

Debate Pack
7 October 2022
Number CDP-0163 (2022)

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Diagnosis of liver disease and liver cancer

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Summary

There will be a Westminster Hall debate on the diagnosis of liver disease and liver cancer on Tuesday 11th October 2022. Margaret Ferrier MP, Vice Chair of the APPG on Liver Disease and Liver Cancer, will open the debate.

This briefing provides background on liver disease and liver cancer, and efforts to support early diagnosis. It also includes recent Parliamentary and news material.

1 Background

1.1 What are liver disease and liver cancer?

The liver

The liver is an organ located under the rib cage – beneath the diaphragm – on the right-hand side of the body. It performs more than 500 vital functions including:

- regulating the levels of chemicals in, as well as removing toxins (poisons) from, the body;
- producing bile, which carries away waste and breaks down fats during digestion;
- controlling levels of fats and other substances, including glucose, in the blood;
- storing iron and;
- fighting infections.¹

Liver disease

There are over 100 types of liver disease that negatively affect the normal, healthy functioning of the liver, such as:

- alcohol-related liver disease (linked to regular alcohol misuse);
- non-alcoholic fatty liver disease (typically found in those who are overweight / obese when fat builds up in liver cells),
- hepatitis;
- haemochromatosis (an inherited disorder where iron builds up in the body and can damage the liver and other organs) and;
- primary biliary cirrhosis (a rare liver disease that damages the bile ducts in the liver).²

¹ [Liver disease - Illnesses & conditions | NHS inform](#), last updated 14 February 2020; [Liver: Anatomy and Functions | Johns Hopkins Medicine](#), not dated [accessed 3 October 2022], [About the liver - British Liver Trust](#), not dated [accessed 3 October 2022]

² [Liver disease - Illnesses & conditions | NHS inform](#), last updated 14 February 2020; [Liver disease - NHS \(www.nhs.uk\)](#), last updated 20 October 2020

‘Cirrhosis’ occurs when healthy liver tissue is replaced by scar tissue. This stops the liver from working properly. It is ‘chronic’, meaning damage accumulates over time. The NHS notes that cirrhosis is sometimes called “end-stage liver disease because it happens after other stages of damage from conditions that affect the liver, such as hepatitis”.³

Despite the multitude of types of liver disease, there are three main causes which account for 9 out of 10 cases.⁴ They are obesity, an undiagnosed hepatitis infection and alcohol misuse.⁵ Other, less common, factors may also play a role such as autoimmune diseases, inherited diseases, use of certain medicines and exposure to certain toxic chemicals.⁶

Getting a diagnosis

When liver disease is suspected, a range of tests may be performed including:

- Blood tests (a group of blood tests called liver function tests);
- Imaging (such as an ultrasound, CT or MRI scans);
- Biopsy (taking a tissue sample from the liver for cells to be examined under the microscope).⁷

Statistics on liver disease

Data from the Office for Health Improvement and Disparities (OHID) shows that there were just under 67,500 hospital admissions due to liver disease in 2020/21. This is a rate of 124 admissions per 100,000 population, up from 109 per 100,000 recorded in 2010/11.

There were 10,127 deaths due to liver disease in 2020, an increase of 65% on the 2001 figure of 6,140 liver disease deaths.

Further statistics on liver disease, including regional and local area estimates can be viewed using the OHID [Liver Disease Profile](#) tool.

³ [Liver disease - NHS \(www.nhs.uk\)](#), last updated 20 October 2020

⁴ [Risks and causes - British Liver Trust](#), not dated [accessed 3 October 2022]

⁵ [Liver disease - Illnesses & conditions | NHS inform](#), last updated 14 February 2020; [Liver disease - NHS \(www.nhs.uk\)](#), last updated 20 October 2020

⁶ [Chronic Liver Disease/Cirrhosis | Johns Hopkins Medicine](#), not dated [accessed 3 October 2022]

⁷ [Liver problems - Diagnosis and treatment - Mayo Clinic](#), 8 April 2022

Liver cancer

Cancer occurs when abnormal cells grow and divide in an uncontrolled way. Such cells can spread to other parts of the body, invading and destroying surrounding tissue, including organs.⁸ Liver cancer, sometimes referred to as ‘primary’ liver cancer, is a cancer that begins in the liver. Cancer Research UK notes that primary liver cancer is an uncommon cancer in the UK and that it is “more common to have cancer that has spread to the liver from somewhere else in your body” (secondary liver cancer).⁹

There are multiple types of liver cancer; the type depends on exactly where in the body the cancer starts and what type of cell it starts in. Liver diseases can increase the risk of developing liver cancer, though it can also happen in people with no underlying diseases.¹⁰ Examples of primary liver cancers are:

- Hepatocellular carcinoma (HCC – the most common type of liver cancer, sometimes called hepatoma);
- Cholangiocarcinoma (bile duct cancer);
- Fibrolamellar (a rare form of HCC that affects teenagers and young adults who have no history of liver disease);
- Angiosarcoma (or haemangiosarcoma, which starts in the blood vessels of the liver and is extremely rare).¹¹

The NHS webpage on liver cancer notes that “liver cancer may not have any symptoms, or they might be hard to spot”. Symptoms can include:

- loss of appetite;
- weight loss;
- feeling sick;
- jaundice;
- a lump in the right side of your tummy.¹²

⁸ [Cancer - NHS \(www.nhs.uk\)](https://www.nhs.uk), 17 September 2019; US NIH National Cancer Institute, [Cancer](#), not dated [accessed 4 October 2022]

⁹ [What is liver cancer? | Cancer Research UK](#), 27 September 2021

¹⁰ [Liver cancer - Symptoms and causes - Mayo Clinic](#), 18 May 2021

¹¹ [Liver cancers - British Liver Trust](#), not dated [accessed 3 October 2022]; [What is liver cancer? | Cancer Research UK](#), 27 September 2021; [Liver cancer | Macmillan Cancer Support](#), 30 June 2020

¹² [Liver cancer | Macmillan Cancer Support](#), 30 June 2020; [Symptoms of liver cancer - NHS \(www.nhs.uk\)](#), 6 May 2020

Getting a diagnosis

Cancer Research UK has information on its website about how suspected liver cancer may be diagnosed. It states that the diagnostic pathway usually begins with a person having an appointment with their GP and features information about what to expect at the appointment:

Your doctor will ask about your symptoms and how long you have had them. They will also ask you about your general health. Depending on your symptoms your GP might do a general examination. They will feel any areas that might be swollen or painful. They also listen to your chest to find out if it sounds normal.

After your examination, your doctor might need to refer you to the hospital for tests. Or they might refer you directly to a specialist. Ask your GP to explain if they don't think you need a referral or tests. They might ask you to come back in a week or two if your symptoms continue. Go back if they change or get worse.¹³

Macmillan Cancer Support notes that if your GP refers you, it could be to a “liver specialist (hepatologist) [...] Or you may see a doctor who specialises in treating conditions of the stomach and bowel (gastroenterologist)”.¹⁴ Depending on the specific nature of the symptoms, the GP may request an ‘urgent referral’.

Guidelines produced by the National Institute for Health and Care Excellence (NICE) state that a doctor should consider an urgent referral for an ultra sound scan (to be done within 2 weeks) to assess for liver cancer in people with a lump in the upper abdomen that is consistent with an enlarged liver.¹⁵

Both the [NHS liver cancer webpage](#), and [Macmillan Cancer Support](#), provide details of the types of tests that may be performed to check for liver cancer.

Statistics on liver cancer

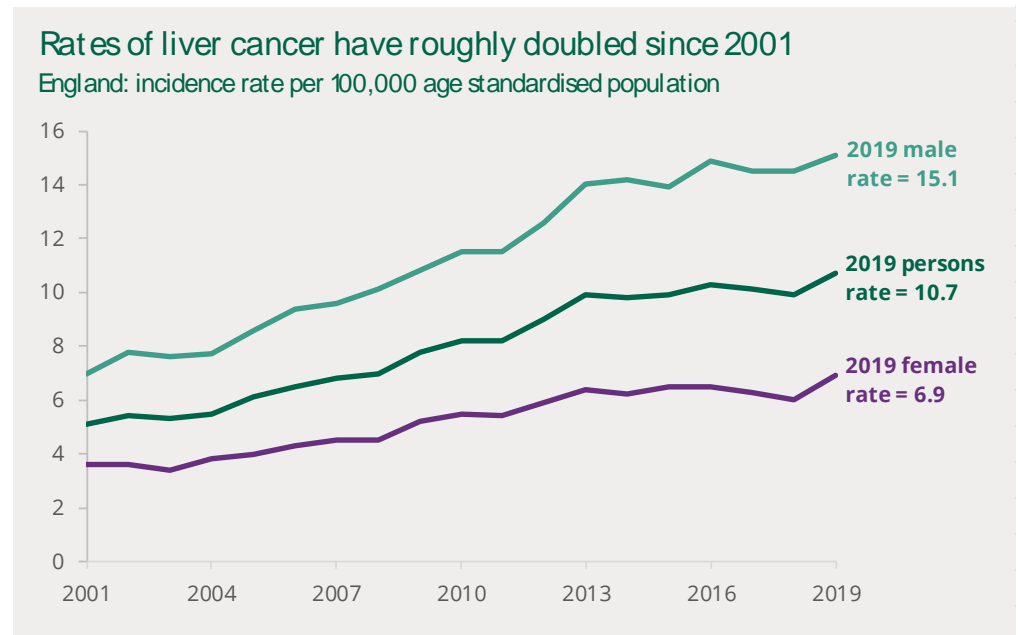
The latest [cancer incidence data for England](#) shows that in 2019, a total of 5,741 people were diagnosed with liver cancer, an age standardised rate of 10.7 per 100,000.

Rates have increased in recent years, roughly doubling since 2001. The rate of increase was broadly similar for males and females, although the male rate for liver cancer is higher than the female rate: 15.1 cases per 100,000 among males in 2019 compared with 6.9 per 100,000 for females.

¹³ [Seeing your GP for liver cancer | Cancer Research UK](#), 27 September 2021

¹⁴ [Diagnosis of liver cancer - liver biopsy, blood tests, MRI scan | Macmillan Cancer Support](#), 30 June 2020

¹⁵ [Recommendations organised by site of cancer | Suspected cancer: recognition and referral | Guidance | NICE](#), NICE guideline [NG12] Published: 23 June 2015 Last updated: 15 December 2021



Source: [Cancerdata.nhs.uk - incidence statistics](https://cancerdata.nhs.uk/incidence-statistics)

Survival rates for liver cancer are relatively low. Office for National Statistics (ONS) [estimates of cancer survival](#) show that among those diagnosed between 2013 and 2017, the proportion who were still alive 5 years later was 13.7%.

Such low survival rates combined with increased incidence mean that mortality from liver cancer is also on the rise. In 2021, there were 5,052 deaths with an underlying cause of liver cancer – over twice the figure of 1,916 observed in 2001. (Source: [ONS Death registration data by cause](#))

1.2

National policies on the diagnosis of liver disease and liver cancer in England

Liver disease

The [NHS Health Check](#) invites adults aged 40 to 74 years old for an overall health check. During a NHS Health Check, the alcohol use disorder identification test (AUDIT) is used to assess alcohol consumption. The [national guidance for the NHS Health Check](#) states that individuals with an AUDIT score of 16 or more should be referred for a liver disease assessment

The [NHS Long Term Plan](#) (January 2019) recognised the importance of preventing avoidable liver disease through targeted policies to address alcohol consumption and obesity. To improve survival rates and support earlier detection of alcohol-related liver disease, NHS England has developed incentives to increase cirrhosis and fibrosis tests for alcohol dependent patients in acute and mental health services, as part of its Commissioning for Quality and Innovation Scheme (CQUIN).¹⁶ NHS England's CQUIN guidance for 2022/23 states that increasing rates of alcoholic liver disease deaths "is almost certainly due to increased alcohol consumption during the pandemic and patients waiting longer before presenting in healthcare settings."¹⁷

In 2019 to 2020, Public Health England awarded £6 million capital funding to 23 local authorities to support alcohol treatments. Nine areas used this grant to purchase Fibroscan machines to increase early detection of fibrosis/cirrhosis and access to treatment for those with alcohol-related liver disease.¹⁸

NHS England is developing liver networks in England, supported by the [Hepatobiliary Clinical Reference Group](#), to enable quicker access to specialised liver services, as well as providing clinical advice on disease prevention and referral practice.¹⁹

There are a number of clinical guidelines from the National Institute for Health and Care Excellence (NICE) which provide best practice for diagnosing of liver disease, including:

- [Non-alcoholic fatty liver disease \(NAFLD\)](#) (NG49, 2016)
- [Cirrhosis in over 16s: assessment and management](#) (NG50, 2016)

NICE guidance recommends that people who are alcohol dependent should receive a test for fibrosis and cirrhosis.²⁰

Liver cancer

NHS England's cancer programme is working to deliver 11 community liver health check pilots. These pilots aim to support earlier detection and diagnosis of liver cancer by identifying and referring people with cirrhosis or advanced fibrosis into a liver surveillance pathway.²¹

¹⁶ NHS England, [2022/23 CQUIN guidance](#), January 2022

¹⁷ See above.

¹⁸ Gov.uk, [Funding awarded to 23 projects to help those affected by alcohol](#), 22 March 2019

¹⁹ [PQ166388, Liver Diseases: Health Services, 18 March 2021](#)

²⁰ NICE, [Cirrhosis in over 16s: assessment and management](#) (NG50, 2016)

²¹ PQ35973, [Liver Diseases](#), 21 July 2022

1.3

Calls for action

The British Liver Trust launched its ‘make early diagnosis of liver disease routine’ campaign on 26th April 2022, in Parliament, and is calling for people to contact their MP, to support effective liver detection and management pathways being put in place across the UK.²² The Trust also reported on the first meeting of the recently established All Party Parliamentary Group (APPG) on Liver Disease and Liver Cancer.²³

In August the British Liver Trust reported the results of research, based on freedom of information requests to NHS bodies, which showed the extent of regional variation in the care of liver disease patients care.²⁴

In November 2019 the Lancet Commission into liver disease in the UK published its final report, entitled ‘Unacceptable failures’.²⁵ The report stressed the continuing increase in burden of liver disease from excess alcohol consumption and obesity, and the greater impact this is having in deprived areas. The Commission called for comprehensive preventative measures, such as food and alcohol strategies that include regulation of pricing.

The [Foundation for Liver Research](#) have published earlier [recommendations made by the Lancet Commission](#) for policy changes to help tackle liver disease.

The APPG on Hepatology 2014 report, [Liver Disease: Today’s Complacency, Tomorrow’s Catastrophe](#), followed an inquiry into outcomes in liver disease.

²² British Liver Trust, [Help our campaign to make the early diagnosis of liver disease routine](#)

²³ British Liver Trust, [MPs call for action to “level up” inequalities in liver disease care and outcomes across UK](#), July 2022

²⁴ British Liver Trust, New research reveals how liver disease patient care is a postcode lottery, 4 August 2022

²⁵ The Lancet, [Unacceptable failures: the final report of the Lancet Commission into liver disease in the UK](#), November 2019. The Commission was established in 2013 to consider measures to improve the diagnosis, care and availability of services for liver patients in the UK.

2

Parliamentary material

Early Day Motions

DIAGNOSIS OF LIVER DISEASE

EDM 858 (session 2021-22)

17 January 2022

Tracey Crouch

That this House welcomes the British Liver Trust's campaign to make early diagnosis of liver disease routine, to be launched in Parliament on Tuesday 26 April 2022; is concerned that the UK is facing a liver disease crisis as a result of the seriously late diagnosis of liver disease across the UK; notes that delays in diagnosis have worsened during the covid-19 outbreak; and calls for urgent action to ensure effective patient pathways are commissioned and implemented.

Written questions

Liver Diseases

21 Jul 2022 | Written questions | Answered | House of Commons | 35973

Asked by: Margaret Ferrier | Party: Independent (affiliation)

To ask the Secretary of State for Health and Social Care, whether he has made an assessment of the impact of late presentation and diagnosis of liver disease on the incidence of hepatocellular carcinoma.

Answering member: James Morris | Party: Conservative Party

| Department: Department of Health and Social Care

No specific assessment has been made. We would expect general practitioners to use professional judgement in diagnosing liver disease and refer patients as appropriate.

Between 2015 and 2020, hepatitis C-related mortality from end stage liver disease and hepatocellular carcinoma has reduced by 20%. NHS England's cancer programme is working with the hepatitis C elimination programme to deliver 11 community liver health check pilots. These pilots aim to support earlier detection and diagnosis of liver cancer by identifying and referring people with cirrhosis or advanced fibrosis into a liver surveillance pathway.

Liver Diseases: Health Services

21 Jul 2022 | Written questions | Answered | House of Commons | 35972

Asked by: Margaret Ferrier | Party: Independent (affiliation)

To ask the Secretary of State for Health and Social Care, if he will make an assessment of the potential merits of including liver disease assessments in NHS health checks for people aged 40 and over.

**Answering member: James Morris | Party: Conservative Party
| Department: Department of Health and Social Care**

During a NHS Health Check, the alcohol use disorder identification test (AUDIT) is used to assess alcohol consumption. The national guidance for the NHS Health Check states that individuals with an AUDIT score of 16 or more should be referred for a liver disease assessment. The 2021 evidence-based review of the NHS Health Check programme recognised the benefit of including increasingly common conditions, such as mental and musculoskeletal ill-health. There are no current plans to include liver disease assessments in the NHS Health Check programme.

Liver Diseases: Diagnosis

21 Jul 2022 | Written questions | Answered | House of Commons | 38525

Asked by: Wayne David | Party: Labour Party

To ask the Secretary of State for Health and Social Care, what assessment he has made of the adequacy of patient care pathways for the early detection of liver disease in England by (a) region and (b) integrated care system.

**Answering member: James Morris | Party: Conservative Party
| Department: Department of Health and Social Care**

No specific assessment has been made. However, in 2021, NHS England commissioned a stocktake of health inequalities in liver disease and the relevant care pathways, which recognised the association of regional variation with many risk factors, morbidity and mortality.

The Hepatobiliary Clinical Reference Group is reviewing the findings of this stocktake, which will inform priorities for action in 2022/23. NHS England is developing a policy on screening and treatment of patients commencing chemotherapy who may be unaware they are living with hepatitis B. The hepatitis C programme has reduced the prevalence of the disease through identifying patients in the community in a range of settings.

Liver Diseases: Screening

27 Jun 2022 | Written questions | Answered | House of Commons | 22609

Asked by: Rachel Hopkins | Party: Labour Party

To ask the Secretary of State for Health and Social Care, what assessment he has made of the potential merits of introducing fibroscans in primary care to improve early diagnosis of liver disease.

**Answering member: Maria Caulfield | Party: Conservative Party
| Department: Department of Health and Social Care**

While NHS England has undertaken some preliminary work to assess the introduction of fibroscan in primary care through community diagnostic centres, this is currently at a scoping stage.

Liver Diseases: Mortality Rates

27 Jun 2022 | Written questions | Answered | House of Commons | 22608

Asked by: Rachel Hopkins | Party: Labour Party

To ask the Secretary of State for Health and Social Care, what steps his Department is taking to reduce liver disease mortality rates in areas of social deprivation.

**Answering member: Maria Caulfield | Party: Conservative Party
| Department: Department of Health and Social Care**

The National Health Service 'Better Health' campaign aims to promote greater awareness of liver disease and its main causes. The former Public Health England published 'Better care for people with co-occurring mental health and alcohol/drug use conditions: A guide for commissioners and service providers' which addresses potential issues of stigma and mistrust and other barriers preventing patients from accessing treatment.

From 1 April 2022, NHS England has introduced a Commissioning for Quality and Innovation measure to incentivise providers to improve earlier detection of liver disease for alcohol dependent in-patients. In addition, £27 million has been invested to establish specialist alcohol care teams in the 25% of hospitals with the highest rates of alcohol dependence-related admissions.

Liver Diseases: Screening

15 Mar 2022 | Written questions | Answered | House of Commons | 115871

Asked by: Caroline Lucas | Party: Green Party

To ask the Secretary of State for Health and Social Care, if he will make it his policy to increase funding for liver disease scanning and testing in community diagnosis centres; what steps he is taking to reduce liver disease deaths; what assessment he has made of the reasons for the increase in those deaths; and if he will make a statement.

**Answering member: Edward Argar | Party: Conservative Party
| Department: Department of Health and Social Care**

The Spending Review 2021 allocated £2.3 billion for diagnostics to increase the number of community diagnostic centres to at least 100 sites by March 2025. This will increase diagnostic capacity for tests, such as ultrasounds,

blood tests and computed tomography scans, to diagnose liver disease and improve earlier diagnosis and health outcomes. There are no plans to increase funding for liver disease scanning or testing specifically.

The National Health Service is introducing an indicator to support the earlier detection of liver disease in those most at-risk cohorts by incentivising improved access to cirrhosis and fibrosis tests for alcohol dependent in-patients. The NHS Health Check invites adults aged 40 to 74 years old for an overall health check, which can provide early detection and identify potential risks of liver disease. Local authorities are responsible for assessing alcohol risk through the NHS Health Check and providing specialist treatment services for dependent drinkers. The NHS has invested £27 million to establish specialist alcohol care teams in hospitals with the highest rates of admissions related to alcohol dependence.

The Office for Health Improvement and Disparities has published Liver Disease Profiles, which showed the main increase in liver disease mortality was due to additional alcoholic liver disease deaths in 2020. Additional deaths from non-alcoholic fatty liver disease and from hepatitis B related end-stage liver disease/hepatocellular carcinoma also showed a smaller increase. Deprivation is also identified as an influential factor on liver disease mortality, with those living in the most deprived areas being more adversely affected.

3 Newspaper articles

Blood test spots multiple cancers without clear symptoms, study finds

Guardian

11 September 2022

4 Press releases

MPs call for action to “level up” inequalities in liver disease care and outcomes across UK

British Liver Trust

5 July 2022

High street pharmacies spot cancers in new NHS early diagnosis drive

NHS England

15 June 2022

Late diagnosis has created deadly cancer gap

Less survivable cancer taskforce

11 January 2022

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