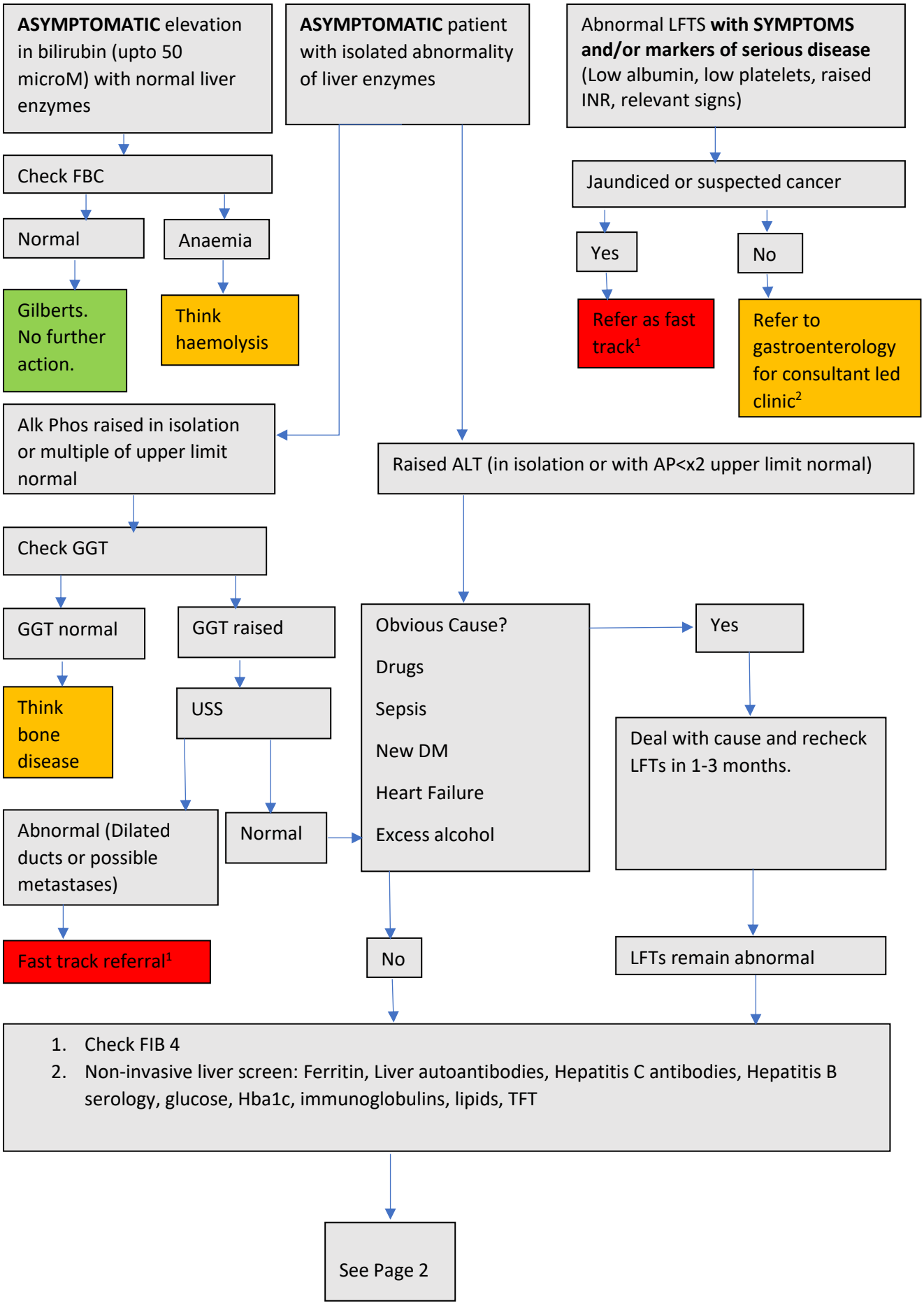
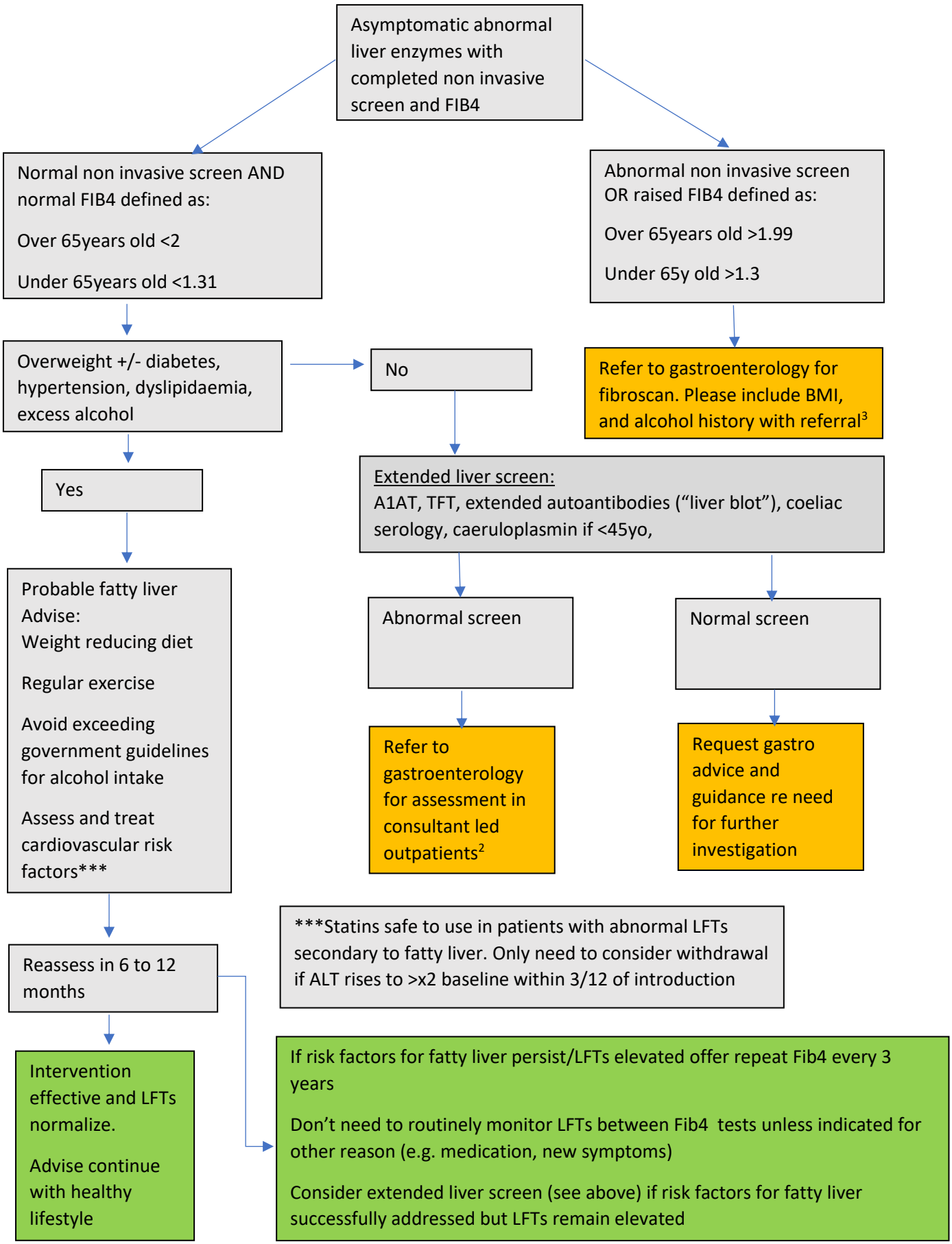

**ASYMPTOMATIC** elevation in bilirubin (upto 50 microM) with normal liver enzymes
**ASYMPTOMATIC** patient with isolated abnormality of liver enzymes
Abnormal LFTS **with SYMPTOMS and/or markers of serious disease** (Low albumin, low platelets, raised INR, relevant signs)
Check FBC
Normal
Anaemia
Gilberts. No further action.
Think haemolysis
Jaundiced or suspected cancer
Yes
No
Refer as fast track[1]
Refer to gastroenterology for consultant led clinic[2]
Alk Phos raised in isolation or multiple of upper limit normal
Raised ALT (in isolation or with AP<x2 upper limit normal)
Check GGT
GGT normal
GGT raised
Think bone disease
USS
Abnormal (Dilated ducts or possible metastases)
Normal
Fast track referral[1]
Obvious Cause?
Drugs
Sepsis
New DM
Heart Failure
Excess alcohol
Yes
Deal with cause and recheck LFTs in 1-3 months.
No
LFTs remain abnormal
1. Check FIB 4
2. Non-invasive liver screen: Ferritin, Liver autoantibodies, Hepatitis C antibodies, Hepatitis B serology, glucose, Hba1c, immunoglobulins, lipids, TFT
See Page 2


Asymptomatic abnormal liver enzymes with completed non invasive screen and FIB4
Normal non invasive screen AND normal FIB4 defined as:
Over 65years old <2
Under 65years old <1.31
Abnormal non invasive screen OR raised FIB4 defined as:
Over 65years old >1.99
Under 65y old >1.3
Overweight +/- diabetes, hypertension, dyslipidaemia, excess alcohol
No
Refer to gastroenterology for fibroscan. Please include BMI, and alcohol history with referral[3]
Yes
Extended liver screen:
A1AT, TFT, extended autoantibodies ("liver blot"), coeliac serology, caeruloplasmin if <45yo,
Probable fatty liver
Advise:
Weight reducing diet
Regular exercise
Avoid exceeding government guidelines for alcohol intake
Assess and treat cardiovascular risk factors***
Abnormal screen
Normal screen
Refer to gastroenterology for assessment in consultant led outpatients[2]
Request gastro advice and guidance re need for further investigation
***Statins safe to use in patients with abnormal LFTs secondary to fatty liver. Only need to consider withdrawal if ALT rises to >x2 baseline within 3/12 of introduction
Reassess in 6 to 12 months
Intervention effective and LFTs normalize.
Advise continue with healthy lifestyle
If risk factors for fatty liver persist/LFTs elevated offer repeat Fib4 every 3 years
Don't need to routinely monitor LFTs between Fib4 tests unless indicated for other reason (e.g. medication, new symptoms)
Consider extended liver screen (see above) if risk factors for fatty liver successfully addressed but LFTs remain elevated

GUIDANCE FOR VETTING CONSULTANT

The following is a guide only. Advice on individual referrals can be sought from liver consultants (EW,SAS, HA CJ, JT).

1. Fast track referrals for patients with deranged LFT.

   If patient is jaundiced request CT chest abdo and pelvis marking **RAPID** on form (to ensure scan done within 5 working days), **and arrange for patient to be seen with results within 2 weeks (any consultant clinic if no hepatology slots)**

   If patient is not jaundiced organise supplementary bloods/imaging/MDT review as necessary and request standard **fast track OP (any consultant), listing any tests requested.**

2. None fast track referrals for patients with deranged LFTs

   A) The following patients should to be referred directly to **consultant led liver clinic**:

   -Evidence of decompensated chronic liver disease. Request urgent consultant led liver clinic, within time frame specified according to severity of presentation. Some patients may require admission. Where there is no capacity some patients may need 1st appointment in a general gastro clinic.

   -Patients referred with abnormal LFTs who have additional concerning symptoms (weight loss, abdo pain etc).

   -Patients with a non invasive screen suggesting autoimmune liver disease, haemochromatosis, Wilsons or A1AT deficiency, even if asymptomatic.

   -Genuinely unexplained ALT>3x normal with NO risk factors for NAFLD

   B) The following patients can be referred directly to **liver nurse clinic**
   - Patients with positive hepatitis B or C serology (including patients with evidence of compensated cirrhosis)

3. Raised FIB4 with negative noninvasive screen

   Complete fibroscan request and forward referral to liver nurses to discuss results in liver MDT.

   In patient with likely diagnosis of NAFLD or excess alcohol an estimated fibrosis score of <F3 can generally be managed in community,