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**St. Vincent’s University Hospital Liver Network**

**Guidelines for the Management of Adults with**

**Asymptomatic Liver Blood Test Abnormalities**

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5. **Scope of Guideline**

This guideline relates to adults with no symptoms or signs of liver disease, found to have abnormal liver blood tests. This guideline does not apply to children.

***This is a guide only and is not intended to replace clinical judgement.***

Bilirubin, albumin and INR are the only blood markers of liver function

ALT, AST, ALP and GGT are liver enzymes indicating level of ongoing liver injury

Low platelets can be seen in advanced liver disease or patients who are drinking heavily

The main contributors to liver disease are obesity, alcohol and viral hepatitis. These are largely preventable risk factors that can be targeted with advice and intervention in primary care.

1. **Pattern of abnormal LFTs**
	1. Recognise Red Flags for referral (Symptomatic Abnormal LFTs *\*Not discussed further in this guideline*)
	2. Clinical Pattern Recognition
2. **First Assessment for patients with elevated LFTs**
3. When to Repeat LFTs

***\*See Section 5 and 6***

1. **Who to refer?**

| **Diagnosis** | **Results** |
| --- | --- |
| Hepatitis C infection (HCV) | HCV antibody positive – check hepatitis C PCR/Hep C Antigen**If positive -** refer to hepatology**If negative**, repeat 3 months later and if still negative, reassure patient infection has cleared, no referral required |
| Hepatitis B infection (HBV) | HbsAg positive  |
| Autoimmune hepatitis (AIH) | ALT increased, positive autoantibodies (SMA, ANA, or LKM) +/- raised IgG  |
| Primary biliary cholangitis (PBC) | Raised ALP (Cholestatic pattern), positive antimitochondrial antibody (AMA) |
| Primary sclerosing cholangitis (PSC) | History of inflammatory bowel disease, cholestatic pattern of LFTs |
| Haemochromatosis | Increased ferritin >300 (males, post-menopausal females) and >200 (pre-menopausal females) and Tsat% ≥ 45% on ≥2 occasions (Fasting samples)Send HFE genotype |
| Wilson's disease | Abnormal low caeruloplasmin performed in a patient below age 55 years old – Refer |
| Alpha-1 antitrypsin deficiency | Low alpha - 1 antitrypsin (<0.9g/L) - Refer |
| Alcohol Related Liver Disease  | Advanced alcohol-related liver disease (Signs of portal hypertension on US, low platelets, low albumin or raised bilirubin) Hazardous/harmful drinker ***(***Identified AUDIT-C>8). *See also Appendix 2* |
| MASLD | Fib4>1.3 (<65 years), Fib4>2 (>65 years). *See also Appendix 3* |
| **SIGNIFICANT FINDING:****Any biliary duct dilation on USS** | Needs further assessment and URGENT hospital referral |

1. **Patients who do not require referral to the liver clinic – ArLD and MASLD**

\*The Liver screen is usually negative, although 10% will have low level liver autoantibodies (with a normal IgG level).

A raised ferritin (with transferrin saturation <45%) is seen in a third of cases.

IgA is raised in about half of cases.

**Appendix 1**

***Abbreviations***

*ArLD-Alcohol-related Liver Disease*

*BMI-Body Mass Index*

*ED-Emergency Department*

*HCC-Hepatocellular carcinoma*

*LFTs-Liver Function Tests*

*MASLD-Metabolic dysfunction-Associated Steatotic Liver Disease*

*NIL-Non-Invasive Liver screen*

*NSAIDs-Non-steroidal anti-inflammatory drugs*

*OPD-Out-patient Department*

*US-ultrasound*

**Appendix 2**

**Non-Invasive Liver Screen (NIL)**

**Appendix 3**

**Alcohol-related Liver Disease Pathway**

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**Appendix 4**

**MASLD (Metabolic Dysfunction-Associated Steatotic Liver Disease) Pathway**

* For patients below 65 years of age, a FIB-4 score lower than 1.3 reliably excludes advanced fibrosis and can be managed in primary care.
* For patients over 65 years old, a FIB-4 score lower than 2.0 reliably excludes advanced fibrosis and can be managed in primary care.
* If FIB-4 score is greater than 1.3 (below 65 years old) or greater than 2.0 for over 65-year-olds » patients have a significant risk of having advanced fibrosis » **Refer to liver clinic**.

**MASLD Management in Community**

Mainstay of management for patients with MASLD is lifestyle modification and optimisation of diabetes and cardiovascular risk factors.

• Give patients advice about MASLD and its treatment. This leaflet provides comprehensive information about MASLD. <https://www.stvincents.ie/app/uploads/2017/05/MASLD-booklet-2024.pdf>

• If BMI >25 or raised waist circumference- Aim for at least a loss of 10% of body weight

* Consider referral to specialist weight management services if patients meet the criteria for bariatric surgery (BMI>35)
* Advise exercise at least 30 minutes 3 times per week (both cardiovascular and resistance exercise are beneficial even independent of weight loss)

• Optimise control of diabetes- Use metformin, SGLT2 inhibitor or GLP-1 analogue where appropriate. Treat hypertension and cholesterol as appropriate.

• Statins are safe in patients with MASLD and should be considered in those with a QRISK >10%

• Drink sensibly – <7 units per week for males and females. There is no evidence at present to recommend abstinence unless cirrhotic however no safe level of alcohol consumption can be advised

• Calculate the FIB-4 score every 3 years and refer if the FIB-4 score increases above the age-related cut-offs

**MASLD Bundle**