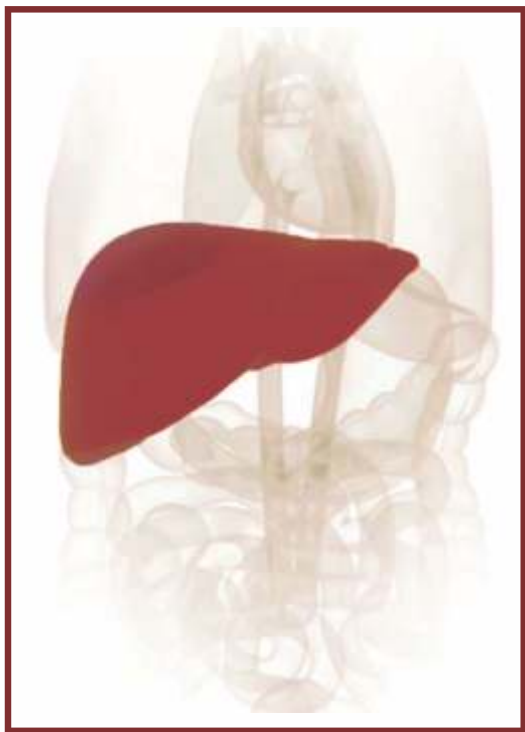


Liver Cancer



Primary Liver Cancer



Primary liver cancer

Liver cancer is described as either primary, when the cancer starts in the liver itself, or secondary, when the cancer starts elsewhere in the body but spreads (metastasizes) to the liver. This booklet looks only at the most common type of primary liver cancer which is called hepatocellular carcinoma (HCC). Worldwide, the number of people getting HCC is increasing – it is the fifth most common cancer in men and the seventh most common cancer in women.

What causes liver cancer?

There are several risk factors as below :

- **Cirrhosis of liver:** Cirrhosis, or scarring can lead to liver cancer. Over 80 percent of liver cancer cases are linked to cirrhosis.
- **Chronic infection with hepatitis B and C viruses:**
About 10% of hepatitis B patients become carriers and they have an increased risk of developing HCC.
A person is a carrier when his hepatitis B surface antigen (HBSAg) blood is positive. Infection with hepatitis C can also lead to HCC formation. Hepatitis B can lead to liver cancer without cirrhosis.
- **Alcohol:** Excessive consumption of alcohol leads to liver cirrhosis and risk of HCC.
- **Smoking:** is another probable risk factor, especially among people who abuse alcohol and have cirrhosis.
- **Obesity:** also appears to be linked to primary liver cancer.
- **Family history:** of liver cancer.
- **Aflatoxin:** A poisonous substance produced by a fungus found in grains.
- **Chemicals:** such as nitrites, hydrocarbons, solvents, vinyl chloride are known carcinogens linked to HCC.
- **Inherited conditions:** which cause liver cirrhosis e.g. Haemochromatosis, Wilson's disease.

Who are in the high-risk group and is there any screening method for liver cancer?

People are at a higher risk of developing HCC if they carry hepatitis B or C virus, or have liver cirrhosis. According to age, family history, presence of cirrhosis

and other clinical parameters, they should consult their doctors and consider cancer surveillance with screening for alpha - fetoprotein (AFP) or ultrasonography every 6 months. Liver cancer is usually asymptomatic in its early stage. It would be too late for cure once symptoms appear. For high-risk individuals, regular checks are important for early detection.

What are the symptoms of liver cancer?

Liver cancer is usually asymptomatic in its early stage. It is already in late stage if the following symptoms appear:

- Upper abdominal pain • Weight loss • Poor appetite
- Fatigue • Swelling of ankles • Ascites • Jaundice

How is liver cancer diagnosed?

Liver cancer may be discovered in a routine checkup if the doctor feels hard lumps in the abdomen, or incidentally by imaging studies. To confirm a diagnosis of liver cancer, doctors would use blood tests (AFP, PIVKA-II); ultrasound; computer tomography (CT) scans and magnetic resonance imaging (MRI). Doctors may find it necessary to do a biopsy, where a small sample of liver tissue is removed with a needle and then examined for cancer cells.

How will the course of treatment be decided for liver cancer?

The treatment planning is complex and involves a multi-disciplinary team which includes doctors who are specialized in the treatment of liver cancer. The team includes a liver surgeon, a hepatologist (physician), an oncologist, a radiologist and a pathologist. The team takes into consideration various aspects including the stage of the disease, the presence or absence of cirrhosis, if present, and the general condition of the patient. The severity of cirrhosis is determined by a scoring system called the "Child Pugh" scoring system. By this system, points are allotted based on serum bilirubin levels, albumin levels, prothrombin time, ascites and encephalopathy.

These points are then added, based on which a patient is determined to have Child's A, B or C cirrhosis with A indicating early disease and C – advanced disease.

How is primary liver cancer treated?

Surgery is amenable to cancer that is still localized within the liver

- **Surgical resection:** In cases where the cancer has been found early and the liver is otherwise healthy, or has only early-stage cirrhosis, doctors will remove the portion of the liver where the tumor is located, a process called liver resection.
- **Liver transplantation:** Liver cancer is unresectable when there is presence of liver cirrhosis or bilobar tumor. Liver transplantation remains the only option in such cases, but only if the cancer has not spread to other organs and a suitable liver can be found.

Non-surgical treatment

- **Ablation:** This procedure destroys cancer cells with minimally invasive, local and variable techniques. Ablation treatments are often used when surgery is not an option and are most beneficial in patients with smaller tumors. Radiofrequency Ablation (RFA), percutaneous ethanol injection (PEI), cryoablation and microwave therapy are different types of ablation treatments.
- **Transarterial Chemoembolization (TACE):** Embolization damages cancer cells by delivering toxic agents through the hepatic artery to the cancerous area. The goal is to block the tumor's blood supply and thereby stop its growth. This treatment administers chemotherapy drugs into the liver tumor through the hepatic artery. This procedure is usually beneficial in patients who have tumors limited to the liver. TACE can be used to decrease the size of tumors to make surgical options possible.
- **Transarterial Radioembolization (TARE):** This treatment consists of microscopic glass beads filled with radioactive elements. Injected through the hepatic artery, the beads deliver radiation directly to the liver tumors. TARE is also known as SIR-Spheres®, Thera Sphere®, Yttrium 90, Y90, brachytherapy or Selective Internal Radiation Therapy (SIRT).

- **Radiation therapy:** Radiation therapy uses radiation (high-energy x-rays) to destroy cancer cells. Radiation treatment combined with chemotherapy offers some benefits in inoperable HCC. It is sometimes used to relieve pain and control the symptoms of advanced primary liver cancer.

What are the treatments for late-stage liver cancer?

If there are more than one tumours in the liver or distant metastases, pharmacological treatment is usually recommended. They include oral chemotherapy, oral targeted therapy (e.g. Sorafenib and Lenvatinib) and immunotherapy. These treatments are palliative for inoperable HCC.

What is the outlook for patients with liver cancer?

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

What is the best way to prevent liver cancer?

Just like other cancers, the risk can be reduced by leading a healthy lifestyle, including a balanced diet and regular exercise. There are steps that you can take to reduce the risk of getting liver cancer or to discover it at an early stage, through screening. These steps are especially important if you already have liver disease.

- If you have been diagnosed with cirrhosis or chronic liver disease, you should be under the care of a doctor who specializes in liver disease. See your doctor regularly and follow all recommendations for treatment, vaccinations and cancer screenings.
- If someone close to you has hepatitis, talk to your doctor about prevention, including vaccination options. Take steps to prevent exposure to hepatitis B and C.

- Talk to your doctor about liver health, hepatitis vaccinations and liver cancer screening. This is especially important if you are also a former or current drinker or smoker, or if you are significantly overweight.
- Alcohol consumption can lead to cirrhosis, which is usually the precursor of liver cancer. The more you drink, the higher the risk. Better cut down on consumption, and far better not to drink any alcohol at all.

Is there any chance of cancer coming back?

Despite optimal treatment, the risk of cancer appearing back exists. After completion of treatment, one needs to go for a regular check-up & get treated for any tumor that comes back at an early stage.

About Gujarat Liver Cancer Clinic (GLCC)

Gujarat Liver Cancer Clinic (GLCC) is the only comprehensive cancer center in Gujarat treating both pediatric and adult liver cancers in one facility. Located at Sterling Hospital, Ahmedabad offers a broad spectrum of cancer care with expertise in prevention, screening, diagnosis, treatment, rehabilitation and palliative care. Our team of doctors are pioneers in liver surgery in Ahmedabad and has largest experience of performing liver cancer surgery in the state.



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