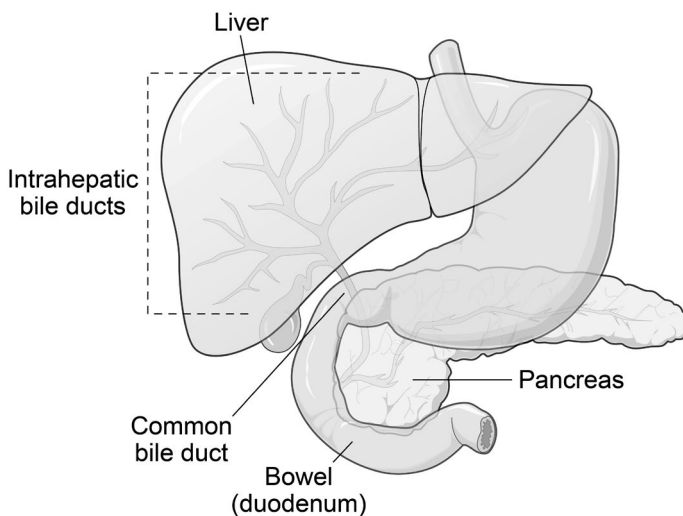


Liver Cancer

This handout will tell you about the risk factors, symptoms and treatment options for liver cancer, or hepatocellular carcinoma (HCC).

What is the liver?

The liver is the largest organ inside the body. It breaks down food. The liver has many other functions. It collects and filters blood from the intestines. It also removes toxic wastes from the body. It stores energy and makes proteins. You cannot live without a liver.



Causes and Symptoms

What is liver cancer?

Cancer starts when normal cells change and grow out of control. They form a mass called a tumor. A tumor can be cancerous or benign. A cancerous tumor is malignant. This means it can spread to other parts of the body. A benign tumor will not spread.

What are the risk factors for liver cancer?

- **Alcohol use:** Heavy drinking can cause cirrhosis of the liver. Cirrhosis damages the liver cells causing scar tissue.
- **Non-alcoholic fatty liver disease (NAFLD):** Obesity or diabetes can cause fat to build up in the liver.
- **Viral hepatitis:** Hepatitis viruses can infect the liver. The 2 most common types are Hepatitis B and Hepatitis C.
- **Age:** Liver cancer occurs most often in people older than 60.
- **Gender:** Men are more likely than women to get liver cancer.
- **Chemical exposure:** Being exposed to certain chemicals may increase risk.
- **Race and ethnicity:** Asian Americans and Pacific Islanders have higher rates of liver cancer.

What are the symptoms of liver cancer?

- Pain in the top right belly area, or near the right shoulder blade or in the back
- Unexplained weight loss
- Weakness or fatigue
- Decrease in appetite
- Nausea and vomiting
- Yellowing of the skin and eyes (jaundice)
- Swelling in the belly (ascites) or bloating

What are symptoms of bile duct cancer?

- Lighter or chalky colored stool
- Darker, cola-colored urine

Can liver cancer be cured?

The chances of your cancer being cured depend on:

- the stage when it is found,
- if the cancer has spread, and
- if the cancer is a new diagnosis or has come back.

Diagnosis and Staging

How is it diagnosed?

- **History and physical exam:** A health care provider will review your symptoms, health habits, past illnesses and treatments.
- **Blood tests:** Blood tests can check liver function and check for hepatitis. You may also have your alpha-fetoprotein (**AFP**) level checked as levels may be high with liver cancer.
- **Ultrasound:** This test uses sound waves to create a picture of the liver.
- **CT scan:** This test takes pictures of the inside of the body after drinking or injecting special dye.
- **MRI:** This uses a magnet, radio waves and a computer to take pictures of the inside of the body.
- **Angiogram:** This test takes an x-ray picture of the blood vessel in the liver after injecting dye into the bloodstream.
- **Laparoscopy:** This is a surgery done with a scope that lets the surgeon check the belly for signs of cancer.
- **Biopsy:** This test checks tissue under a microscope to look for cancer. Biopsies may be done during surgery or a procedure with the help of a CT scan or ultrasound.

How is liver cancer staged?

Staging describes where the cancer is located. It tells us where it has spread to see if cancer is in other parts of the body. Knowing the stage helps to decide on treatment options. It can help predict outcome.

One tool doctors use to describe the stage is the **TNM** system. **Tumor (T)**- How large is the tumor? Where is it located? **Node (N)**- Has the tumor spread to lymph nodes? **Metastasis (M)**- Has the cancer spread to other parts of the body?

Other Staging Terms

- **Localized resectable-** The cancer is only in one place in the liver. Other parts of the liver are healthy. Resectable means it can be removed with surgery.
- **Localized unresectable-** The cancer is found in only one part of the liver. But it cannot be removed by surgery.
- **Advanced-** Cancer has spread throughout the liver and/or to other parts of the body.
- **Recurrent-** This is a cancer that has come back after treatment.

Treatment

How is liver cancer treated?

Treatment options depend on:

- If the cancer is only in the liver
- Where it started or spread
- Overall health
- Future damage to nonaffected area.

Surgery

Surgery involves removing the tumor and tissue around the tumor.

- **Hepatectomy:** This is when a part of the liver is removed. This is done when the cancer is only in one part of the liver and the liver works well.

- **Liver transplant:** This is done only when the cancer has not spread out of the liver. A donor who meets very specific criteria needs to be found.

Thermal Ablation

This treatment uses heat from radiofrequency ablation (**RFA**) and microwave therapy to kill cancer cells. It may be given through the skin. It can also be done through laparoscopy or during a surgery while you are asleep.

Chemoembolization

This treatment involves injecting medicine into the artery that enters the liver (hepatic artery). The flow of the blood through this artery is blocked for a short time. This allows the medicine to stay in the tumor longer. This also decreases the blood supply to the tumor.

Radiation Therapy

This treatment uses high energy x-rays or other types of radiation to kill or slow the growth of cancer cells. Radiation treats a very specific area. This is called regional therapy.

Targeted Therapy

This treatment targets a specific function of the cancer cell. This treatment most often comes in pill form. In liver cancer, this treatment stops new blood vessels from

forming. This blocks the growth and spread of cancer cells.

Chemotherapy

This treatment uses medicine to kill cancer cells or stop them from dividing. Chemotherapy can be injected through a vein using an IV or taken by mouth in the pill form. The medicine enters the bloodstream and can kill each cancer cell throughout the body. This is called **systemic** therapy.

Clinical Trials

You may have the chance to take part in a clinical trial. Clinical trials are controlled research studies. They are voluntary. Clinical trials help to find out if new cancer treatments are safe and effective. They may find better treatments for cancer than the standard treatments.

Follow-up Tests

During your treatments you will need blood tests and scans to see how well the treatment is working. These tests help guide decisions to keep going, stop, or change treatments.

You will also have blood tests and scans after you have finished your treatments. These tests can show if your condition has changed, or the cancer has come back.