Hepatology referral pathways for GPs

1 Scope

For use within hepatology

Contents

2 Liver blood tests and what they mean

Test	Normal range	What does it mean?	Actions if abnormal
ALT	7-40	Hepatocellular injury	Raised ALT
Bilirubin isolated raised Bilirubin with abnormal LFT	<21	Gilberts Haemolysis Liver or biliary pathology	Isolated asymptomatic raised bilirubin Refer (routine vs urgent acc to values)
Alkaline Phosphatase (ALP)	30-130	Biliary disease (if raised GGT) Bone disease Pregnancy (placenta) Acute phase response	Raised ALP and normal ALT
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	Raised ferritin
Reduced platelets		Can be a feature of cirrhosis with portal hypertension	Refer if could be liver related

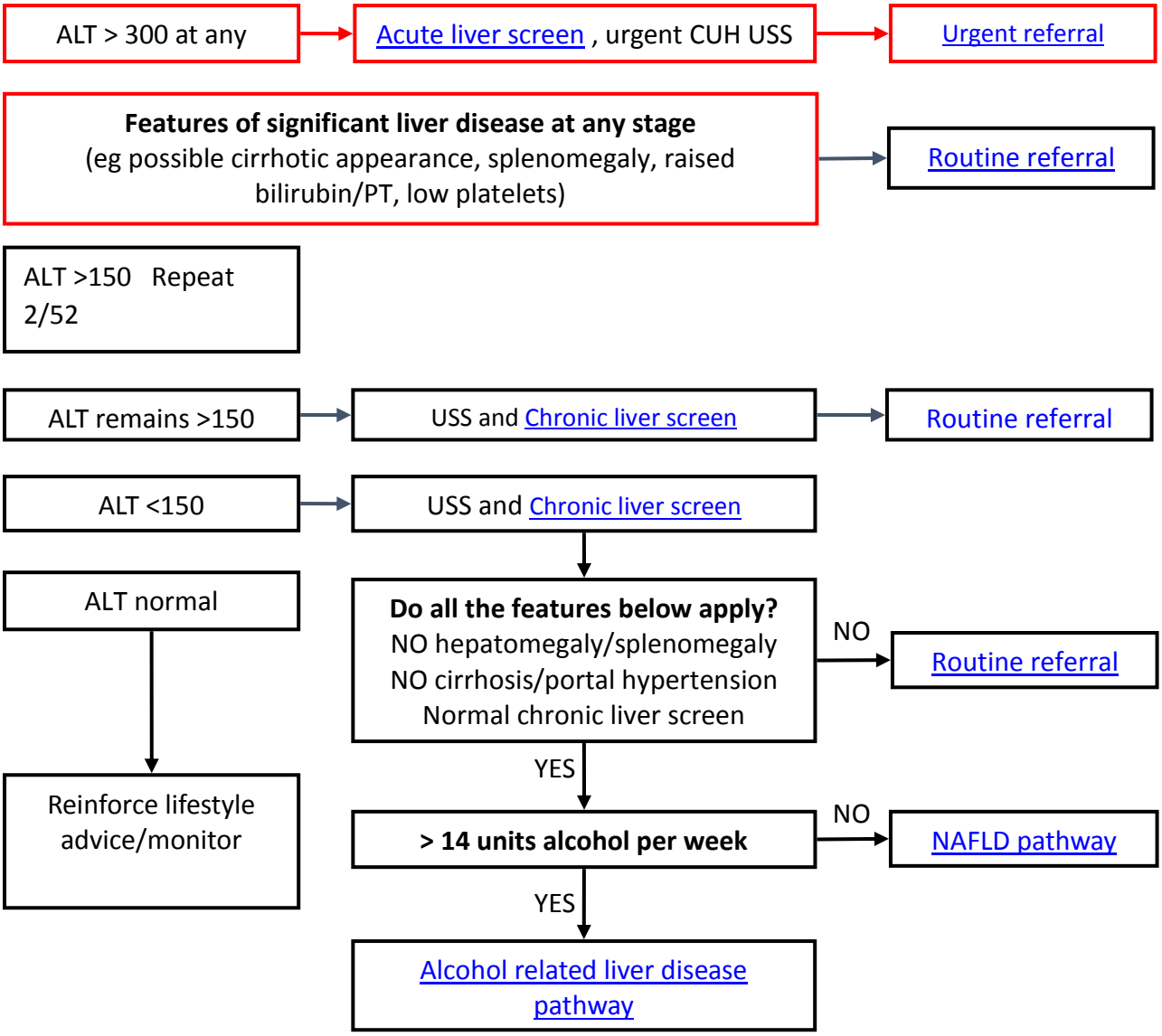
Chronic liver screen	**Acute liver screen**
U/E, LFT, FBC, PT, FIB-4 if suspected NAFLD Hepatitis B & C serology Liver autoantibodies Serum immunoglobulins Ferritin Alpha-1 antitrypsin level Random glucose, HBA1c, lipids if ?NAFLD If under 50 caeruloplasmin	LFT, FBC, PT Hepatitis A, hepatitis B and hepatitis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

Hepatitis B screen	**Hepatitis C screen**
Chronic liver screen plus: HBV DNA Hepatitis A IgG HIV screen	Chronic liver screen plus: HCV RNA and genotype Hepatitis A IgG HIV screen

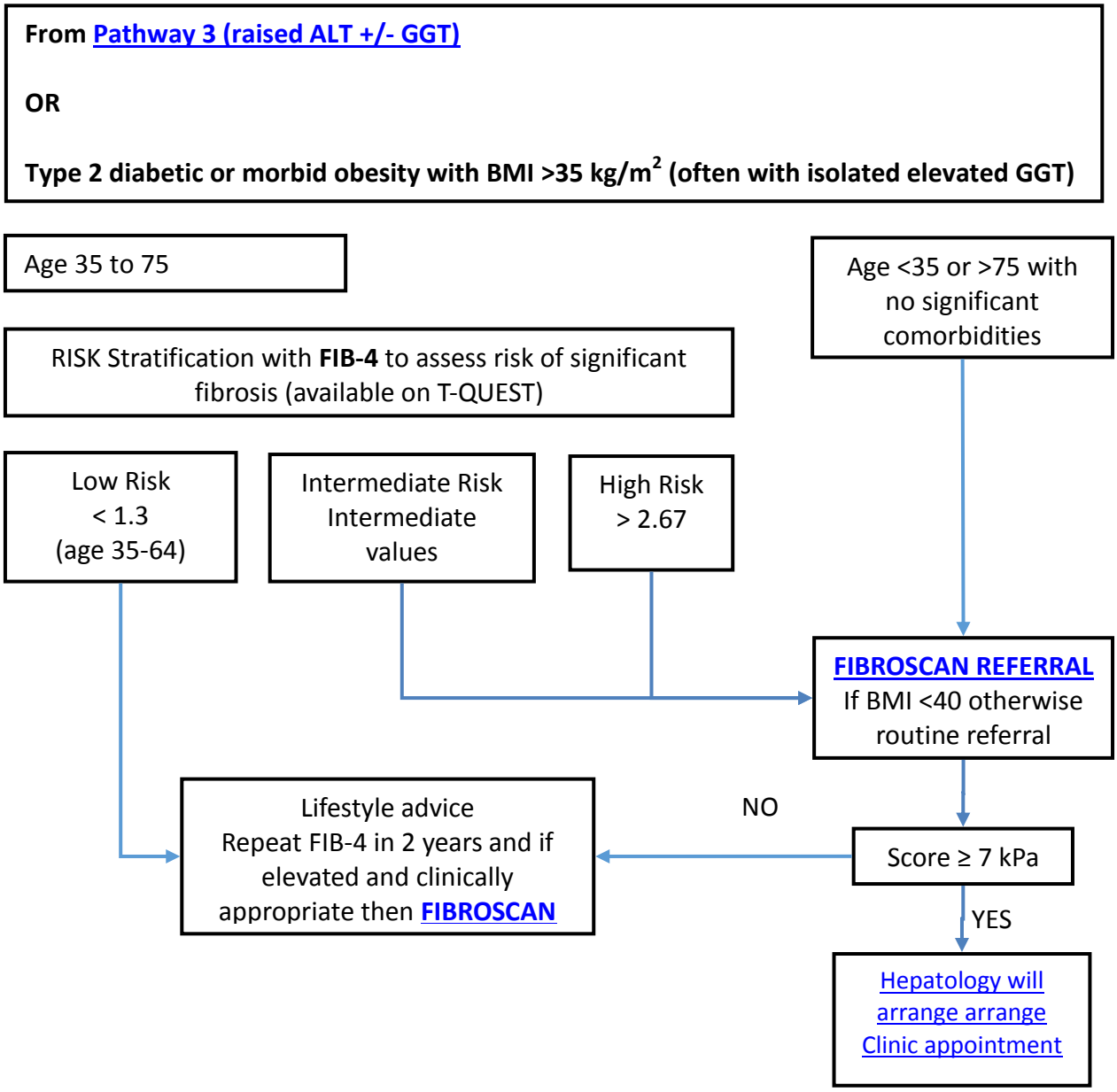
3 Isolated raised ALT (+/- GGT)

THINK about and address risk factors

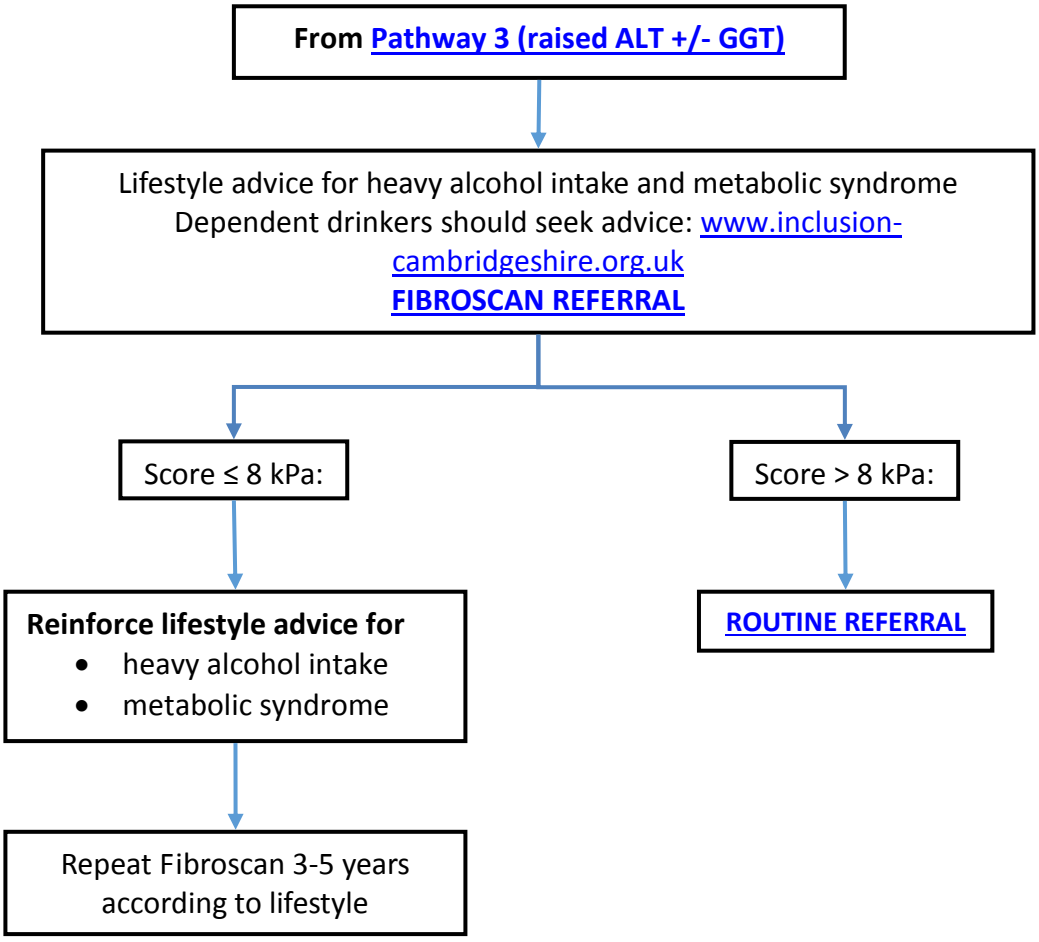
- Metabolic syndrome
- Diabetes
- Alcohol
- Risks for viral hepatitis (ethnicity, IV drug use)
- Medication
- Vigorous exercise (check CK)



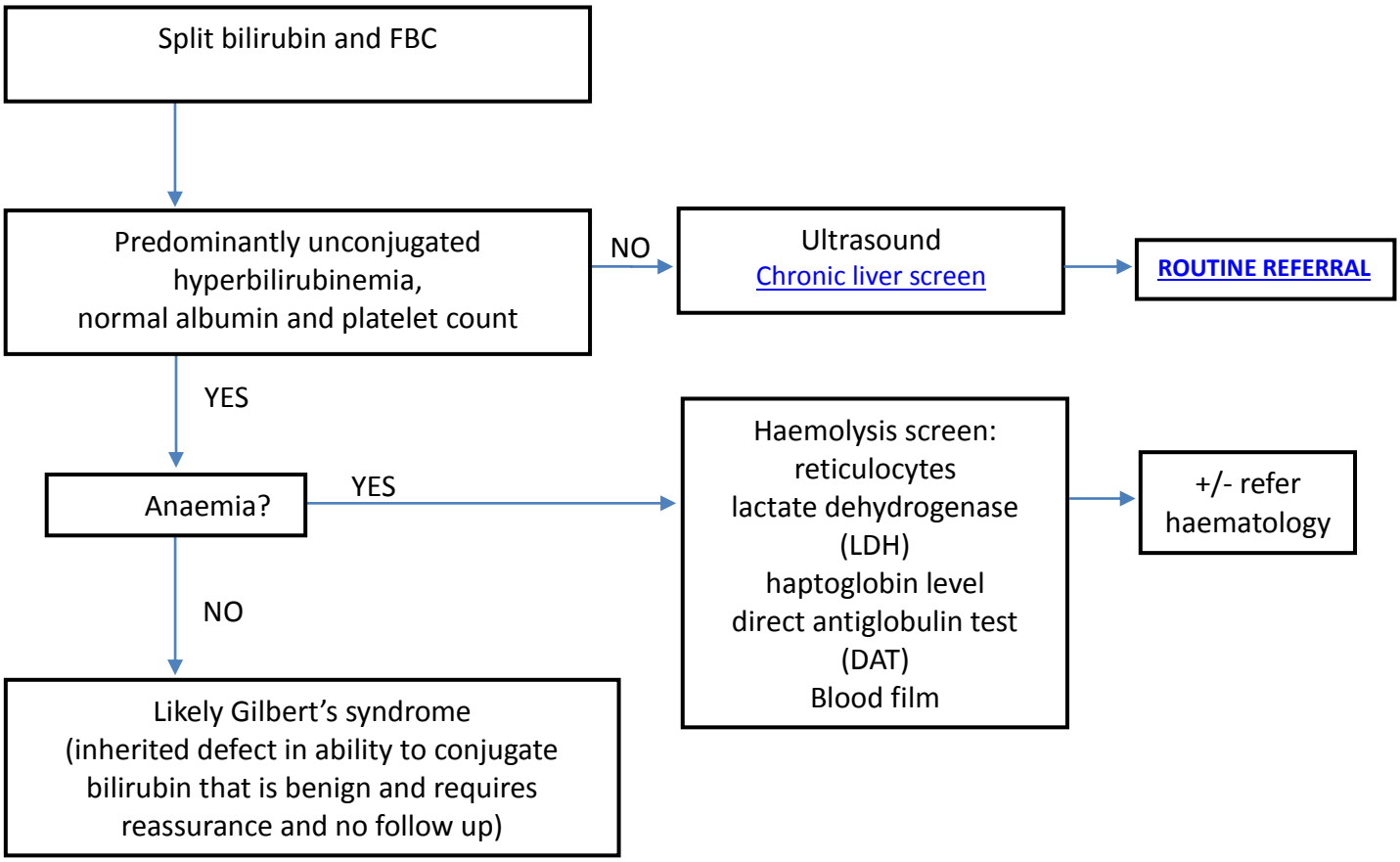
4 Non alcoholic fatty liver disease (NAFLD) pathway



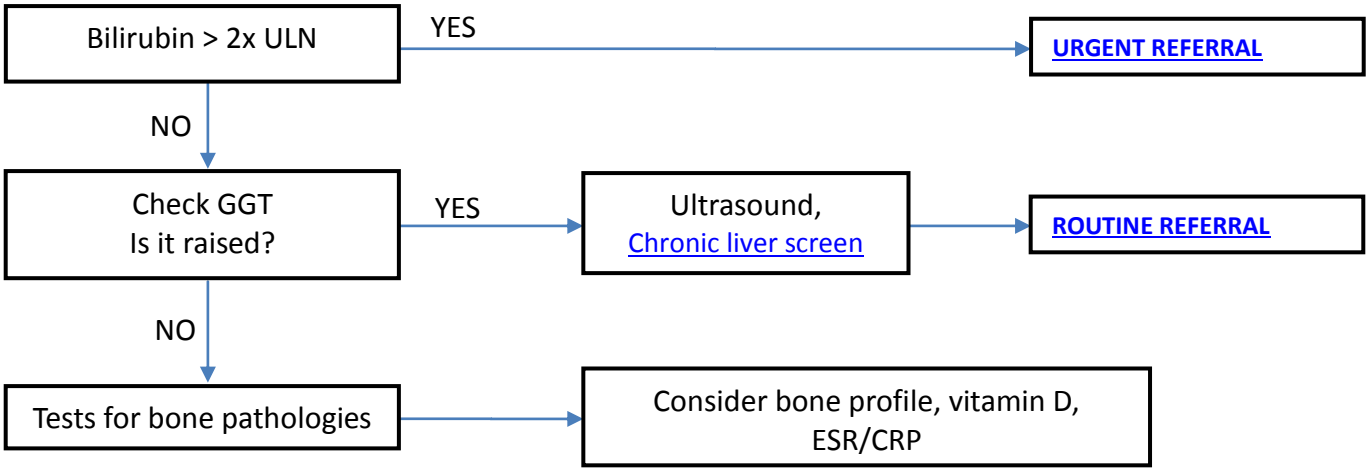
5 Alcohol-related liver disease (ArLD) pathway



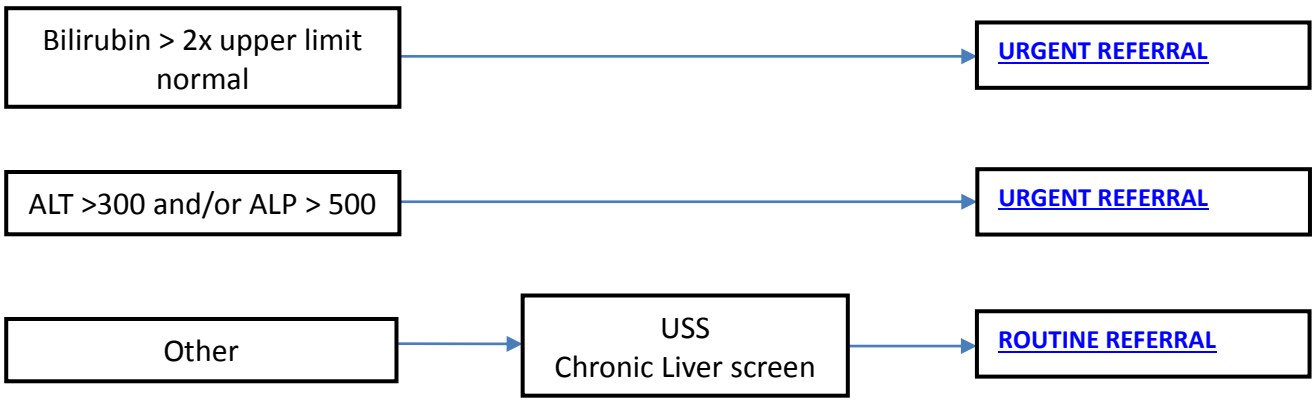
6 Isolated asymptomatic raised bilirubin



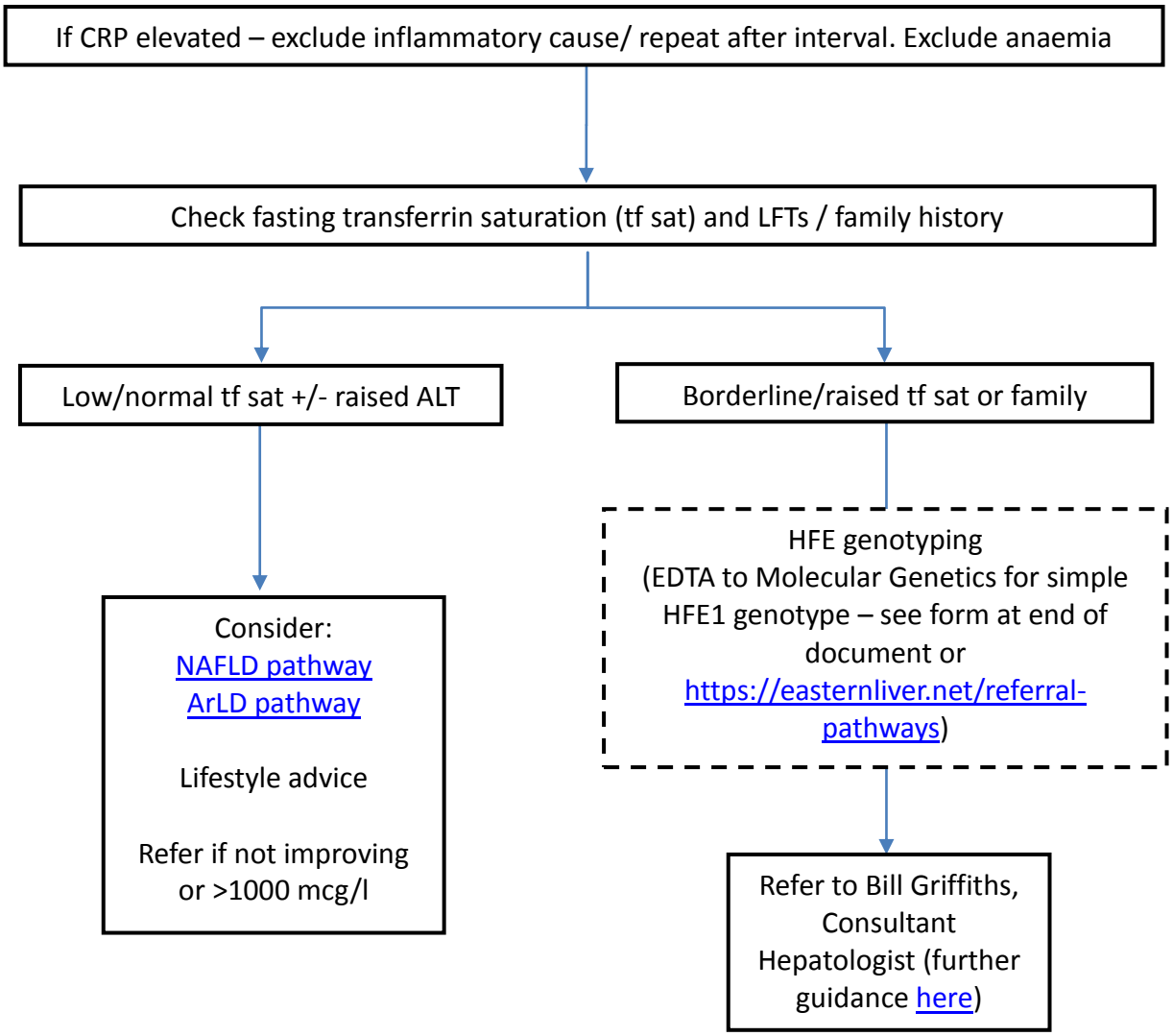
7 Raised ALP and normal ALT



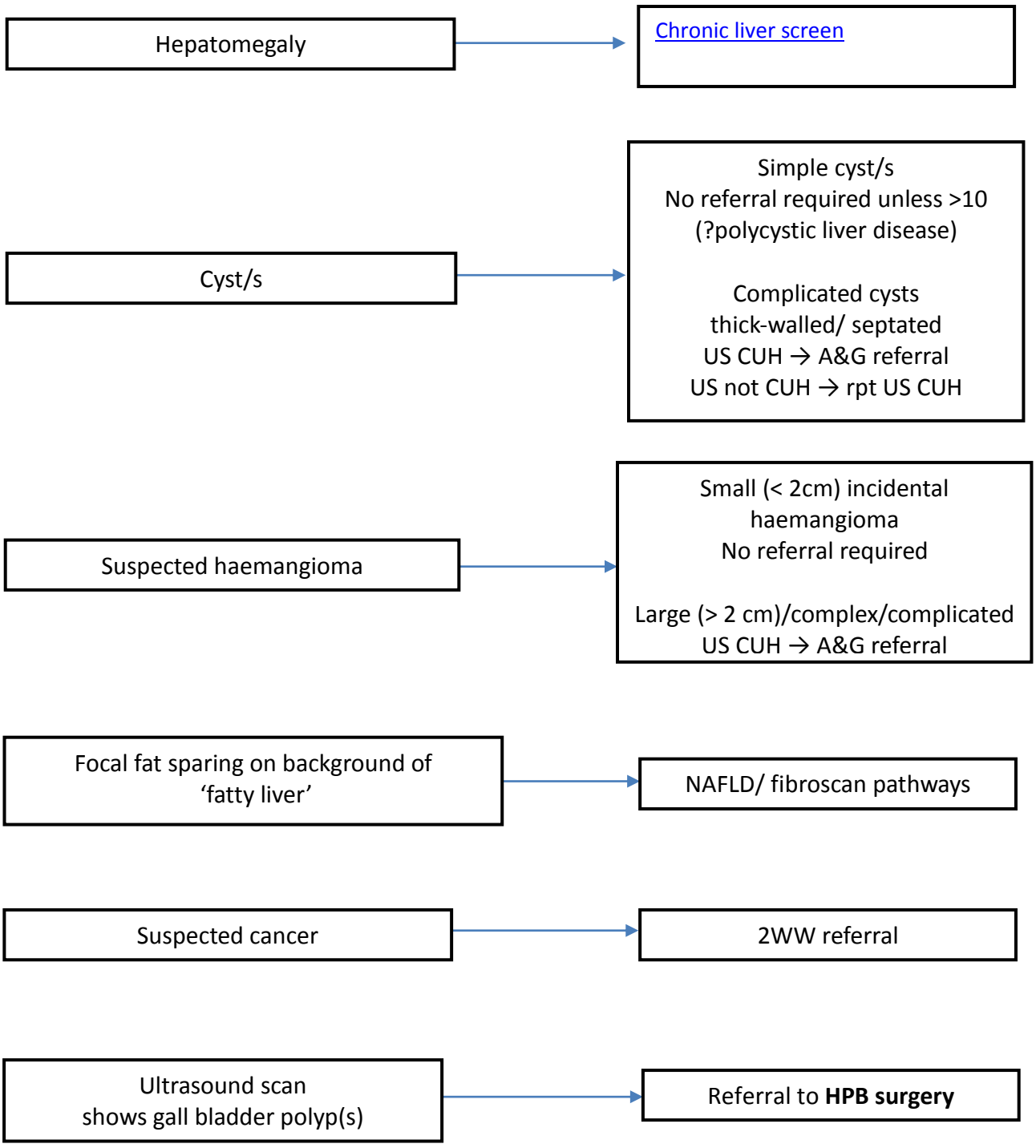
8 Combination of LFT abnormalities



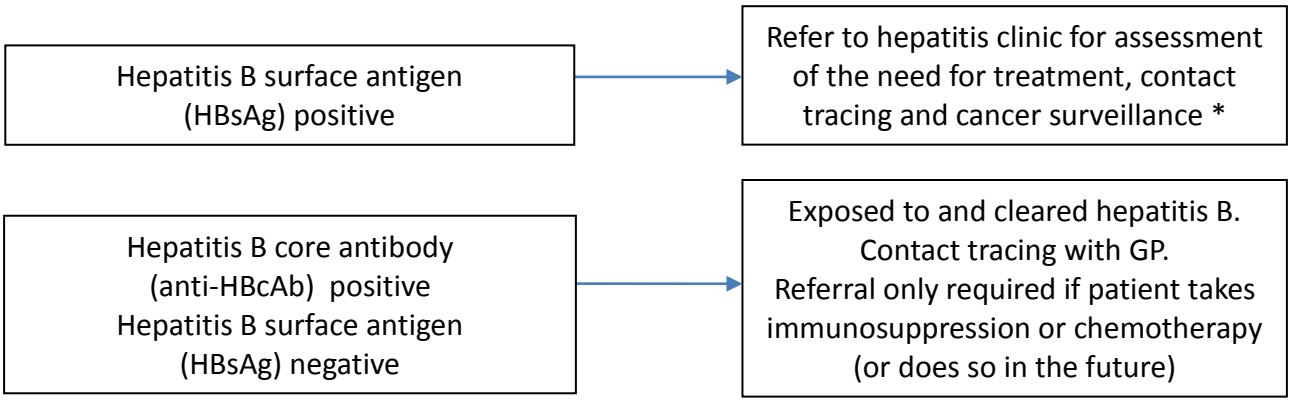
9 Raised ferritin



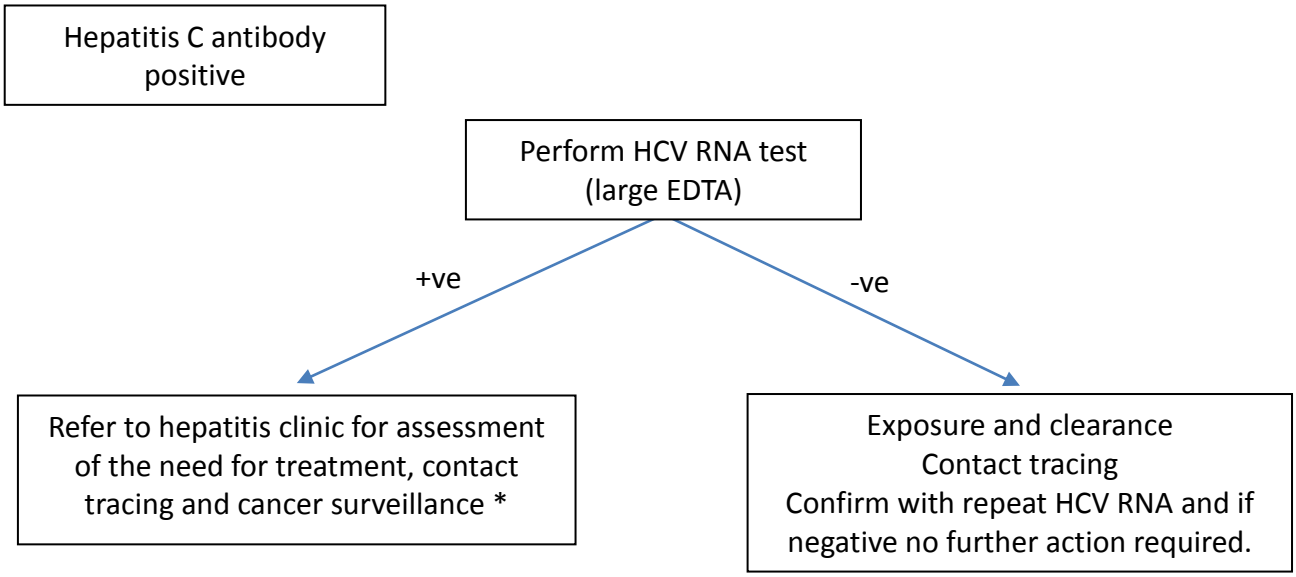
10 Abnormal liver imaging



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)

13 Referral pathways

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

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 ***viral hepatitis*** clinic
Benign abnormal liver imaging	Referral according to guidance
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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* Information required prior to sending to Genetics

Cambridge University Hospitals NHS
NHS Foundation Trust

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.

Surname *	**Date of Birth** *	**Age at Presentation**
First Names *		**Sex** *
NHS Number *		**Ethnicity**
Hospital Number * (If known)	**Family Number**	

Home Address *

Postcode

Patient email address

GP Name (Printed) *

GP Address

Postcode

GP email address (nhs.net preferred)

Consultant (PRINT)	**Hospital**

Speciality/Dept/Ward

Contact telephone number

Email address (nhs.net preferred)

Results to (if different from above) **inc email address (nhs.net preferred)**

Venous blood samples: Adult: 5ml; Children: 1-5ml

☑ DNA test: EDTA tube

☐ Chromosomes: Lithium Heparin tube

☐ Microarray: Lithium Heparin and EDTA tubes

Other samples:

☐ Cord/Placenta/insertion site/skin

☐ Products of Conception (whole specimen in sterile pot)

☐ Amniotic Fluid

☐ CVS

☐ Other (please contact the laboratory)

Sample obtained by (Signature)……

Printed Name ……..

Date…….

Billing to:

Private Patient: ☐

In Submitting this sample, the clinician confirms that consent has been obtained for: *

a) Testing and Storage
☐ Yes ☐No

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)
☐Yes ☐No

Clinical Synopsis

Please provide clinical synopsis and pedigree with relevant family history to help the team generate a laboratory report *

Tests Required:

HFE1 p.(Cys282Tyr) and p.(His63Asp) genotypes.

Please send EDTA tube to Regional Genetics Laboratory (See address overleaf).

Storage Only (no testing at this time): ☐

Gestation in weeks (If pregnant):

Partners Name and DOB:

Index Case (if not this patient):

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 1st 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

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:

Receipt date and time: **Tube type:** **Volume:** **No of tubes:** **Shire Only** ☐ **Patient Demographics Checked:**	**Other Information:**
Send out approved by:…….. Signature:…… **Date:……**	