

Hepatocellular liver cancer (HCC)

What is HCC?

HCC is a cancer of liver cells. Cells called hepatocytes start to multiply and grow more than they should. Around 3 out of 4 cancers that start in the liver are HCC.

The liver is the largest organ in the body. It has over 500 different functions, including:

- helping to digest and store nutrients from your diet
- helping blood to clot
- making bile and processing toxins, including alcohol and drugs

Some HCCs grow in a single lump (tumour). Others grow as lots of small tumours throughout the liver. There is a rarer type of HCC, called fibrolamellar cancer, which is more common in younger people.

HCC symptoms

Early HCC may not cause any symptoms. More advanced HCC may have symptoms. These may be vague, especially if you already have symptoms from other liver disease. You may

- feel sick
- have no appetite, or feel full after eating very little
- lose weight without trying

Other symptoms include:

- tummy (abdominal) pain or swelling
- feeling unwell and lacking in energy
- shoulder pain
- jaundice – yellowing skin and whites of eyes

You may have jaundice (say: jawn-diss) because your liver isn't working well, or because the cancer is blocking a bile duct.

Very rarely, people have odd symptoms because the cancer cells are making hormones.

All these symptoms can be caused by other conditions – it's important to see your GP to find out what's causing them.



HCC risks and causes

In the UK, around 3,600 people are diagnosed with HCC each year. Although the 3rd commonest cancer worldwide, it's rare in the UK. Around 4 times as many men get it as women.

Most cases of HCC are related to serious scarring of the liver (cirrhosis) from other liver diseases. Worldwide, the commonest cause of cirrhosis is infection with hepatitis B or C. Other causes include other liver diseases, such as haemochromatosis and primary biliary cholangitis. In the UK, around 1 in 10 cases are caused by drinking alcohol.

Fatty liver disease can lead to HCC. This is more common in people who have type 2 diabetes or are overweight.

There is an increased risk if you have a close relative with HCC. But remember that this is still a small risk, as HCC is rare overall.

Tests to diagnose HCC

To start with, most people see their GP, who may do some blood tests. If these are abnormal, your GP will refer you to a specialist. At the hospital, you may have:

- more blood tests
- an ultrasound, CT and MRI scan

If you have a long-term liver condition, you may already be having regular blood tests and ultrasounds. This 'surveillance' is to pick up any cancer as early as possible.

Your specialist can often diagnose HCC from a scan. But sometimes they need a tissue sample (biopsy). To get this, they may put a needle through the skin and into the liver. The biopsy will be examined for signs of cancer, which can take a week or so.

After your tests, a group of specialists called a multi-disciplinary team (MDT) will meet to look at the results of your tests and decide on the best course of treatment for you.

HCC stages

The stage of a cancer means how far it's grown and whether it has spread. Doctors decide on treatment according to stage. There are different staging systems. The most widely used in HCC is the Barcelona system. It includes:

- the number and size of liver tumours
- your general health
- how well your liver is working

There are 5 Barcelona stages – 0, A, B, C and D. Your general health is included because some HCC treatments can be hard going. They may be too much for you if you are very unwell.

Doctors use the Child-Pugh [say: child pew] system to measure how well the liver works. You may have a Child Pugh score of

- A (normal)
- B (some liver damage) or
- C (a lot of liver damage).

HCC treatment

Your treatment depends on the size, number and position of tumours in your liver and whether the cancer has spread. Your doctor will also consider any other medical conditions you have and how well your liver is working. Your doctor will talk through the options with you and your family, so you can decide together what's best for you.

The information below is arranged into treatment for different stages of HCC.

Treatment for early stage HCC

If you have an early cancer, it may be possible to cure it with surgery. You may have part of your liver containing a single tumour removed (a liver resection).

If this isn't possible or you can't have surgery, other options are to try and cure the cancer using:

- heat produced by radio waves (RFA) or microwaves – called 'thermal ablation'
- a treatment called embolization, either on its own, with chemo (called TACE) or with internal radiotherapy (called SIRT or TARE)
- external stereotactic radiotherapy (called SABR)

Embolization means blocking the blood supply to the cancer, so it gets no food or oxygen. You may have embolization, with chemo – a treatment called TACE. Or with radiotherapy – SIRT or TARE. You have radioactive beads or chemo directly into a blood vessel that supplies the liver cancer. Then that's blocked off, which seals the chemo or radiation in.

If you are well enough and there is no other way to try and cure your HCC, your specialist may suggest a liver transplant. If you are waiting for a transplant, you may have embolization or TACE to control the cancer until a donor liver becomes available.

Treatment for intermediate stage HCC

If you have large liver tumours or there are more than 5, you are most likely to have treatment to shrink it by cutting off the tumours' blood supply (embolization). You may have this with chemo (TACE) or radiotherapy (SIRT or TARE). This is to try and control the cancer.

Sometimes, it's possible to shrink an intermediate stage HCC enough to make surgery possible. Doctors call this 'downstaging'.

Treatment for advanced HCC

HCC is advanced if the cancer has grown into blood vessels, is in many places within your liver or has spread outside the liver. You are most likely to have a targeted therapy (also called biological therapies). The most widely used treatment is with two drugs called

- bevacizumab, which stops the cancer growing blood vessels
- atezolizumab, which helps your immune system find and kill cancer cells.

Other drugs for advanced HCC are called sorafenib, lenvatinib and regorafenib.

These drugs are not chemotherapy. But they do have side effects. Ask your doctor or nurse for info on the side effects of the drugs you're having. You usually continue to have treatment for as long as it's controlling the cancer and you are coping with any side effects.

Treatment for very advanced HCC

Very advanced (stage D) HCC means you are very unwell, either because of your cancer or because of other liver disease. If your liver isn't working well, your body is less likely to be able to cope with HCC treatments.

Your doctor is likely to suggest treatment to control any symptoms and help you feel better. As well as medicines to control pain or sickness, you may have

- radiotherapy to control bone pain, for example
- treatment to remove fluid (ascites) from your tummy

If you are troubled by jaundice and your doctor thinks it'll help, you may have a stent put in. This is a thin metal tube that can hold a blocked bile duct open. But it isn't often possible to relieve jaundice this way in advanced HCC. It's more likely to be caused by the liver not working so well.

Treatment for HCC that's come back

Unfortunately HCC can come back after treatment. Doctors call this recurrent cancer. It may come back in the liver or elsewhere in the body. If in the liver, you may have

- more surgery to remove the cancer
- a liver transplant
- treatment to destroy the tumours (ablation)
- TACE – localised chemo into the liver

If it comes back elsewhere, you may have drug treatment with targeted therapies. This is to try and stop the cancer growing further. Your doctor will also aim to control any symptoms you're having so you feel better.

HCC check-ups

After your treatment finishes you'll have check-ups, or follow up appointments.

After surgery to remove HCC, you usually see your doctor after 6 weeks, then 3 monthly.

If you've had a liver transplant, you'll see your surgeon weekly, then fortnightly, then monthly. If all's well, it'll then be 3 monthly.

During treatment for advanced HCC, you usually see the doctor every month. After treatment you may see them every 3 months.

HCC cells often make a substance called AFP. This can be measured in blood samples. You may have regular blood tests for this, as well as general liver blood tests. If you start to feel more unwell, or have a new symptom or side effect, contact your hospital. You don't have to wait until your next appointment.

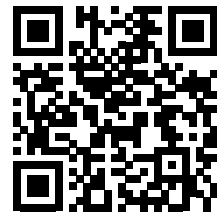
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