b>	Jaundice >40 yrs Suspected liver cancer	2WW proforma
<b>URGENT REFERRAL</b>	Jaundice <40 yrs Tense ascites ALT > 300 and/or ALP > 500 Suspected cirrhotic decompensation	Urgent CAS referral with hepatology proforma
<b>ROUTINE REFERRAL (please review guidance first)</b>	Abnormal LFTs Suspected chronic liver disease Raised ferritin Hep B or C new diagnosis FibroScan- include ultrasound scan	Routine CAS referral with hepatology proforma
	Benign abnormal liver imaging	<a href="#">Referral according to guidance</a>
<b>ADVICE &amp; GUIDANCE</b>		A&G CAS referral with hepatology proforma

- [Addenbrookes Hepatology Webpage](#)
- Further information: <https://easternliver.net>

### Equality and diversity statement

This document complies with the Cambridge University Hospitals NHS Foundation Trust service equality and diversity statement.

### Disclaimer

It is **your** responsibility to check against the electronic library that this printed out copy is the most recent issue of this document.

### Document management

Approved by:	Bill Griffiths		
Approval date:	19 May 2021		
JDTC approval date:	n/a		
Owning department:	Hepatology		
Author(s):	Will Gelson		
Pharmacist:	n/a		
File name:	Hepatology referral pathways for GPs v 15 May 2021		
Supersedes:	Version 14, November 2020		
Version number:	15		
Local reference:		Document ID:	100137

