

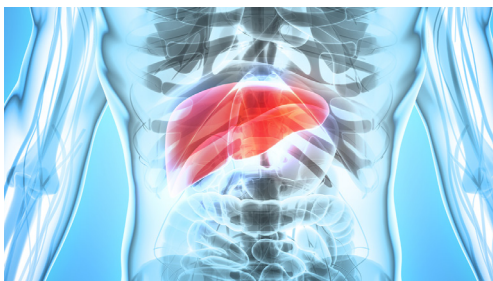
AMERICAN  
**LIVER**  
FOUNDATION™



# Liver Cancer



*Be a Liver of Life!™*



## Why is the liver important?

The liver is the largest solid organ in your body and is located under your rib cage on the right side. It weighs about three pounds and is shaped like a football that is flat on one side.

The liver performs many jobs in your body. It processes what you eat and drink into energy and nutrients for your body to use. The liver also removes harmful substances from your body.

## What is liver cancer?

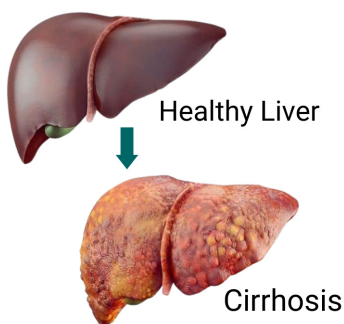
Liver cancer is the growth and spread of unhealthy cells in the liver. Cancer that starts in the liver is called primary liver cancer, or simply liver cancer. Primary liver cancer is also called hepatocellular carcinoma, or HCC. Cancer that spreads to the liver from another organ is called metastatic cancer to the liver.

About 42,000 Americans are diagnosed with liver cancer each year. Primary liver cancer is the most rapidly growing cause of cancer deaths in the U.S. with rates more than doubling since 1980. It is also about twice as common in men than in women.

## What causes liver cancer?

- Viral hepatitis B can lead to liver cancer with or without cirrhosis (scarring of the liver).
- Viral hepatitis C can lead to liver cancer in patients who have cirrhosis.

- Excessive alcohol use can cause cirrhosis, known as alcoholic cirrhosis. Cirrhosis can progress to liver cancer.
- Morbid obesity and diabetes are closely associated with liver diseases like nonalcoholic fatty liver disease (NAFLD) and the progressed form of NAFLD known as nonalcoholic steatohepatitis (NASH). Having NAFLD/NASH can increase the risk of liver cancer.
- Certain inherited metabolic diseases can lead to liver cancer.
- Exposure to certain toxins may be a risk for liver cancer.



## What are the symptoms of liver cancer?

Symptoms of liver cancer may include:

- Fatigue and/or weakness
- Bloating and/or feeling of fullness
- Pain on the right side of the upper abdomen or back and shoulder
- Nausea
- Loss of appetite
- Weight loss
- Jaundice (yellowing of eyes and skin) and dark urine

## How is liver cancer diagnosed?

A physical examination or imaging tests may suggest liver cancer. To confirm a diagnosis, doctors may use blood tests

and different forms of imaging including but not limited to ultrasounds; computed tomography (CT) scans; and magnetic resonance imaging (MRI). Liver biopsy may also be needed, especially if there is no intention of removing the cancer. During a biopsy, a small piece of liver tissue is removed and studied to confirm the diagnosis of liver cancer. Often, genetic testing analysis of the cancer is also performed. This may help suggest certain therapies, if needed.

## How is liver cancer treated?

Liver cancer treatment depends on:

- The liver's condition and extent of cirrhosis
- The extent of the cancer in the liver including but not limited to size, location and number of tumors
- Involvement of blood vessels supporting the liver
- Whether the cancer has spread outside the liver or been contained within the liver
- The overall health of the patient and other risk factors for liver cancer

If the cancer has not spread and the rest of the liver is healthy, curative options may include:

- Liver transplant (replacing the liver)
- Partial hepatectomy or segmentectomy (surgery to remove a portion of the liver or a tumor from the liver)
- Radiofrequency ablation (inserting a thin probe through the skin and into the tumor to heat and destroy cancer cells)

If the cancer is still limited to the liver but is unresponsive to any of the above curative therapies, treatments may include:

- Bland embolization, chemoembolization or

radioembolization of the blood vessels near the tumor (procedures to block the blood supply to the tumor, either with or without use of anti-cancer medications)

- Radiation therapy (high-energy x-rays) to destroy cancer cells

If the cancer has spread outside of the liver, or if still localized but not responsive to any of the above, treatment options may include separately or in combination:

- Oral (by mouth) biologic anti-cancer medication
- Immunotherapy
- Clinical trials (scientific studies to test new medications not yet available to the public)
- Other options as suggested by your doctor

## **What is the outlook for patients with liver cancer?**

A successful liver transplant, surgical resection or radiofrequency ablation will effectively cure liver cancer, but it is an option for only a small percentage of patients. Surgical resections are successful in about one out of three cases. However, scientists are experimenting with several promising new treatments that could help prolong the lives of people with liver cancer.



## What is the best way to reduce the risk of liver cancer?

To reduce your risk of liver cancer, consider these recommendations:

- Prevent exposure to hepatitis B (through blood and body fluids) by ensuring vaccination for all newborns, and for adults who are not vaccinated and at risk. Prevent exposure to hepatitis C (through blood) from other people by accident (e.g. needle stick injuries).
- If you have hepatitis B or hepatitis C, talk to your doctor about getting treated for those diseases.
- Discuss your cancer risk with your doctor if you are overweight; obese; have diabetes; or drink heavily.
- If you have chronic liver disease or cirrhosis, regularly see a doctor who specializes in liver disease (gastroenterologist or hepatologist) and follow recommendations for treatment and liver cancer screenings.



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## **National Helpline**

1-800-GO-LIVER (1-800-465-4837)

[liverfoundation.org](http://liverfoundation.org)  
[info@liverfoundation.org](mailto:info@liverfoundation.org)

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