

Liver Cancer

Information for people living with cancer

This information should not be used to diagnose yourself or in place of a doctor's care.

Primary liver cancer is very different from cancer that has spread to the liver from somewhere else in your body (secondary or metastatic liver cancer). There is another page about secondary liver cancer: www.bccancer.bc.ca/health-info/types-of-cancer/digestive-system/liver-secondary

Other names for liver cancer: primary carcinoma of the liver, hepatocellular cancer, and hepatoma.

The liver does many things in your body:

- Removes toxins from your blood.
- Makes bile and enzymes to help with digestion.
- Makes proteins that help the blood clot.
- Controls the level of cholesterol in the body.
- Stores glycogen (sugar) which your body uses for energy.

Your liver is your body's largest internal organ. It can weigh up to 1.8 kg (4 pounds).

Your liver is on the upper right side of your abdomen. Image of liver:

<https://visualsonline.cancer.gov/retrieve.cfm?imageid=9077&dpi=72&fileformat=jpg>

Diagnosis and Staging

What are the signs and symptoms of liver cancer?

There are usually no symptoms in the early stages of liver cancer.

Common symptoms in people with later stage liver cancer include:

- Unexplained weight loss.
- Loss of appetite.

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- Pain and swelling in your abdomen.
- Fever.
- Jaundice (when your skin and the whites of your eyes turn yellow).
- Fatigue.
- Weakness.
- If the cancer has spread to other parts of your body (metastasis), you may have bone pain, a cough or gastrointestinal bleeding.

If you have any signs or symptoms that you are worried about, please talk to your family doctor or nurse practitioner.

How is liver cancer diagnosed?

Liver cancer is usually not diagnosed until it is in an advanced stage.

Tests that may help diagnose liver cancer include:

- **Liver function test** (blood tests)
- **Imaging tests to see the tumour and if the cancer has spread:**
 - **Liver scan**
 - **Chest x-ray**
 - **Bone scan**
 - **Ultrasound**
 - **CT** (computed tomography) **scan**
 - **MRI** (magnetic resonance imaging)
 - **PET** (positron emission tomography)
 - **Angiography:** a special dye is injected into a small tube that is put into your artery. X-ray pictures are then taken to see the arteries.
 - **Laparoscopy:** A laparoscope is a thin tube with a light and camera on it. It is put through a cut made in your abdomen. This procedure is done under general anesthetic.

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- **Abdominal exploratory surgery:** when a surgeon looks in your abdomen to see if there is any cancer.
- **A biopsy** is usually only done for liver cancers that cannot be removed by surgery.
- **Alpha-fetoprotein (AFP) blood test:** This may be helpful but about 30% of people with liver cancer do not have high amounts of AFP in their blood.

For more information on tests used to diagnose cancer, see our Screening and Diagnosis pathfinder: bccancer.libguides.com/pathfinder-screening

What are the types of liver cancer?

Hepatocellular carcinoma

- 90% (90 out of 100) of liver cancers.
- 30-70% (30-70 out of 100) of people with this type of liver cancer have cirrhosis (scarring of the liver caused by liver disease).
- 7% (7 out of 100) of these cancers start in the liver's bile ducts (tubes that carry bile from the liver and gallbladder to the small intestine).

Fibrolamellar carcinoma

- An unusual type of hepatocellular carcinoma.
- Most common in young women [see note below, Statistics].
- Has a slightly better prognosis (how well your treatment is expected to work and how long you are expected live) than other hepatocellular carcinomas.

Angiosarcoma

- Very rare.
- Linked to polyvinylchloride (PVCs) and other industrial toxins like PVCs.

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What are the stages of liver cancer?

Staging describes the cancer. Staging is based on how much cancer is in the body, where it was first diagnosed, if the cancer has spread and where it has spread to.

The stage of the cancer can help your health care team plan your treatment. It can also tell them how your cancer might respond to treatment and the chance that your cancer may come back (recur).

Hepatocellular carcinoma staging is based on three things:

1. **Child-Pugh classification score:** Measures damage to your liver caused by cirrhosis (scarring). For more information: www.healthline.com/health/child-pugh-classification
2. **Tumours:** Number of tumours, size of tumours, if tumours are causing symptoms and where the cancer has spread to.
3. **Performance status:** Measures how well you can do your normal daily activities. Called an ECOG (Eastern Cooperative Oncology Group) score. For more information about ECOG score: ecog-acrin.org/resources/ecog-performance-status

Hepatocellular carcinoma staging:

- **Stage 0 (very early stage):**
 - One tumour (cancer growth) that is 2 cm (1 inch) or smaller.
 - Tumour has not grown into nearby large blood vessels.
 - No symptoms.
 - Child-Pugh A.
 - ECOG 0.
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- **Stage A (early stage):**
 - Up to 3 tumours that are all smaller than 3 cm (just over 1 inch).
 - Tumours have not grown into nearby large blood vessels.
 - No symptoms.

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- Child-Pugh A or B.
- ECOG score 0.
- **Stage B (intermediate stage):**
 - More than 3 tumours or 1-3 tumours with at least 1 that is larger than 3 cm.
 - Tumours have not grown into nearby large blood vessels.
 - No symptoms.
 - Child-Pugh A or B.
 - ECOG score 0.
- **Stage C (advanced stage):**
 - Tumour has grown into large blood vessels in the liver or cancer has spread to other parts of the body.
 - Causing symptoms.
 - Child-Pugh A or B.
 - ECOG score 1 or 2.
- **Stage D (end stage):**
 - Tumour may have grown into large blood vessels in the liver or cancer may have spread to other parts of the body.
 - Causing symptoms
 - Child-Pugh C.
 - ECOG 3 or 4.

For more information on staging, see our About Cancer page:

bccancer.bc.ca/health-info/types-of-cancer/about-cancer

Treatment

What is the treatment for liver cancer?

Cancer treatment may be different for each person. It depends on your particular cancer. Your treatment may be different from what is listed here.

Treatment for liver cancer depends on the stage of your disease.

Stage 0 treatment options

- **Liver resection (partial hepatectomy):** the part of your liver with cancer is removed.
- **Liver transplant:** your entire liver is removed and you are given a new liver.
- **Radiofrequency ablation:** Uses electrical current to heat and kill the cancer cells in the liver.

Stage A treatment options

- **Liver transplant.**
- **Radiofrequency ablation.**
- **Percutaneous ethanol injection:** ethanol alcohol is injected into the tumour to kill cancer cells.

Stage B treatment options

- **Transarterial Chemoembolization (TACE):** systemic therapy (chemotherapy) drugs are delivered to the tumour through a tube put into the hepatic artery. This treatment blocks the blood supply to the tumour.
- **Transarterial radioembolization (TARE):** radiation is delivered directly to the tumour. This treatment blocks the blood supply to the tumour.
- **Stereotactic ablative radiation therapy (SABR):** a type of radiation that uses special equipment to position you for treatment. The equipment allows the radiation to be given in a more precise way.

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Stage C treatment options

- **Targeted therapy:** drugs that treat specific molecules, such as proteins, on or inside cancer cells.

Stage D treatment options

- The cancer is very advanced and there are no treatments.
- Treatments focus on relieving your pain and other symptoms (palliative care). The goal is to make you more comfortable.

For more information about radiation therapy go to:

bccancer.bc.ca/our-services/treatments/radiation-therapy

For more information about systemic therapy go to:

[bccancer.bc.ca/our-services/treatments/systemic-therapy-\(chemotherapy\)](http://bccancer.bc.ca/our-services/treatments/systemic-therapy-(chemotherapy))

What is the follow-up after treatment?

- Follow-up testing and appointments are based on your type of cancer.
- Guidelines for follow-up after treatment for liver cancer are on our website: www.bccancer.bc.ca/health-professionals/clinical-resources/cancer-management-manual/gastrointestinal/liver#Follow-Up-liver
- These are guidelines written for your doctor, nurse practitioner or specialist. You can look at them to see what appointments and tests you might need after treatment.
- After treatment, you may return to the care of your family doctor or specialist for regular follow-up. If you do not have a family doctor, please talk to your BC Cancer health care team.

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- If you had a resection (your cancer was removed), you should see your doctor every 3-6 months for the first two years after treatment. At each visit, you should have blood tests and liver imaging. After this, you should see your doctor each year for the rest of your life as you are at risk of the cancer coming back.
- If you had a liver transplant, you should be followed at a transplant centre.
- The BC Cancer Life after Cancer page has information on issues that cancer survivors may face: bccancer.bc.ca/lifeaftercancer

More Information

What causes liver cancer and who gets it?

These are some of the risk factors for this cancer. Not all of these risk factors may cause this cancer, but they may help the cancer start growing.

- Primary liver cancer is rare in North America. Only 1-2% (1-2 out of 100) of all cancers in North America are primary liver cancers. In Africa and parts of Asia, liver cancer is one of the most common cancers.
- Most people who get liver cancer in North America are of late middle age or older. In Africa, the disease usually occurs in young adulthood or early middle age.
- Men are twice as likely as women to develop liver cancer. [see note below, Statistics]
- Infection with hepatitis B or hepatitis C.
- Cirrhosis of the liver (damage to the liver). A person with cirrhosis of the liver is 40 times more likely to develop cancer than a person with a normal liver. Cirrhosis can develop from exposure to toxins, alcoholism, and viral or parasitic infections.

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- Exposure to certain hazardous materials. Some of these materials include Thorotrast (once used in X-ray exams, but not used anymore), aflatoxin (made by some moulds), A20 compounds, and PVCs (polyvinyl chlorides).
- Hemochromatosis: a condition in which the liver stores too much iron.
- Oral estrogens, particularly those used in birth control pills, are only associated with a small risk of liver cancer, unless the person has a history of liver cancer. Oral estrogens have been associated with benign liver tumours which may cause bleeding problems.
- Using oral steroids.

Statistics on liver cancer

- B.C. statistics: www.bccancer.bc.ca/health-info/disease-system-statistics/statistics-by-cancer-type
- Canada statistics: www.cancer.ca/en/cancer-information/cancer-type/liver/statistics/?region=bc

Note: Available statistics do not have information about the inclusion of transgender and gender diverse participants. It is unknown how these statistics apply to transgender and gender diverse people. Patients are advised to speak with their primary care provider or specialists about their individual considerations and recommendations.

Can I help prevent liver cancer?

Here are some things you can do to lower your risk of liver cancer:

- **Do not drink too much alcohol:** Not drinking alcohol at all will lower your cancer risk the most.
 - Visit the BC Cancer's Alcohol and Cancer Prevention page:
www.bccancer.bc.ca/health-info/prevention/alcohol

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- **Get your Hepatitis B vaccination.** Hepatitis B may cause cirrhosis. Learn more about Hepatitis B vaccination on the Immunize BC website: immunizebc.ca/hepatitis-b
- If you have a family history of Hepatitis B virus, babies in your family should be vaccinated at birth while still in the hospital. Follow-up doses are given by public health nurses.

Is there screening for liver cancer?

There is no screening program for this cancer.

Where can I find more information?

- If you have questions about liver cancer, please talk to your health care team.
- Our librarians can help you find the information you need. Visit our Library page: bccancer.bc.ca/our-services/services/library
- BC Cancer Library Liver Cancer (primary) pathfinder: bccancer.libguides.com/pathfinder-liver
- Managing Your Symptoms: www.bccancer.bc.ca/health-info/coping-with-cancer/managing-symptoms-side-effects
- Emotional Support: www.bccancer.bc.ca/health-info/coping-with-cancer/emotional-support