



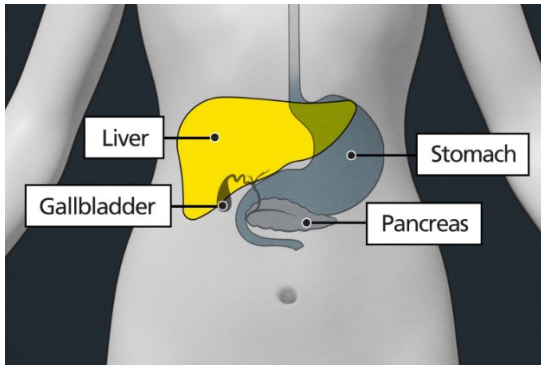
**Salisbury**  
NHS Foundation Trust

# Liver Cancer



## Where is the liver?

The liver is the largest organ in the body. It lies under the lower part of the rib cage on the right-hand side of the body but it stretches across the middle about as far as the left nipple (see figure).



## What is cancer?

The body is made up of billions of tiny cells whose growth is very carefully controlled. Cancers can be thought of as a collection of abnormal cells that have escaped from growing under this normal control. At first, the collection of abnormal cells is tiny and too small to be seen on an X-ray or scan. Usually cancers do not produce any symptoms until they have grown.

When the liver gets larger, which can often happen when it is diseased, your GP may be able to feel its lower edge below your rib cage. He might ask you to take a deep breath, which can make the liver easier to feel.

## What does the liver do?

The liver performs many important functions in the body. It produces bile, which is needed to digest certain foods, and also helps to absorb several important vitamins.

It is helpful to think of the liver as a 'factory' which makes many important proteins and other chemical substances that the body needs to work normally. The liver helps regulate the energy and fluid stores in the body, and also processes many of the body's waste products (or toxins) to make them harmless.

## What types of liver cancer are there?

Some cancers begin in the cells of the liver itself – this is called primary liver cancer. More commonly, cancers start in cells in other organs of the body but then spread to the liver – this is called secondary liver cancer. Your doctor may use the term 'liver

metastasis' (which is another way of saying that cancer has spread to the liver). There can be several cancer deposits (metastases) in the liver.

There is more than one sort of primary liver cancer. One such type starts within the cells which make up most of the liver tissue – this is known as a hepatoma, or sometimes hepatocellular carcinoma (HCC for short). Hepatomas usually occur in people who have an underlying liver disease, such as scarring of the liver (also known as cirrhosis) and can be a long-term result of chronic hepatitis.

Another type begins in the cells which line the tubes (or ducts) that carry the bile from the liver – this bile duct cancer is known as a cholangiocarcinoma. There is no association between cirrhosis and the development of cholangiocarcinoma. In the UK, secondary liver cancer is about 30 times more common than these primary liver cancers. Secondary cancer occurs in people who have a primary cancer which has begun elsewhere, such as the lung, breast, large bowel, stomach and pancreas. Cancer cells usually spread to the liver from the primary tumour through the bloodstream.

Other, much less common, types of cancers can occur in the liver. These grow at different speeds. Your GP will explain if you have one of these sorts of tumour.

## **How will I know which type of liver cancer I have?**

It can sometimes be difficult to tell which type of liver cancer a patient has developed. Your GP may need to investigate whether you have had an underlying cause of liver disease, which you may not have even been aware of, that makes primary liver cancer more likely.

Your GP will wish to examine you and arrange further blood tests or scans which might be necessary to find out if there is any sign of a cancer elsewhere that has spread to the liver. Sometimes the picture that the doctor gets from scans of your liver is so clear-cut that they can be sure of the problem. However, they may recommend taking a biopsy (or small sample) of tissue either from the liver itself or from where the cancer is suspected to have originally arisen. Taking a biopsy is a routine procedure which is either painless or causes only slight discomfort. By examining this sample in detail, your GP can often find out precisely which type of cancer is present in the liver. Sometimes the appearances of the tumour in detailed body scans can give enough information for your GP to make decisions regarding treatment.

## **Why have I developed liver cancer?**

### **Primary liver cancer**

Primary liver cancer usually occurs in a liver in which cirrhosis (or scarring) has developed. There are several different causes of cirrhosis. In the UK, excessive

alcohol consumption is the commonest cause of liver cirrhosis and this is a condition that has increased dramatically in recent years. Long term infection (hepatitis) with certain viruses (for example hepatitis B or C virus), or a rare condition which leads to increased iron deposited within the liver can also result in liver cirrhosis, increasing the risk of primary liver cancer. Patients known to have liver cirrhosis who are at increased risk of liver cancer will often have screening blood tests and liver scans in an attempt to detect the tumour at an early stage of its development.

## **Secondary (metastatic) liver cancer**

In general, the more advanced the primary cancer becomes, the more likely it is to have spread to the liver. Conversely, if cancer can be detected at an early stage when it has not yet spread, the prospects of cure are greater.

## **But why do people develop cancer in the first place?**

Usually we just don't know. Cancer is one of the most common causes of death in the UK, and most people know a family member or friend affected by the disease. The risk of cancer can be increased in families with certain inherited genes, by the way we live or the food we eat.

Regular exercise, eating plenty of fruit and vegetables and not smoking are ways in which we can reduce the risk of developing cancer. However, even the most health conscious can still develop cancer. This is why research into the causes and types of liver and other cancers is vital to improving our understanding and treatment of the disease.

## **What symptoms will I have?**

Cancer in the liver may not cause any symptoms. It might have been discovered because your doctor performed some blood tests to see how well the liver was working, or an abnormal area may have been noticed during a scan. Liver cancer can cause discomfort or pain in the upper part of the abdomen. Some patients may feel sick or can be generally unwell. Others may lose their appetite. Liver cancer can cause jaundice. If the liver is enlarged, you might notice a lump in the upper part of the abdomen, or under the rib cage on the right-hand side.

## **What is the treatment?**

This depends on the type of cancer that you have and how much of the liver is affected by the cancer.

## **Primary liver cancer**

If you develop a small hepatoma and the working of the remaining liver is good enough, it may be possible to remove the cancer by an operation.

If the liver cirrhosis is more advanced, the stress of an operation even to remove a small cancer may be too much. Liver transplantation to remove your liver containing the cancer and replacing it with a healthy donor liver is an option, but is a major operation. Patients need to be carefully assessed, and be fit enough in other ways to be considered for a liver transplantation.

Other available treatments for hepatomas are injecting medicines, or placing an instrument inside the body to release damaging sound waves (called 'radio frequency ablation' or 'RFA'), directly into the cancers to kill the cancer cells. The blood vessels to the area of the liver containing the cancer can also be injected with chemotherapy drugs to try to kill the cancer cells, or with substances that block the blood vessels and starve the cancer of its blood supply. Cholangiocarcinomas often cause narrowing or blockage of the main bile ducts, causing jaundice. The blockage can be relieved by placing a plastic or metal tube (known as a 'stent') through the narrowing. This is usually done with an endoscope – a flexible tube passed through the mouth. Occasionally surgery can be performed to remove the cancer depending on where in the liver the cancer is and the general health of the patient. Newer treatments are being developed using medicine to make cancer cells extremely sensitive to light, which is then directed onto the cancers during an endoscopy test.

## **Secondary liver cancer**

Treatment of secondary (metastatic) liver cancer often depends on where the cancer started. In some patients where the cancer has spread from the bowel, both the bowel cancer and the secondary liver cancer can be removed by an operation in an attempt to cure the cancer. This depends on the size and number of cancers present, and where in the liver the cancer is.

Most other types of secondary cancers in the liver cannot be removed or cured by surgery. These are usually treated with drugs (chemotherapy) to slow down the growth of cancer cells. This may also relieve discomfort by shrinking larger cancers which are pressing on the capsule surrounding the liver. Many types of chemotherapy treatments are available, often given as an out-patient procedure, and your GP may refer you to see a consultant who specialises in chemotherapy (an oncologist).

As well as seeing consultants in the hospital, your GP will be informed of your condition and will be happy to keep an eye on you to ensure your symptoms are well controlled. Specialist nurses who work in hospitals and the community trained in the care of patients who have cancer (Macmillan nurses), are there to discuss any aspect of your condition with you.

## **How is it decided what type of treatment I receive?**

Each patient found to have liver cancer is discussed at a special meeting where a team of experts including physicians, surgeons, radiologists (doctors who specialise

in cancer scans), pathologists (doctors trained to examine specimens of cancer tissue) and oncologists (cancer treatment doctors) consider the best treatment options.

Sometimes, you may be offered 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 patients in the future.

## **Will my doctor tell me about how long I might have to live?**

As already discussed, different treatments are used to reduce the size of liver cancer. However, cancers within the liver can be difficult to cure. Patients often ask how this condition will affect their chances of survival, and this can be a very difficult question to answer for any particular individual. 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 particular questions.

Once the type of liver cancer that you have is known, it is worth appreciating that your doctor will be pleased to discuss any aspect of your illness that you choose. 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. Two pairs of ears can be better than one and you may value the support.

## **What research is needed in liver cancer?**

As the number of people affected by primary liver cancer is rapidly increasing, and a large proportion of all patients with cancer will have secondary spread to the liver, it is crucial that further research is performed. In order to understand how to prevent these cancers, we need more understanding of why and how they develop. There is real demand for new effective treatments for liver cancers to be developed to improve the quality and duration of life for those diagnosed with liver cancer.

## **Useful websites:**

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

CancerBackup is a support network for sufferers of cancer as well as their families and friends.

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

CancerHelp UK is a free information service about cancer and cancer care for people with cancer and their families. It is hosted by Cancer Research UK.

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

This has information to help you and your family understand what could happen at each stage of your experience of cancer, and to help you access further information and support.

This leaflet is based on one produced by Core – the Digestive Disorders Foundation in association with the British Society Gastroenterology and the Primary Care Society for Gastroenterology.

CORE

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