

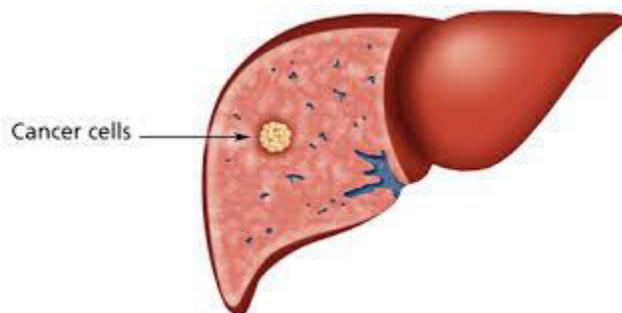
## LIVER CANCER

### OVERVIEW:

Liver cancer is cancer that begins in the cells of liver. Liver is a football-sized organ that sits in the upper right portion of your abdomen, beneath your diaphragm.

Several types of cancer can form in the liver. The most common type of liver cancer is hepatocellular carcinoma, which begins in the main type of liver cell (hepatocyte). Other types of liver cancer, such as intrahepatic cholangiocarcinoma and hepatoblastoma, are much less common.

Not all cancers that affect the liver are considered liver cancer. Cancer that begins in another area of the body — such as the colon, lung or breast — and then spreads to the liver is called metastatic cancer of the liver. And this type of cancer is named after the organ in which it began — such as metastatic colon cancer to describe cancer that begins in the colon and spreads to the liver. Cancer that spreads to the liver is more common than cancer that begins in the liver cells.



### SYMPTOMS:

- Symptoms develop in later stages
- Losing weight without trying

- Loss of appetite
- Upper abdominal pain
- Nausea and vomiting
- General weakness and fatigue
- Abdominal swelling
- Yellow discoloration of your skin and the whites of your eyes (jaundice)
- White, chalky stools

### **Risk factors**

Factors that increase the risk of primary liver cancer include:

- Chronic infection with the hepatitis B virus (HBV) or hepatitis C virus (HCV).
- Cirrhosis of liver.
- inherited liver diseases like hemochromatosis and Wilson's disease.
- Nonalcoholic fatty liver disease.
- Exposure to aflatoxins. Crops such as corn and peanuts can become contaminated with aflatoxins
- Excessive alcohol consumption.

### **Diagnosing liver cancer**

Tests and procedures used to diagnose liver cancer include:

- **Blood tests.** Blood tests may reveal liver function abnormalities.

- **Tumor Markers:** These are the substances that tend to increase in the blood when cancer is there. Some markers are specific such as Alpha Feto Protein (AFP). These help in diagnosis and prognostication and monitoring the treatment response.
- **Imaging tests.** Tests such as an ultrasound, computerized tomography (CT) scan and magnetic resonance imaging (MRI).
- **Liver biopsy:** Removing a sample of liver tissue and examine the tissue under a microscope to look for cancer cells. Liver biopsy carries a risk of bleeding, bruising and infection.

### **Treatment:**

#### **Surgery**

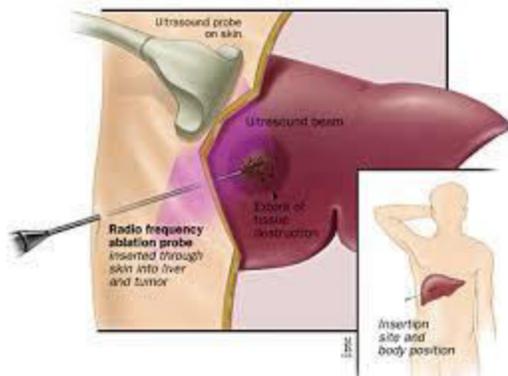
Operations used to treat liver cancer include:

- **Surgery to remove the tumor.** Depends on the location of cancer within the liver, how well the liver functions and the overall health.
- **Liver transplant surgery.** During liver transplant surgery, diseased liver is removed and replaced with a healthy liver from a donor. Liver transplant surgery is only an option for a small percentage of people with early-stage liver cancer.

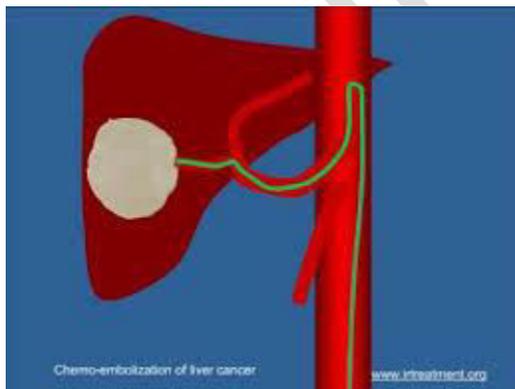
#### **LOCALIZED TREATMENTS**

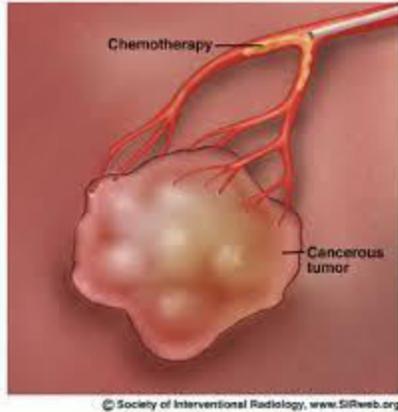
Localized treatments for liver cancer are those that are administered directly to the cancer cells or the area surrounding the cancer cells. Localized treatment options for liver cancer include:

- **RADIOFREQUENCY ABLATION:** Heating cancer cells. Here electric current is used to heat and destroy cancer cells. Using an ultrasound or CT scan as a guide, surgeon inserts one or more thin needles into the tumor, they're heated with an electric current, destroying the cancer cells.



- **CRYOABLATION:** Freezing cancer cells. uses extreme cold to destroy cancer cells.
- **INJECTING ALCOHOL INTO THE TUMOR:** During alcohol injection, pure alcohol is injected directly into tumors. Alcohol causes the tumor cells to die.
- **TRANSARTERIAL CHEMOEMBOLISATION(TACE):** Injecting chemotherapy drugs into the liver. Chemoembolization is a type of chemotherapy treatment that supplies strong anti-cancer drugs directly to the liver.





- **Placing beads filled with radiation in the liver.** Tiny spheres that contain radiation may be placed directly in the liver where they can deliver radiation directly to the tumor.

Omega Hospitals with its experienced team of specialists in Interventional Radiologists, Surgical Oncologists and Nuclear medicine specialists offers you complete and comprehensive care for the control of Liver cancer.

### **Radiation therapy**

This treatment uses high-powered energy from sources such as X-rays and protons to destroy cancer cells and shrink tumors. Doctors carefully direct the energy to the liver, while sparing the surrounding healthy tissue.

During external beam radiation therapy treatment, you lie on a table and a machine directs the energy beams at a precise point on your body.

A specialized type of radiation therapy, called stereotactic radiosurgery, often called Stereotactic Body radiation therapy (SBRT) if it is done in extracranial locations involves focusing many beams of radiation simultaneously at one point in your body. SBRT has evolved as an excellent alternative to surgery in localized hepatocellular cancers and solitary metastasis without any side effects.

Omega Hospital, with its state of the art technology offers SBRT by Cyberknife. Combined with fiducial and respiratory tracking abilities, Cyberknife is the best in class for the delivery of SBRT high doses without any or minimal side effects.

Omega hospitals is the only hospital in the twin states of Telangana and Andhra Pradesh which has **CYBERKNIFE** ROBOTIC Radio-surgical System

- It is the World's first and only ROBOTIC Radiosurgery system designed to treat tumors anywhere in the body
- The only system that can continuously track (by real time imaging), detect and correct the tumor and patient movement throughout the treatment
- Can deliver High doses of radiation in 1-5 fractions thereby reducing the overall treatment duration and minimizing the patient discomfort
- Delivers radiation with submillimeter geometric accuracy and a mechanical precision of <0.06mm
- Utilizes image guidance technology and computer controlled robotics to deliver radiation and hence it is a frameless non-invasive system

### **Targeted drug therapy**

Targeted drugs work by interfering with specific abnormalities within a tumor. They have been shown to slow or stop advanced hepatocellular carcinoma from progressing for a few months longer than with no treatment.

More studies are needed to understand how targeted therapies, such as the drug sorafenib may be used to control advanced liver cancer.