

## 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 |

#### Common reasons for referral

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|-----|---|-----|
| 3.  | <a href="#">Raised ALT +/- GGT</a>                                | p3  |
| 4.  | <a href="#">Non alcoholic fatty liver disease (NAFLD) pathway</a> | p4  |
| 5.  | <a href="#">Alcohol-related liver disease (ArLD) pathway</a>      | p5  |
| 6.  | <a href="#">Isolated asymptomatic raised bilirubin</a>            | p6  |
| 7.  | <a href="#">Raised ALP and normal ALT</a>                         | p6  |
| 8.  | <a href="#">Combination of LFT abnormalities</a>                  | p7  |
| 9.  | <a href="#">Raised ferritin</a>                                   | p7  |
| 10. | <a href="#">Abnormal liver imaging</a>                            | p8  |
| 11. | <a href="#">Hepatitis B</a>                                       | p9  |
| 12. | <a href="#">Hepatitis C</a>                                       | p9  |
| 13. | <a href="#">Referral pathways</a>                                 | p10 |

# Hepatology

Division C

## 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 Bilirubin with abnormal LFT	<21	Gilberts Haemolysis  Liver or biliary pathology	<a href="#">Isolated asymptomatic raised bilirubin</a>  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

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

## Division C

### 3 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

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

NO → [Routine referral](#)

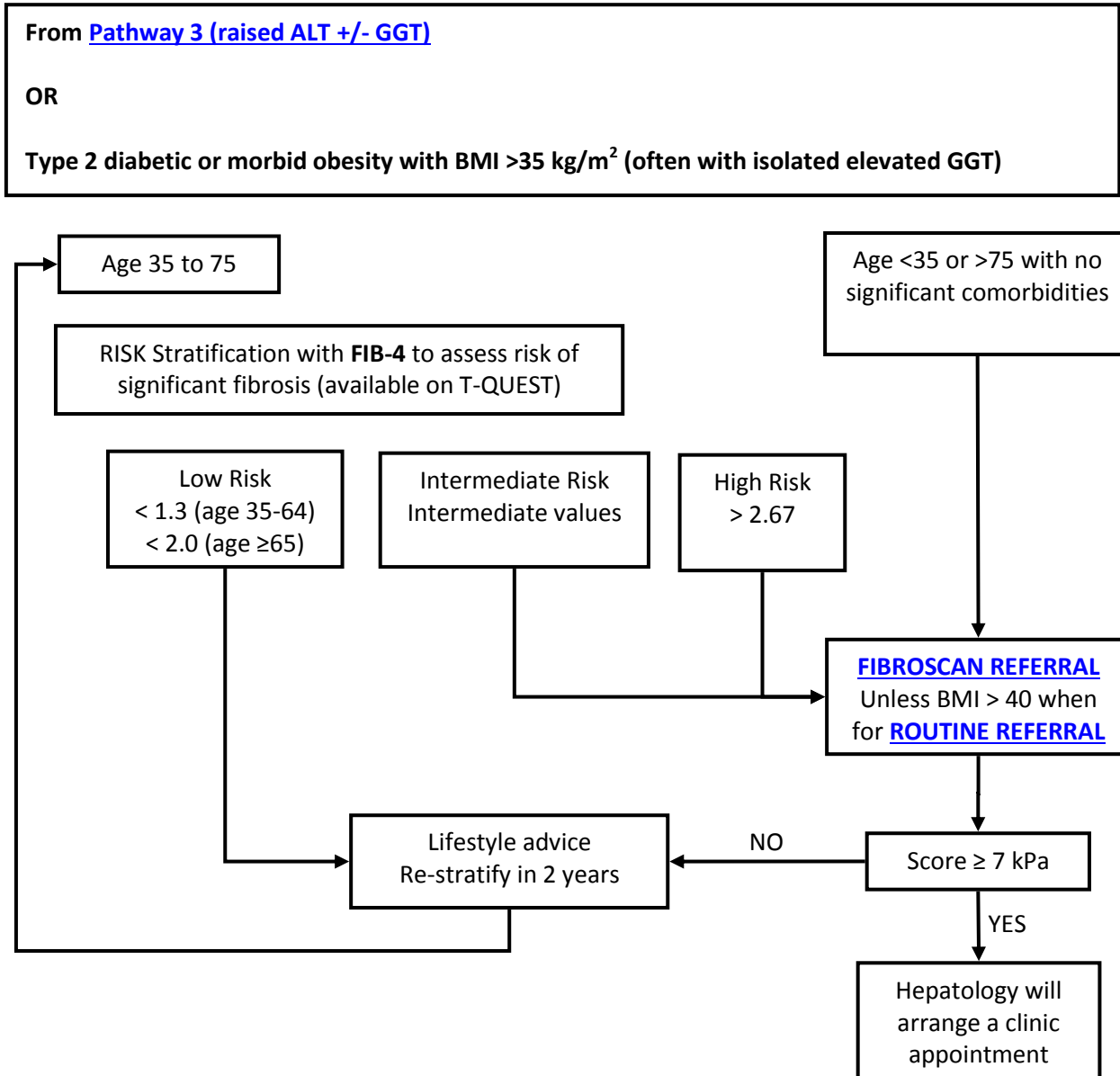
Reinforce lifestyle advice/monitor

YES → > 14 units alcohol per week

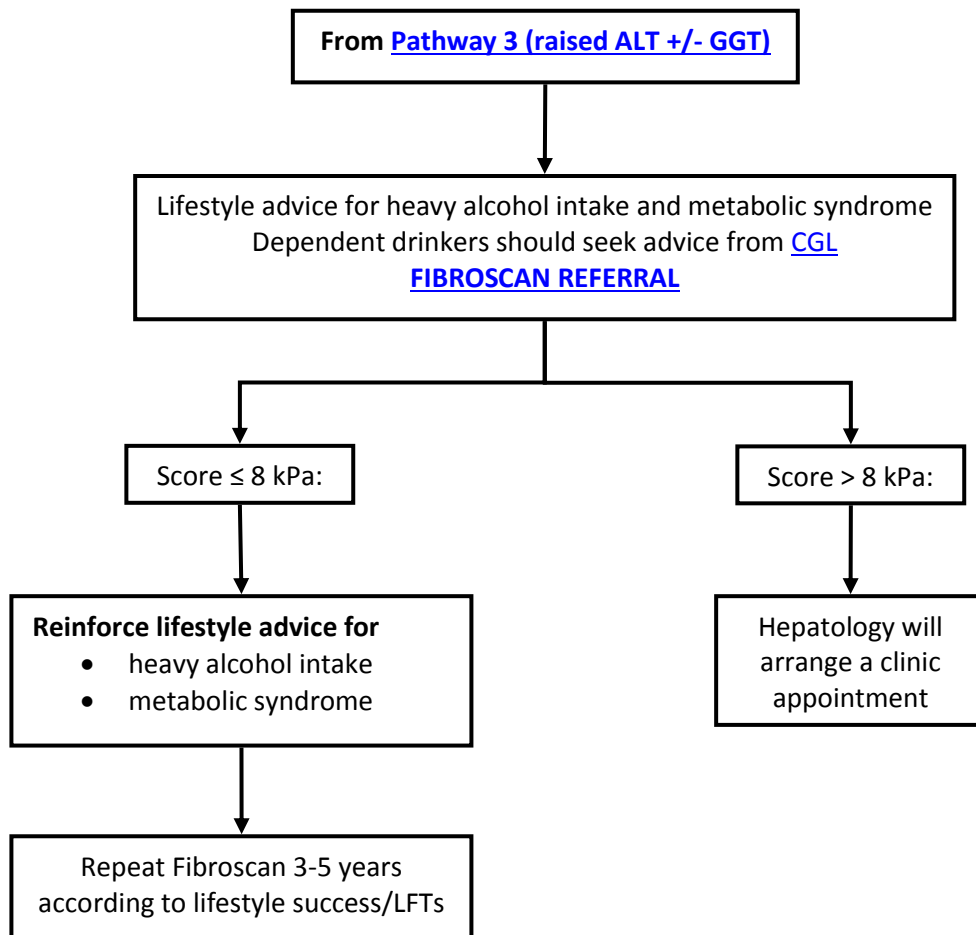
NO → [NAFLD pathway](#)

YES → [Alcohol related liver disease pathway](#)

4 Non Alcoholic Fatty liver Disease (NAFLD) pathway



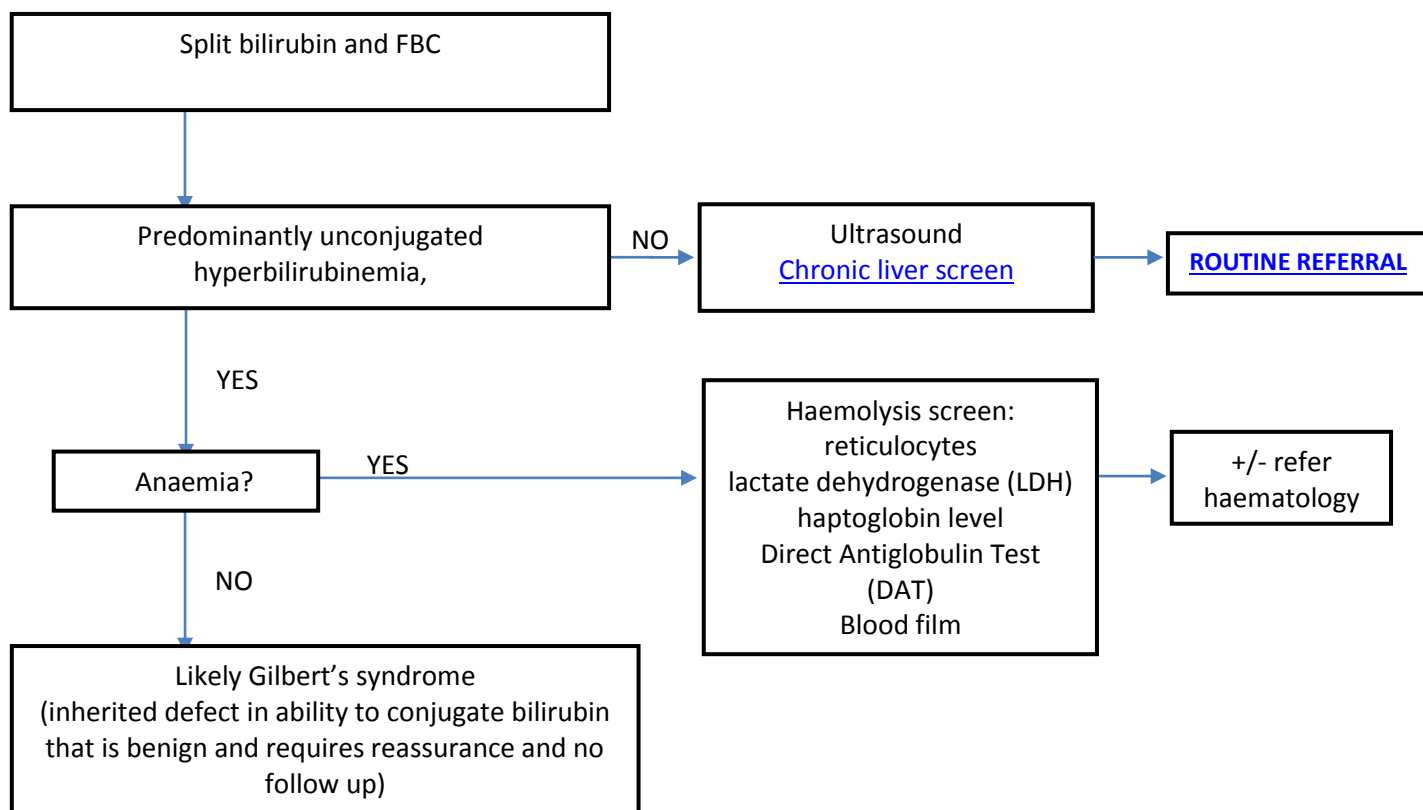
### 5 Alcohol-related Liver Disease (ArLD) pathway



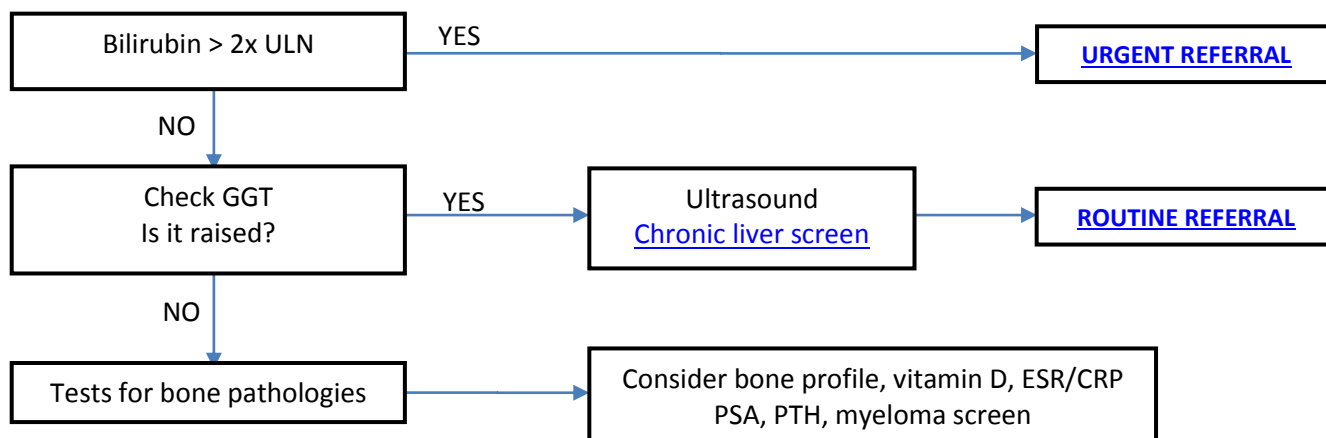
# Hepatology

Division C

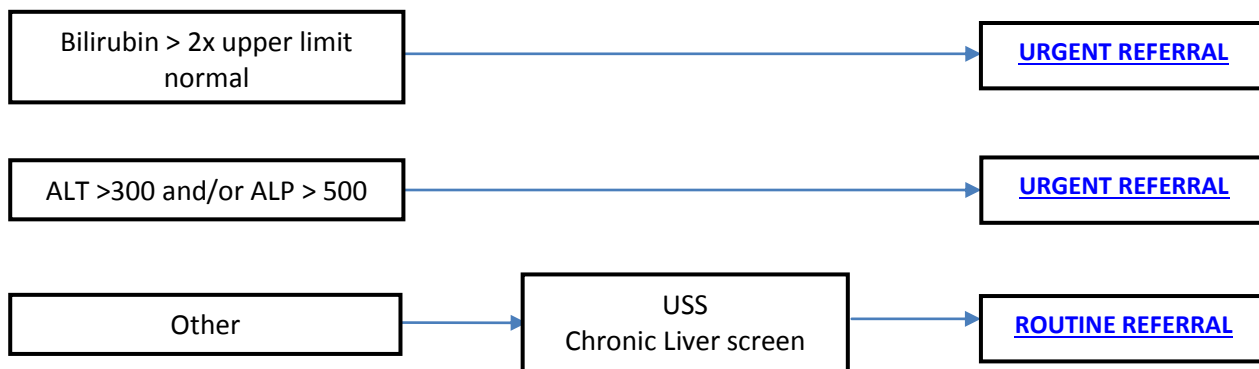
## 6 Isolated asymptomatic raised bilirubin



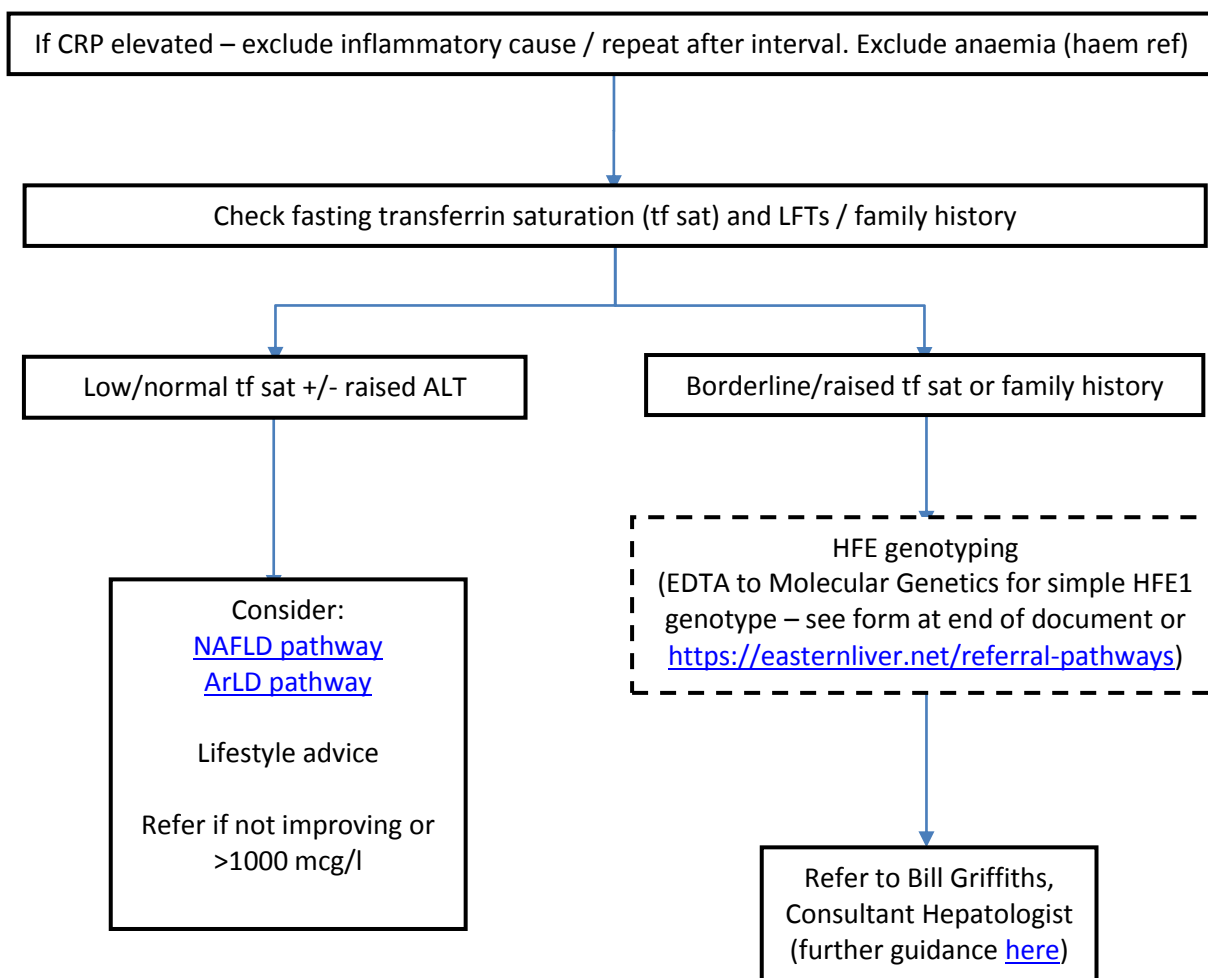
## 7 Raised ALP and normal ALT



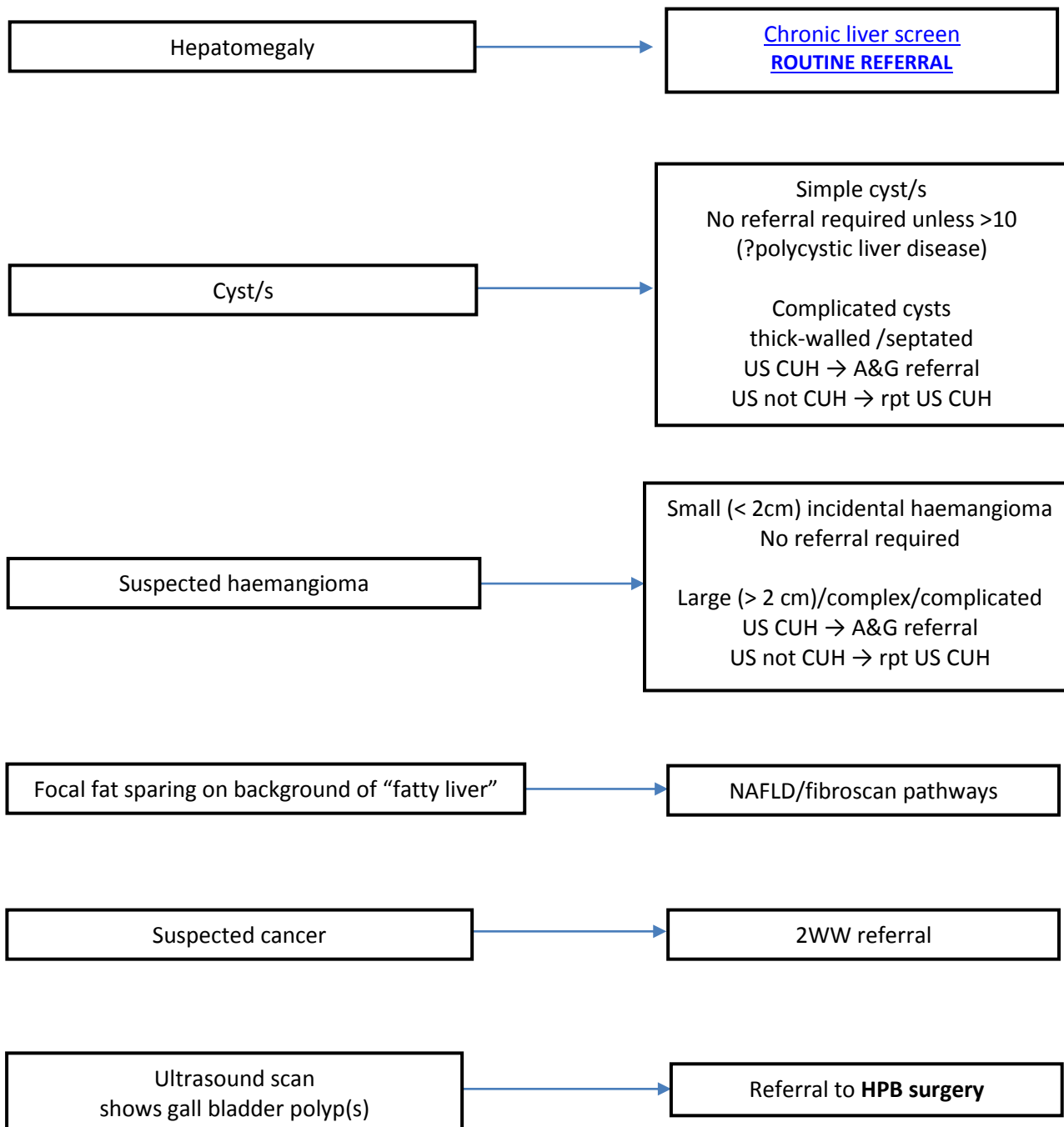
## 8 Combination of LFT abnormalities



## 9 Raised ferritin



## 10 Abnormal liver imaging

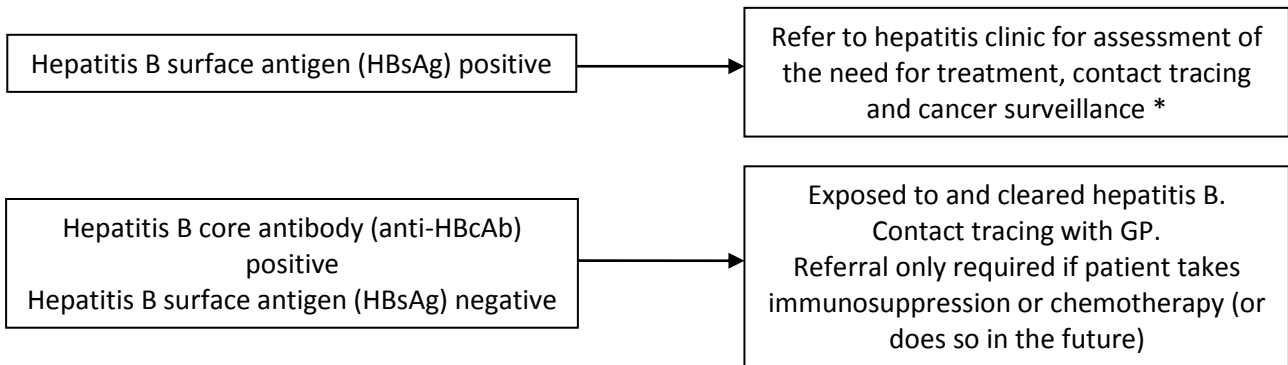




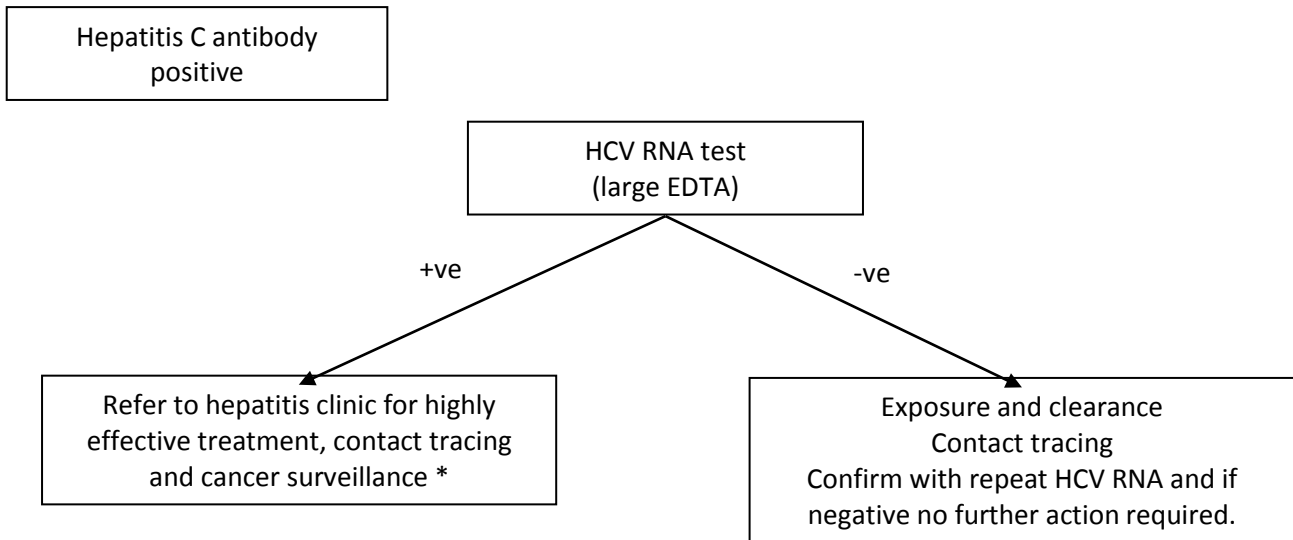
# Hepatology

Division C

## 11 Hepatitis B



## 12 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)

# Hepatology

Division C

## 13 Referral pathways

URGENT REFERRAL	
Jaundice <40 yrs, tense ascites, ALT > 300 and/or ALP > 500, Suspected cirrhotic decompensation <b>Jaundice &gt;40 yrs, suspected liver cancer</b>	E-referral to general hepatology clinic (non-viral) and mark URGENT  <b>2WW pathway</b>

ROUTINE REFERRAL – please review guidance	
Abnormal LFTs Suspected chronic liver disease Raised ferritin	E-referral to general hepatology clinic (non-viral)
Hep B or C new diagnosis	E-referral to <b>viral hepatitis</b> clinic
Benign abnormal liver imaging	<a href="#">Referral according to guidance</a>
Fibroscan	E-referral via specific proforma

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

### Equality and diversity statement

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### Document management

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**REGIONAL GENETICS LABORATORIES TEST REQUEST**

All tests requested will be reviewed against departmental criteria. If testing is not arranged, the samples will be stored and the referring clinicians informed. After testing, samples may be used anonymously for the development of new tests and for quality monitoring.

<b>Surname *</b>	<b>Date of Birth *</b>	<b>Age at Presentation</b>	<b>Venous blood samples: Adult: 5ml; Children: 1-5ml</b> <input checked="" type="checkbox"/> DNA test: EDTA tube
<b>First Names *</b>	<b>Sex *</b>		
<b>NHS Number *</b>	<b>Ethnicity</b>		<input type="checkbox"/> Microarray: Lithium Heparin and EDTA tubes
<b>Hospital Number * (If known)</b>	<b>Family Number</b>		<b>Other samples:</b>
<b>Home Address *</b>			<input type="checkbox"/> Cord/Placenta/insertion site/skin
<b>Postcode</b>			<input type="checkbox"/> Products of Conception (whole specimen in sterile pot)
<b>Patient email address</b>			<input type="checkbox"/> Amniotic Fluid
<b>GP Name (Printed) *</b>			<input type="checkbox"/> CVS
<b>GP Address</b>			<input type="checkbox"/> Other (please contact the laboratory)
<b>Postcode</b>			<b>Sample obtained by (Signature).....</b>
<b>GP email address (nhs.net preferred)</b>			<b>Printed Name .....</b>
<b>Consultant (PRINT)</b>			<b>Date.....</b>
<b>Hospital</b>			<b>Billing to:</b>
<b>Speciality/Dept/Ward</b>			<b>Private Patient: <input type="checkbox"/></b>
<b>Contact telephone number</b>			<b>In Submitting this sample, the clinician confirms * that consent has been obtained for:</b>
<b>Email address (nhs.net preferred)</b>			a) Testing and Storage <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Results to (if different from above) inc email address (nhs.net preferred)</b>			b) The use of this sample and the information generated from it to be shared with members of the patient's family and their health professionals (if appropriate) <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Clinical Synopsis</b> Please provide clinical synopsis and pedigree with relevant family history to help the team generate a laboratory report *			
<b>Tests Required:</b>  HFE1 p.(Cys282Tyr) and p.(His63Asp) genotypes. Please send EDTA tube to Regional Genetics Laboratory (See address overleaf).  <b>Storage Only (no testing at this time): <input type="checkbox"/></b>			
<b>Gestation in weeks (If pregnant):</b>			
<b>Partners Name and DOB:</b>			
<b>Index Case (if not this patient):</b>			

The Laboratory does NOT report results via the telephone

**All samples MUST be labelled with FULL name, date of birth and NHS number  
Processing of samples will be delayed if information is incomplete**

Send samples at room temperature by 1<sup>st</sup> class post or courier to:  
**East Anglian Medical Genetics Service, Genetics Laboratories, Box 143  
ATC Level 6, Addenbrooke's Hospital, Hills Road, Cambridge, CB2 0QQ**

Laboratory opening hours: 8.30am - 5.30pm Monday to Friday  
Telephone: 01223 348866 Fax: 01223 348712  
E-mail: geneticslaboratories@nhs.net

**For further information about sample requirements and tests available see: [www.cuh.org.uk/genetics-labs](http://www.cuh.org.uk/genetics-labs)**

**Indication for Genetic Testing:**

- 1. To establish a diagnosis
  - 2. Guide clinical management
  - 3. Information regarding prognosis/recurrence risk
  - 4. Predictive testing
  - 5. PGD/Prenatal diagnosis
- Has the test been discussed at a clinical meeting?  
If so, please provide information on clinical meeting  
(i.e.: Neurology meeting, cancer meeting)
- Is the test urgent?  
(i.e. pregnant or will alter management)
- Please confirm that your department will fund the test\*
- Has the test been approved by patient's consultant

\* Please see UKGTN website (<http://ukgtn.nhs.uk/>) for approximate cost or contact the duty scientist (tel: 01223 348866)

**CUH Laboratory Use Only:**

<b>Receipt date and time:</b>	<b>Other Information:</b>
<b>Tube type:</b> <b>Volume:</b>	
<b>No of tubes:</b>	
<b>Shire Only</b> <input type="checkbox"/>	
<b>Patient Demographics Checked:</b>	
<b>Send out approved by:..... Signature:.....</b>	
<b>Date:.....</b>	