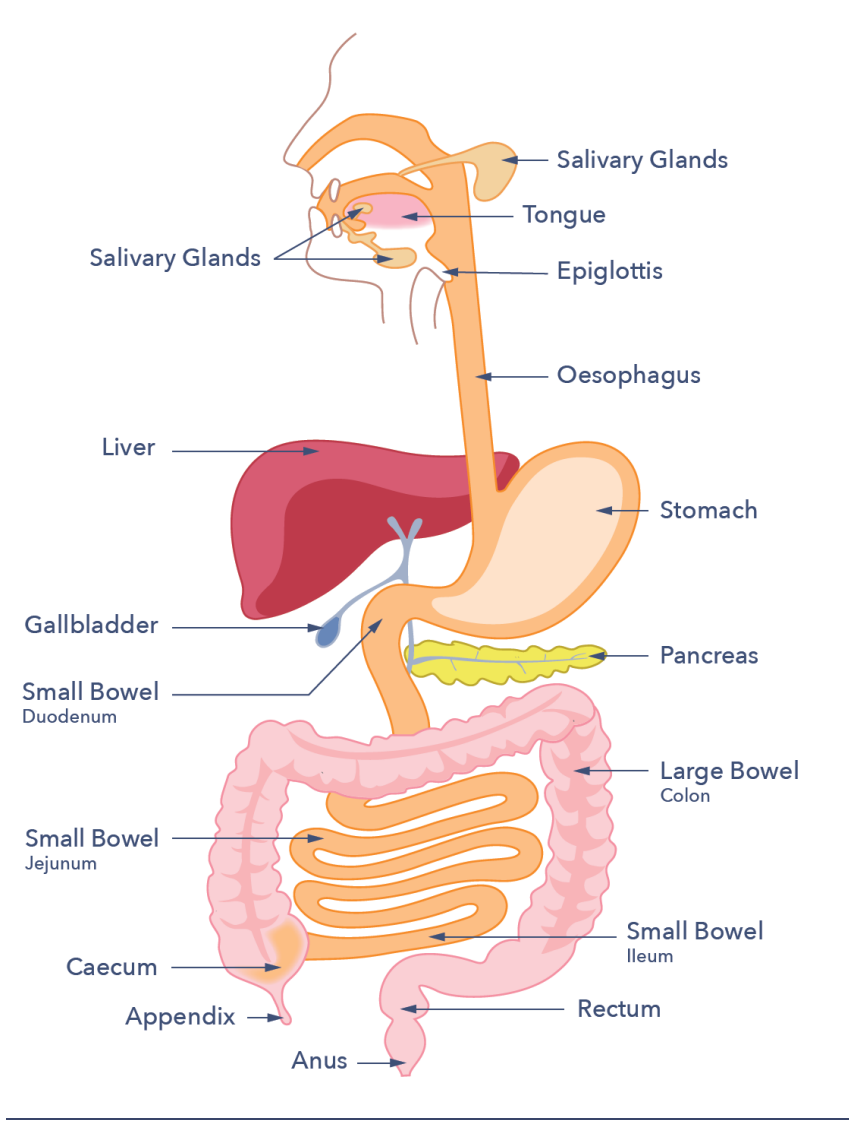




# FUNDING RESEARCH TO FIGHT DISEASES OF THE GUT, LIVER & PANCREAS

## THE DIGESTIVE SYSTEM



## OVERVIEW

### THIS FACTSHEET IS ABOUT HEPATOCELLULAR CARCINOMA (LIVER CANCER).

The liver is the largest solid organ in the body. It lies under the lower part of the rib cage on the right-hand side of the body. It stretches across the middle of the body, about as far as the left nipple. The liver is like a factory. It works to convert food into energy. Most of the body's energy is stored there. The liver makes proteins that help to repair the body and help your blood to clot. The liver also makes bile, which is needed to digest certain foods and absorb several important vitamins. Another of the liver's jobs is to process toxins and some of the body's waste products to make them harmless.

Approximately 6,200 people in the UK are diagnosed with liver cancer every year, and this number is increasing. It is the 18th most common cancer in the UK and affects more men than women. Nine in every ten liver cancers occur in people over the age of 60.

### TYPES OF LIVER CANCER

Primary liver cancer is when the cancer begins in the liver. The two main types are hepatocellular carcinoma (HCC) and cholangiocarcinoma. This information is about hepatocellular carcinoma. Cholangiocarcinoma is a form of cancer that affects the ducts (or tubes) both inside and outside the liver. There are also very rare vascular liver cancers that are not discussed in this leaflet.

Secondary liver cancer (sometimes called metastatic liver cancer) starts in other organs of the body but then spreads to the liver, usually through the bloodstream. This leaflet is about primary liver cancer.

## CAUSES

### WHAT ARE THE CAUSES OF LIVER CANCER?

Most primary liver cancers, about 9 in 10, develop in people who already have an underlying liver condition. In some cases, this condition may

have led to liver scarring, called liver cirrhosis. Liver disease or cirrhosis may be caused by many conditions, including the following:

- Fatty liver disease (also called non-alcoholic fatty liver disease, 'NAFLD' or non-alcoholic steatohepatitis 'NASH').
- Alcohol.
- Hepatitis B virus or hepatitis C virus.
- Primary biliary cholangitis, primary sclerosing cholangitis, autoimmune hepatitis - these are rare autoimmune diseases where the body's own immune system reacts with the liver.
- Inherited diseases for example haemochromatosis - an inherited condition causing iron to accumulate in the body.

Some people may have liver disease diagnosed at the time they are found to have liver cancer. Others can develop liver cancer without having liver disease.

There are also rare causes of liver cancer including:

- Aflatoxin: a fungus that can contaminate grains such as corn, nuts and beans, generally in the developing world. Exposure to aflatoxin over a long time can increase the risk of liver cancer.
- Industrial chemicals can also increase the risk of liver cancer: chlorinated chemicals, for example vinyl chloride monomer, trichloroethylene and perchloroethylene, plus arsenic based chemicals. People who are exposed to a heavy metal called cadmium can also have a risk of liver cancer. If this is the cause most people will be exposed to these chemicals at their place of work. The Health and Safety Executive produce guidance on assessing exposure risk, checking exposure and health in the workplace, when these chemicals are used. [HSE: Information about health and safety at work.](#)
- Chewing Areca nut (Betel, Paan or Pan)

## CAN HEPATOCELLULAR CARCINOMA BE HEREDITARY?

Not directly but it can arise as a rare consequence of inherited diseases such as haemochromatosis. This condition is inherited from both your father and mother. On diagnosis of haemochromatosis, you should be referred for genetic counselling and treatment which can control the build-up of iron and prevent the development of cirrhosis. Ask your GP if you feel this applies to you.

## ETHNICITY AND HEPATOCELLULAR CARCINOMA

There is a difference in the number of people developing liver cancer depending on someone's ethnic background. This is partly due to variation of the underlying disease that causes the cancer. For example, in those around 40 to 50yrs, hepatitis B is a leading cause of HCC. Hepatitis B is more commonly diagnosed in people of from China and South East Asia and this results in much higher numbers of liver cancer cases in these populations. This situation changes between the ages of 50 and 60 years. More causes are then linked to alcohol-related liver disease and non-alcoholic steatohepatitis, which are more common in people of white ethnicity.

## SYMPTOMS

### WHAT ARE THE USUAL SYMPTOMS OF LIVER CANCER?

Cancer in the liver may not cause any symptoms and can be picked up by chance when performing other tests. It might have been discovered because your doctor performed some blood tests to see how well the liver was working. Alternatively, an abnormal area may have been observed during a scan.

Symptoms include:

- discomfort or pain in the upper part of the abdomen (belly). This might also be felt as pain in the right shoulder blade.
- feeling sick or generally unwell.
- Loss of appetite or feeling full.

- Abdominal (belly) swelling might happen if the liver is enlarged. A hard lump in the upper part of the abdomen (belly) or under the rib cage on the right-hand side.

If you are experiencing any of the following symptoms these need more urgent medical attention:

- Jaundice, which is a yellowing of the whites of the eyes and skin. Jaundice might not be as obvious in people with darker skin pigmentation. Jaundice can also cause itching, dark urine and pale poo.
- Swelling of the abdomen (belly) or ankles caused by build-up of fluid. This fluid build-up is called ascites.
- Vomiting blood (being sick) or passing black, tarry, sticky poo that smells bad.

## DIAGNOSIS

### HOW IS LIVER CANCER DIAGNOSED?

The doctor will use a combination of the following to check for liver cancer:

- The history of the person to check for risk factors.
- Clinical examination.

If liver cancer is suspected, further tests will be requested urgently. These can include:

- **Blood tests:** to assess how well the liver is working and to measure substances produced by the cancer which can be used to screen for liver cancer in patients with cirrhosis.
- **Ultrasound scan:** this can show if the liver is scarred and possibly the site and extent of a tumour.
- **MRI or CT scan:** these will show the extent of the cancer and help to determine whether it is primary or secondary liver cancer.

## TREATMENT

### HOW IS LIVER CANCER TREATED?

When someone is diagnosed with liver cancer, their situation will be discussed at a special meeting by a team of experts. This is known as a Multi-Disciplinary Team or MDT. The MDT will include the following healthcare practitioners:

- Gastroenterologist or hepatologist (a liver specialist doctor).
- Surgeon.
- Radiologist (doctors who specialise in cancer scans).
- Pathologist (doctors trained to examine specimens of cancer tissue).
- Oncologist (cancer treatment doctors).
- Specialist cancer nurse.

This team will consider the best options for treatment. Sometimes there is the opportunity to enter a clinical trial when newer, potentially better treatments, are being compared to established treatments. Without these important trials, we will not know how to improve the outcome for people diagnosed in the future.

The treatment selected depends on the cancer type that you have and how much of the liver is affected by the cancer. If you have cirrhosis, it will also depend on how well your liver is working.

### Primary liver cancer

- **Surgery:** if you develop a small cancer and the rest of the liver is working well, it may be possible to remove the cancer by surgery. It might not be possible to remove a portion of the liver if you have liver cirrhosis.
- **Liver transplantation:** this replaces the cancerous liver with a healthy donor organ. It is a major operation, so people need to be carefully assessed to be considered for liver transplantation.
- **Radio Frequency Ablation (RFA):** is where a needle releasing sound waves is inserted directly into the cancer. The sound waves produce heat, treating the cancer. This treatment works best on small cancers.
- **Microwave Ablation:** this is similar treatment to RFA, but microwaves are used to make heat instead of sound waves. This treatment works best on small cancers.

- **Targeted Arterial Therapy:** blood vessels (arteries) that deliver blood to tumour can be injected with chemotherapy drugs to try to kill the cancer cells. A substance can also be injected into the tumour blood vessels to cut off its blood supply. This also helps to fight the cancer.
- **Systemic therapy:** if the treatments listed above are not suitable for you, your doctor may discuss using targeted therapy medicine that help to prevent tumours from growing and spreading.
- Examples of targeted therapy tablet treatments are:

**Sorefenib:** is approved for use in England

<https://www.nice.org.uk/guidance/ta474/informationforpublic> and Scotland <https://www.scottishmedicines.org.uk/medicines-advice/sorafenib-nexavar-resubmission-48208/> for liver cancer treatment.

**Levantinib:** is approved for use in England for liver cancer treatment.

<https://www.nice.org.uk/guidance/ta551/informationforpublic>

**Regorafenib:** is approved for use in England

<https://www.nice.org.uk/guidance/ta555/informationforpublic> and Scotland <https://www.scottishmedicines.org.uk/medicines-advice/regorafenib-stivarga-fullsubmission/> for liver cancer treatment.

You can enquire with your doctor about the accessibility of these treatments in Scotland, Wales and Northern Ireland.

- **Immunotherapy:** this is the newest treatment now available for liver cancer. It uses the body's own immune system to fight the cancer. It is given as an infusion (a drip in the arm).

Although most liver cancer treatment is carried out in hospital under the care of the MDT, your GP will be informed and updated. Your GP can also provide support and advice. Specialist nurses who work in hospitals and the community trained in the care of people who have cancer (such

as Macmillan nurses) are available. They are there to support and advise on any aspect of treatment or care in or out of hospital.

## SUPPORT

### HOW CAN LIVER CANCER AFFECT YOU?

There are several treatments that are used to reduce the size of liver cancer. However, cancers within the liver can be difficult to cure as many are diagnosed alongside long-term liver problems such as cirrhosis. The outlook for secondary liver cancer often depends on how well the initial cancer is being controlled.

### WHAT SHOULD I ASK MY DOCTOR?

People often ask how this condition will affect their chances of survival, and this can be a very difficult question to answer on an individual basis. Some people prefer to know all the facts about their condition and how it is going to affect their life. Others choose not to ask specific questions. There is no right or wrong approach.

Once the type of liver cancer that you have is known, if you have any questions about your own treatment, don't be afraid to ask your doctor or the nurse who is looking after you. It often helps to make a list of questions for your doctor and to take a close friend or relative with you when you attend appointments.

[You can also find other information from MacMillan Cancer support](#)

[www.macmillan.org.uk](http://www.macmillan.org.uk)

References available on request.

For further information, visit [gutscharity.org.uk](http://gutscharity.org.uk)