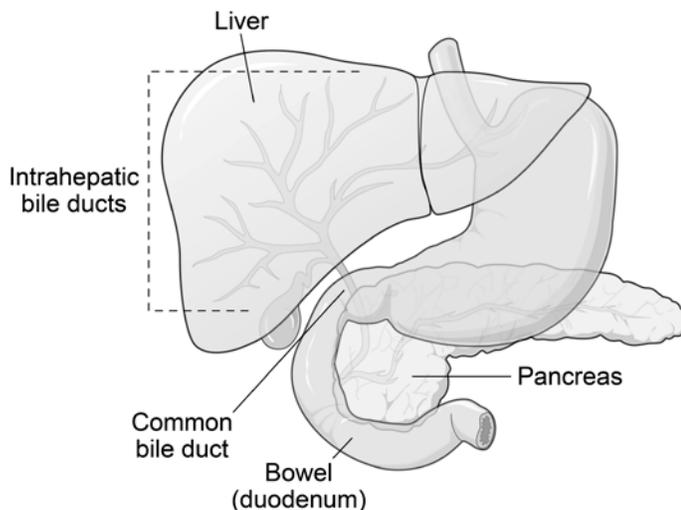


Hepatocellular Carcinoma (HCC)

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. No one survives without a liver.



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 is HCC?

HCC is a primary liver cancer. In the United States, about 33,000 adult cases are found each year. Liver cancer is much more common in developing countries within Africa and Asia.

What are the risk factors for HCC?

- Excessive alcohol use/cirrhosis of the liver- Liver cells are damaged. They are replaced by scar tissue.
- Non-alcoholic fatty liver disease (NAFLD)- Fat builds up in the liver. It may be caused by obesity or diabetes.
- Viral Hepatitis- Hepatitis viruses can infect the liver. The 2 most common types are Hepatitis B and Hepatitis C.
- Age- Occurs most often in people older than 60.
- Gender- Men are more likely than women to get HCC.
- Environmental factors- Certain chemical exposures may increase risk.
- Race and ethnicity- Rates are highest in Asian Americans and Pacific Islanders.

What are the symptoms of HCC?

- Pain: Mainly in the top right belly area. Can also be near the right shoulder blade or in the back.
- Unexplained weight loss
- Weakness or fatigue
- Decrease in appetite
- Nausea and vomiting
- Jaundice: Yellowing of the skin and eyes. Occurs when the liver does not work right.
- Swelling in the belly (ascites) or bloating

What are symptoms of bile duct cancer?

- Changes in stool or urine color- Stool may look lighter or chalky in color. Urine may look dark (like cola).

What is the prognosis?

The prognosis (chance of recovery) depends on:

- The stage when it is found.
- If the cancer has spread.
- If the cancer is a new diagnosis or has come back.

How is it diagnosed?

- **History and physical exam-** A review of symptoms, health habits, past illnesses and treatments.
- **Blood tests-** Blood tests can check liver function. A hepatitis panel may also be done. For **HCC**, a test for alpha-fetoprotein (**AFP**) is done. AFP is high in 50-70% of people with HCC.
- **Ultrasound-** Uses sound waves to create a picture of the liver.
- **CT scan-** A series of computerized pictures of the inside of the body. This is taken after drinking or injecting into a vein special dye.
- **MRI-** This uses a magnet, radio waves and a computer to take pictures of the inside of the body.
- **Angiogram-** A X-ray picture of the blood vessels. A dye is injected into the bloodstream. This shows blood vessels of the liver on x-ray.
- **Laparoscopy-** A surgery done with a scope. This lets the surgeon check the belly cavity for signs of cancer.
- **Biopsy-** Checks tissue under a microscope. This shows if it is cancer and where it came from. Biopsies may be done during surgery or during a procedure with the help of a CT scan or ultrasound.

How is HCC staged?

Staging describes where the cancer is located. It looks if or where it has spread. It looks at if it affects other parts of the body. Knowing the stage helps to decide on treatment options. It can help predict prognosis. 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.

How is HCC treated?

Treatment options depend on if the cancer is only in the liver, where it started or spread, overall health, and future damage to nonaffected area.

Surgery- Removal of the tumor and surrounding tissue during an operation

- **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 Transplantation-** This is done only when the cancer has not spread out of the liver. A suitable donor needs to be found. Very specific criteria need to be met.

Thermal ablation- Radiofrequency ablation (**RFA**) and microwave therapy both use heat 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 is a type of treatment in which drugs are injected 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 drugs to stay in the tumor longer. This also decreases the blood supply to the tumor.

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

Targeted Therapy- This is most often given in a pill form. The treatment targets a specific function of the cancer cell. In HCC, this therapy stops new blood vessels from forming. This blocks the growth and spread of cancer cells.

Chemotherapy- Drugs are used to kill cancer cells or stop them from dividing. Chemotherapy can be injected **intravenously (IV)** or taken **orally** in the pill form. It enters the bloodstream. It 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. They 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.

Blood tests and scans will be done from time to time after you have finished your treatments. They can show if your condition has changed or the cancer has recurred, or come back.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 3/2018 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#7755