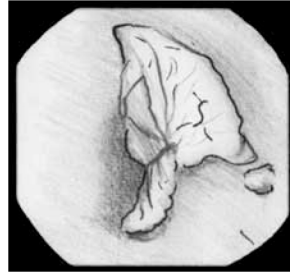


- **Tumour Ablation:**

Ablation refers to methods that destroy the tumour without removing it. These include local ethanol injection, radiofrequency ablation and chemoembolisation. The last one involves combining embolisation with chemotherapy. The chemotherapeutic agent is injected first, followed by injecting materials that plug up the artery.



Chemoembolisation of cancer

- **Can Liver Cancer be Prevented?**

Public health measures that reduce exposure to risk factors can help prevent most liver cancers. Worldwide, the biggest risk factor is infection with hepatitis B or C virus. There is vaccine to prevent hepatitis B. All children (as well as adults at high risk) should have this vaccination.

There is no vaccine for hepatitis C. Preventing hepatitis C and hepatitis B in people who have not had the vaccine is based on knowing the ways it spreads. These viruses are spread through blood transfusions, having unprotected sex with multiple partners, reuse of syringes, and common razors used by barbers. Many blood banks in Pakistan do not check donated blood for hepatitis B and C according to the standard method.

Studies suggest that the drugs interferon and ribavarin may prevent the development of liver cancer in people who have hepatitis C. They are administered together. Proper treatment for hepatitis B is also advisable.

Preventing liver cancer caused by alcohol abuse remains a challenge. Quitting smoking may also slightly lower the risk of liver cancer, as well as the risk for many other serious diseases. Changing the way certain grains are stored in warm countries could reduce exposure to cancer-causing substances.

For further information, please contact:

Section of Gastroenterology

Aga Khan University Hospital, Karachi

P.O. Box 3500, Stadium Road, Karachi-74800, Pakistan.

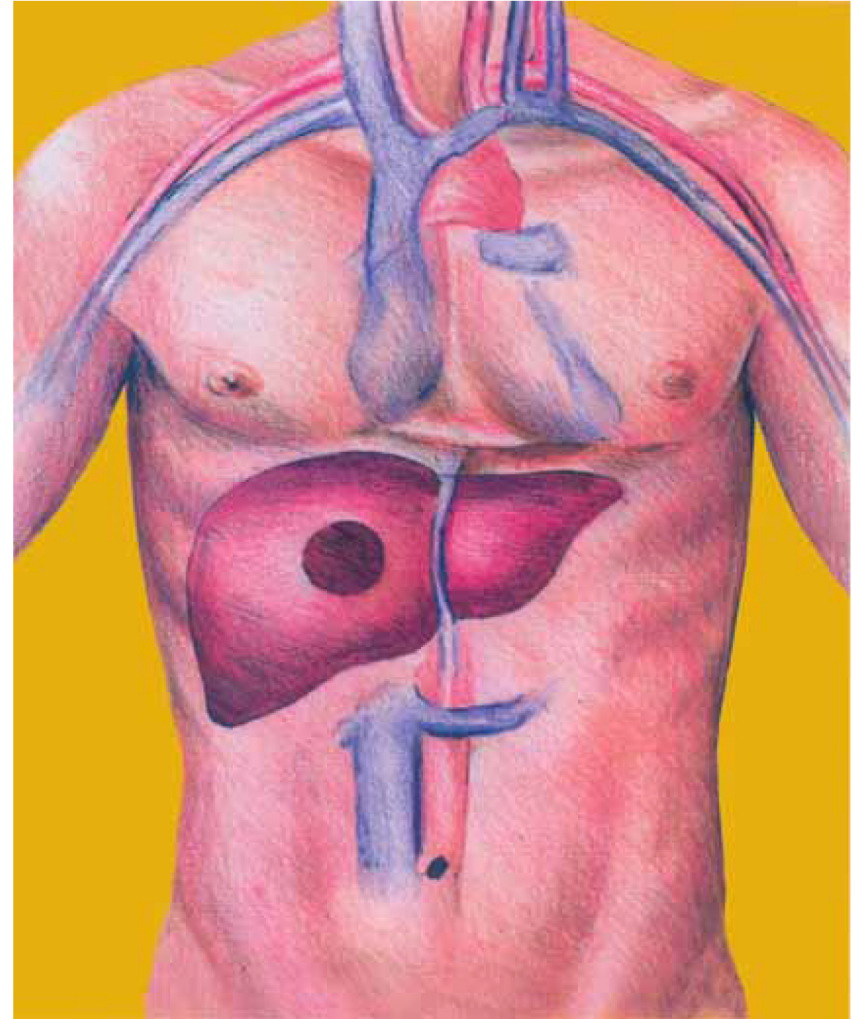
Tel: 92 21 3486 4661 Fax: 92 21 3493 4294, 3493 2095

E-mail: gastroenterology@aku.edu

www.aku.edu

LIVER CANCER

Patient Information



آغا خان یونیورسٹی ہسپتال، کراچی

The Aga Khan University Hospital, Karachi.

P.O. Box 3500, Stadium Road, Karachi-74800, Pakistan.

Tel: 92 21 3486 4661 Fax: 92 21 3493 4294, 3493 2095

www.aku.edu



What are the Normal Functions of Liver?

The liver performs several vital functions. It processes and stores many of the nutrients absorbed from the intestine. It also makes some of the clotting factors needed to stop bleeding from a cut or injury, and it secretes bile into the intestine to help absorb nutrients. The liver also plays an important part in removing toxic wastes from the body.



What Causes Liver Cancer?

• Gender:

Men are more likely to get liver cancer than women.

• Certain Types of Liver Disease:

On-going (chronic) infection with hepatitis B virus (HBV) and cirrhosis due to hepatitis C virus (HCV) are very important liver cancer risks. These infections are common in Pakistan. There are also some inherited liver diseases that increase the risk of liver cancer.

Cirrhosis is the end result of chronic liver disease leading to scar tissue in the liver. This can often lead to cancer. Major causes of liver cirrhosis are hepatitis B and C and alcohol abuse.



• Tobacco Use:

There is a link between smoking and liver cancer. The risk may be even greater for people who also abuse alcohol.

• Obesity:

Obesity increases the risk of liver cancer.

• Aflatoxins:

These cancer-causing substances are made by a fungus that can contaminate peanuts, wheat, soybeans, corn and rice. Long-term exposure to aflatoxins can increase the risk of liver cancer. In Pakistan, these foods are not tested for aflatoxins.

• Certain Chemicals:

Vinyl Chloride and Thorium Dioxide (Thorotrast)

• Long-term use of Anabolic Steroids:

These are male hormones that are used by some athletes to increase their strength. Their long-term use can slightly increase the risk of liver cancer.

• Arsenic contaminated Drinking Water:

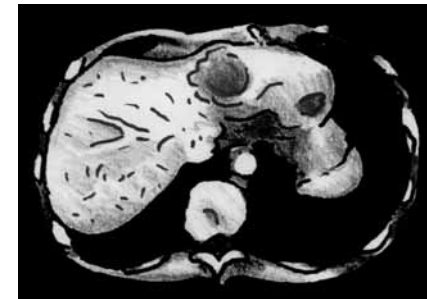
What are the Alarming Signs and Symptoms of Liver Cancer?

One should consult a doctor if any of the following problems occur:

- A hard lump on the right side just below the rib cage;
- Discomfort in the upper abdomen on the right side;
- Pain around the right shoulder blade;
- Unexplained weight loss;
- Jaundice (yellowing of the skin and whites of the eyes);
- Unusual tiredness;
- Nausea;
- Loss of appetite.

• How is Liver Cancer Diagnosed?

- History and Physical Examination;
- Serum Tumour Marker Test;
- alpha-fetoprotein;
- Ultrasound;
- CT Scan / MRI Scan;
- Biopsy.



CT scan showing liver cancer

• How is Liver Cancer Treated?

The main types of treatment for liver cancer surgery and ablation therapy. If the cancer cannot be cured, the goal may be to remove or destroy as much of it as possible to prevent the tumour from growing, spreading, or coming back for as long as possible. Sometimes treatment is aimed at easing symptoms.

• Surgery:

Surgery, either to remove the tumour or to do a liver transplant, offers a chance to cure liver cancer. Complete removal of most liver cancers is not possible.