



Canadian  
Cancer  
Society

# Liver Cancer

*Understanding your diagnosis*



1 888 939-3333 | [cancer.ca](https://cancer.ca)

# Liver Cancer

## *Understanding your diagnosis*

When you first hear that you have cancer, you may feel alone and afraid. You may be overwhelmed by the large amount of information you have to take in and the decisions you need to make.

“ *All I could hear was ‘cancer.’ I heard my doctor say something like, ‘We’re going to start your treatment as soon as possible.’ I didn’t hear one word after that.* ”

The information in this brochure can help you and your family take the first steps in learning about liver cancer.\* A better understanding may give you a feeling of control and help you work with your healthcare team to choose the best care for you.

### **For more information**

You can find more in-depth information about liver cancer on [cancer.ca](http://cancer.ca). Or call us at 1-888-939-3333 to learn more about cancer, diagnosis, treatment, support and services near you.

### **Cancer Basics video series**

Check out our series on common cancer topics. These short, simple videos cover subjects like *What is cancer?* and *Coping when you’re first diagnosed*.

Find the series at [cancer.ca/cancerbasics](http://cancer.ca/cancerbasics).

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\* This brochure is about liver cancer (also called primary liver cancer). It’s not about secondary liver cancer (also called metastatic liver cancer). Secondary liver cancer starts somewhere else and spreads to the liver. For information on secondary liver cancer, call 1-888-939-3333.

## What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of trillions of cells grouped together to form tissues and organs such as muscles, bones, the lungs and the liver. Genes inside each cell tell it when to grow, work, divide and die. Normally, our cells follow these instructions and we stay healthy.

But sometimes the cells grow and divide out of control. After a while, a group of abnormal cells forms a lump (called a tumour).

Tumours can be either non-cancerous (benign) or cancerous (malignant).

- Non-cancerous tumour cells stay in one place in the body and are not usually life-threatening.
- Cancerous tumour cells can grow into nearby tissues and spread to other parts of the body.

It's important to find and treat cancerous tumours as early as possible. In most cases, finding cancer early increases the chances of successful treatment.

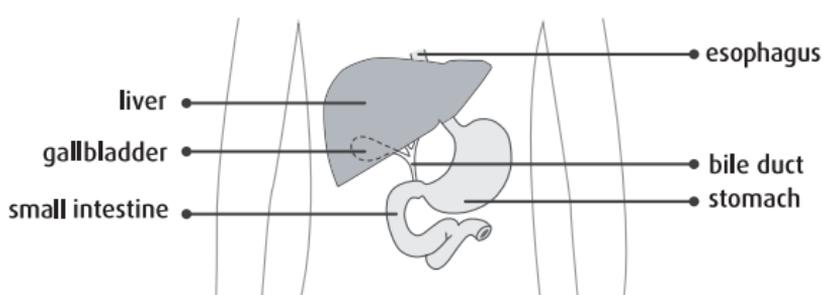
Cancers are named after the part of the body where they start. If cancer spreads to other parts of the body (called metastasis), the cancer still has the same name. For example, cancer that starts in the liver but spreads to the lungs is called liver cancer with lung metastases.

## What is liver cancer?

Liver cancer starts in the cells of the liver. It's also called primary liver cancer. It's not very common.

The liver is part of the digestive system. It is the largest solid organ in the body and is in the upper-right part of the abdomen, just under the rib cage and below the diaphragm.

Location of the Liver



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The liver has 2 lobes. The right lobe is larger than the left lobe. The blood in the liver comes from 2 major sources. The hepatic artery carries the blood that is rich in oxygen from the lungs and heart to the liver. The portal vein carries blood that is rich in nutrients from the intestines to the liver.

The liver plays an important role in digesting the food you eat.

- It collects and filters blood from the intestines.
- It makes bile to help the small intestine digest and absorb fats, cholesterol and vitamins from food.
- It helps the body break down nutrients to use for energy or to repair and build tissue.
- It stores some vitamins and minerals.

- It breaks down alcohol, drugs and other toxins in the blood so they can be removed from the body in poop (stool) and pee (urine).

The liver also helps your blood to clot and stop bleeding when you cut yourself.

The most common type of liver cancer is hepatocellular carcinoma. It starts in the liver cells (called hepatocytes). But liver cancer can also start in the cells that line the bile ducts inside the liver. The bile ducts are tubes that carry bile from the liver to the small intestine. This type of cancer is called intrahepatic bile duct cancer or cholangiocarcinoma. The information in this brochure is about hepatocellular carcinoma, but intrahepatic bile duct cancer is often treated the same way.

## Diagnosing liver cancer

Your doctor may suspect you have liver cancer after hearing about your symptoms, taking your medical history and doing a physical exam.

**Symptoms:** The most common signs and symptoms of primary liver cancer include:

- pain in the upper-right abdomen, which may move up through the right shoulder
- a lump on the right side below the ribs
- nausea
- vomiting
- loss of appetite
- feeling full after a small meal
- unexplained weight loss

You may feel frustrated that it's taking a long time to make a diagnosis, but it's important to rule out other health problems that can also cause these symptoms. To find out for sure if you have liver cancer, your doctor will do one or more of the following tests. These tests may also be used to help plan treatment.

**Blood tests:** Blood is taken to see if the blood cells are normal. Blood tests can also show how well your organs are working and may suggest whether you have cancer and if it has spread. Liver function tests are a group of blood tests that can show how well your liver is working.

**Imaging studies:** The healthcare team uses x-rays, ultrasounds, CT scans or MRIs to look at your tissues, organs and bones in more detail. They can see the size of the tumour and if it has spread. These tests are usually painless, so you don't need a local anesthetic (freezing). In most cases, doctors use a CT scan to diagnose liver cancer.

**Biopsy:** A biopsy may be needed to make a definite diagnosis of cancer. Cells are taken from the body and checked under a microscope. If the cells are cancerous, they will be studied to see how fast they are growing. There are different ways to do a biopsy.

A core needle biopsy uses a large, hollow needle to remove a sample from the tumour. It is the most commonly used biopsy for liver cancer.

**Further testing:** Your doctor may order other tests to diagnose the cancer, see if it has spread or help plan your treatment.

### **Will I be OK?**

Most people with cancer want to know what to expect.

A prognosis is your doctor's best estimate of how cancer will affect you and how it will respond to treatment. It looks at many aspects of the cancer and your situation including:

- the type of cancer and how the cells look and act compared to normal cells
- the size of the tumour and whether it has spread
- your overall health

Even with all this information, it can still be very hard for your doctor to say exactly what will happen. Each person's situation is different.

Your doctor is the only person who can give a prognosis. Ask your doctor about what can affect your prognosis and what it means for you.

### **Staging**

Once liver cancer is diagnosed, it is given a stage. This information helps you and your healthcare team choose the best treatment for you.

Staging is a way to describe or classify the cancer. Staging of liver cancer describes how many tumours are in the liver, the size of the tumours and the amount of liver damage caused by scarring (called cirrhosis). Staging also describes whether cancer cells are found in the large blood vessels in the liver and if the cancer has spread to other parts of the body.

For liver cancer, there are 5 stages – stage 0 followed by stages A, B, C and D.

## Treatments for liver cancer

Your healthcare team considers your general health, the stage of the cancer, how well your liver is working and the amount of scarring in the liver to recommend the best treatments for you. You'll work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

For liver cancer, you might have one or more of the following treatments.

**Surgery:** A decision to have surgery depends on the size of the tumour and where it is. All of the tumour and some healthy tissue around the tumour are removed. This is called a liver resection. A liver transplant may be offered for people who have severe scarring of the liver and whose liver would not work normally after a liver resection. Surgery is done under a general anesthetic (a drug that puts you into a deep sleep so you don't feel pain). You might have to stay in the hospital for several days or longer after the surgery.

After surgery, you may have some pain and nausea. These side effects are usually temporary and can be controlled.

**Radiofrequency ablation (RFA):** RFA uses an electrical current to create heat to destroy cancer cells. RFA works best for small tumours.

After RFA, you may have some pain and a fever.

**Transarterial chemoembolization (TACE):** TACE is a treatment that blocks the blood supply to a liver tumour and delivers chemotherapy directly to it. TACE is offered when the tumour can't be removed by surgery but it hasn't spread to the major blood vessels in the liver or other parts of the body.

After TACE, you may have some pain and a fever.

**Targeted therapy:** Targeted therapy uses drugs to target specific molecules (such as proteins) on the surface of cancer cells. These molecules help send signals that tell cells to grow or divide. By targeting these molecules, the drugs stop the growth and spread of cancer cells while limiting harm to normal cells.

Because targeted therapy doesn't usually damage healthy cells, it tends to cause fewer and less severe side effects than other treatments. Flu-like symptoms and fatigue are common side effects of many targeted therapy drugs.

**Radiation therapy:** Radiation therapy uses high-energy rays or particles to destroy cancer cells. Stereotactic body radiation therapy (SBRT) is a type of external radiation therapy. SBRT delivers very focused beams of high-dose radiation to liver tumours in fewer treatment sessions. Transarterial radioembolization (TARE) is a type of internal radiation therapy. TARE is a treatment that blocks the blood supply to a liver tumour and delivers radiation directly to it.

After radiation therapy, you may have some pain, fatigue and skin problems.

**For more information on treatment**, you may want to read our booklets *Chemotherapy and Other Drug Therapies* (including targeted therapy) and *Radiation Therapy*.

**Immunotherapy:** Immunotherapy helps strengthen or restore your immune system's ability to find and destroy cancer cells. Some immunotherapy drugs make the immune system work harder. Others help the immune system find cancer cells more easily.

**Clinical trials:** Clinical trials test new ways to treat cancer, such as new drugs, types of treatments or combinations of treatments. They provide information about the safety and effectiveness of new approaches to see if they should become widely available. Ask your doctor if any clinical trials are available as a treatment option for you.

**Our brochure** *Clinical Trials* has more information, including how to find a clinical trial.

**Complementary therapies:** Complementary therapies – for example, massage therapy or acupuncture – are used *together with* conventional cancer treatments that are widely used in Canada. Complementary therapies are often used to help ease tension, stress and other side effects of treatment. They don't treat the cancer itself.

If you're thinking about using a complementary therapy, learn as much as you can about the therapy and talk to your

healthcare team. It's possible that the therapy might affect other treatments or test results.

Alternative therapies are used *instead of* conventional cancer treatments. Alternative therapies haven't been tested enough for safety or effectiveness. Using only alternative treatments for cancer may have serious health effects. Talk to your healthcare team before you try an alternative therapy.

## Side effects of treatments

Some cancer treatments cause side effects, such as fatigue, hair loss or nausea. Because treatments affect everyone differently, it's hard to predict which side effects you may have.

Side effects can often be well managed and even prevented. If you're worried about side effects, tell your healthcare team about your concerns and ask questions. They can tell you which side effects you should report as soon as you can and which ones can wait until your next visit.

If you notice any side effects that you didn't expect, talk to a member of your healthcare team as soon as possible. They'll help you get the care and information you need.

## Living with cancer

Many sources of help are available for people with cancer and their caregivers.

**Our booklet** *Coping When You Have Cancer* has more detailed information.

**Your healthcare team:** If you need practical help or emotional support, members of your healthcare team may be able to suggest services in your community or refer you to cancer centre staff or mental health professionals.

**Family and friends:** People closest to you can be very supportive. Accept offers of help. When someone says, “Let me know how I can help,” tell them what they can do. Maybe they can run errands, cook a meal or drive you to your doctor’s office.

**People who’ve had a similar experience:** Talking with and learning from others who’ve had similar experiences can be helpful. Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Try more than one option to see which one works best for you.

**Yourself:** Look after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically. Take some time to find ways to cope. You may also want to talk to a counsellor for more help.

## **Talking to someone who's been there**

If you would like to talk to someone who's had a similar cancer experience, you can connect by phone with a trained volunteer who will listen, provide hope and suggest ideas for coping – all from the shared perspective of someone who's been there.

Register for this free program at [match.cancer.ca](http://match.cancer.ca) or call us at 1-888-939-3333

## **Want to connect with people online?**

If you'd like to join our online community, visit [CancerConnection.ca](http://CancerConnection.ca). You can read news, join discussion groups, get support and help others at the same time. You'll find caring, supportive people there.

## **After treatment**

Follow-up care helps you and your healthcare team follow your progress and your recovery from treatment. At first, you may see one of the specialists from your healthcare team for follow-up care. Later, you may see your family doctor.

The schedule of follow-up visits is different for each person. You might see your doctor more often in the first year after treatment and less often after that. You should tell your doctor as soon as you can about new symptoms or symptoms that don't go away. Don't wait for your next scheduled visit.

The end of cancer treatment may bring mixed emotions. You may be glad the treatments are over and look forward to returning to your normal activities. But you could feel anxious as well. If you're worried about your treatment ending, talk to your healthcare team. They can help you through this transition period.

## What causes liver cancer?

There is no single cause of liver cancer, but some things increase your chance of developing it. These are called risks or risk factors. Some people can develop cancer without any risk factors, while others have some of these factors but do not get cancer.

Risks for liver cancer include:

- cirrhosis (scarring of the liver caused by hepatitis, drinking alcohol or some metabolic disorders)
- infection with hepatitis B or hepatitis C virus
- drinking alcohol
- smoking tobacco
- metabolic disorders, including alpha-1 antitrypsin deficiency
- hemochromatosis (a genetic disorder that causes the liver to store too much iron)
- non-alcoholic steatohepatitis
- overweight and obesity
- coming into contact with aflatoxin (a type of toxin made by moulds and fungi)
- coming into contact with plutonium or vinyl chloride at work
- thorium dioxide (Thorotrast)
- diabetes

## Canadian Cancer Society

*We're here for you.*

When you have questions about treatment, diagnosis, care or services, we will help you find answers.

**Call our toll-free number 1 888 939-3333.**



**Ask** a trained cancer information specialist your questions about cancer. Call us or email [info@cis.cancer.ca](mailto:info@cis.cancer.ca).



**Connect** with people online to join discussions, get support and help others. Visit [CancerConnection.ca](http://CancerConnection.ca).



**Browse** Canada's most trusted online source of information on all types of cancer. Visit [cancer.ca](http://cancer.ca).

Our services are free and confidential. Many are available in other languages through interpreters.

### **Tell us what you think**

Email [cancerinfo@cancer.ca](mailto:cancerinfo@cancer.ca) and tell us how we can make this publication better



## What we do

The Canadian Cancer Society helps people live their lives to the fullest.

- We do everything we can to help prevent cancer.
- We fund groundbreaking research on many types of cancer.
- We empower, inform and support Canadians living with cancer.
- We advocate for public policies to improve the health of Canadians.
- We unite people to help achieve our vision of a world where no Canadian fears cancer.

Contact us for up-to-date information about cancer and our services or to make a donation.



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