

Immunotherapy

An important part of the immune system is the ability to recognise foreign from normal cells. Immunotherapy is a relatively new form of therapy where patients receive a medication targeted at a receptor called the Program death protein 1 (PD1) or programmed death ligand 1 (PD-L1). These are known as checkpoint inhibitors. These drugs stimulate the immune cells called T lymphocytes to attack the cancer cells. A couple of immunotherapy drugs (both PD1 inhibitors) have been shown to be useful in liver cancer and more clinical trials are underway.

Targeted Cancer Therapy

Targeted cancer therapy uses drugs or other substances that block the growth and spread of cancer by interfering with specific molecules involved in cancer growth and progression. There are a few targeted drugs available to treat liver cancer. These drugs targets cancers by stopping them from growing their own blood vessels. As cancer cells need a blood supply to bring nutrients and oxygen, this drug may therefore limit the cancer's ability to develop. Indeed, these drugs has been demonstrated in large clinical studies to prolong survival in patients with advanced HCC, compared with supportive care alone.

Radiotherapy

Radiotherapy uses high-energy rays to destroy cancer cells or keep them from growing. External radiotherapy uses a machine outside the body the deliver radiation towards the cancer. Such treatment is not often used to treat HCC because the liver cannot take very high doses of radiation. It may however be used to relieve pain, for example, in patients whose cancer has spread to the bone. Alternatively, internal radiation uses a radioactive substance delivered selectively to the cancer via a major blood vessel that carries blood to the liver (hepatic artery).

Can Liver Cancer be Prevented?

Yes. There are several things we can do to prevent liver cancer. These include:

- Vaccinate against hepatitis B virus. Have treatment for Hepatitis C.
- Avoid contact with known liver carcinogens, especially alcohol.
- Adopt a Mediterranean diet and avoid heavy meat and animal fat intake. Avoid mouldy peanuts and grains. Drinking coffee and tea may also help prevent liver cancer.
- Go for regular screening if you are in the high risk group.

What Kind of Support is Available?

CanHOPE is a non-profit cancer counselling and support service provided by Parkway Cancer Centre, Singapore. CanHOPE consists of an experienced, knowledgeable and caring support team with access to comprehensive information on a wide range of topics in education and guidelines in cancer treatment.

CanHOPE provides:

- Up-to-date cancer information for patients including ways to prevent cancer, symptoms, risks, screening tests, diagnosis, current treatments and research available.
- Referrals to cancer-related services, such as screening and investigational facilities, treatment centres and appropriate specialist consultation.
- Cancer counselling and advice on strategies to manage side effects of treatments, coping with cancer, diet and nutrition.
- Emotional and psychosocial support to people with cancer and those who care for them.
- Support group activities, focusing on knowledge, skills and supportive activities to educate and create awareness for patients and caregivers.
- Resources for rehabilitative and supportive services
- Palliative care services to improve quality of life of patients with advanced cancer.

The CanHOPE team will journey with patients to provide support and personalised care, as they strive to share a little hope with every person encountered.



CanHOPE Counsellors contact:
Cancer counselling hotline:
(65) 6738 9333
Email: enquiry@canhope.org
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Liver Cancer

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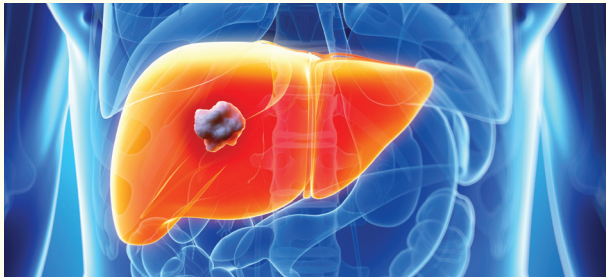
www.parkwaycancercentre.com



What is Liver Cancer?

Primary liver cancer is a disease in which malignant (cancer) cells arise from tissues in the liver. The different types of primary liver cancer are usually named after the types of cells from which it is thought the cancer has developed. Hepatocellular carcinoma (HCC) or hepatoma arises from the main cells of the liver called hepatocytes and accounts for about 85% of primary liver cancers. A less common type of primary liver cancer originates from cells that line the bile duct called cholangiocytes and is therefore called cholangiocarcinoma or bile duct cancer.

The liver is also the seat of another type of cancer called secondary (or metastatic) liver cancer. In this condition, the main cancer originates elsewhere in the body and secondary deposits are formed in the liver. A common example is colorectal cancer spreading to the liver via the bloodstream.



How Common is Liver Cancer?

Primary liver cancer is twice as common in men compared with women, and is the 6th most common cancer worldwide. Asian countries account for nearly 80% of the approximately 712,000 cases of primary liver cancer diagnosed globally each year. It is the second most common cause of cancer related deaths worldwide.

What are The Risk Factors for Liver Cancer?

The three main risk factors for developing HCC (the most common primary liver cancer) are chronic hepatitis B infection, chronic hepatitis C infection and excessive alcohol consumption. The risk of an individual with chronic hepatitis B infection developing HCC is 100-fold that of an uninfected individual.

Other less common risk factors include aflatoxin (a poison found in mouldy peanuts, wheat, soya and grain), inherited conditions (e.g. haemochromatosis, alpha-1 anti-trypsin deficiency) and any cause of cirrhosis (scarring throughout the liver) like autoimmune hepatitis or primary biliary cirrhosis. Many liver cancers can be prevented by public health measures that reduce exposure to these known risk factors.

Symptoms

Patients who develop HCC usually have no symptoms other than those related to their chronic liver disease. With worsening symptoms of the existing chronic liver disease like abdominal distension with fluid (ascites), encephalopathy (altered mental state), jaundice, or gastro-intestinal tract bleeding may heighten the suspicion of development of HCC. Besides that, some patients may have mild to moderate upper abdominal pain, weight loss, early satiety, lethargy, anorexia or a palpable mass in the upper abdomen.

Screening

Screening can help doctors find and treat HCC early, when the cancer is localised and more easily removed by surgery. This may in turn improve the chance of survival. Those with chronic hepatitis B infection and liver scarring (cirrhosis) due to hepatitis C or other causes are at increased risk and should be screened for liver cancer.

Screening involves:

- A blood test for alpha-fetoprotein (AFP) every 3-6 months
- An ultrasound scan of the liver every 6-12 months

Diagnosis

The following tests and procedures may be performed to diagnose HCC and to show the stage of the cancer:

- Physical examination for general signs of health. An examination of the abdomen will also be performed to check for hard lumps or ascites.
- Blood tests to check general health, liver function and the amount of AFP. The amount of AFP in the blood can be higher in people with HCC.
- A liver ultrasound scan that uses sound waves to produce a picture of the liver. This is a painless test and usually takes several minutes to perform. The picture may reveal a liver tumour.
- A computed tomography (CT) or magnetic resonance imaging (MRI) scan of the abdomen to visualise the three-dimensional picture of liver. It can show the size and position of a tumour, and whether it has spread.

Although a diagnosis of HCC can be made based on the amount of AFP in the blood and on dedicated CT or MRI scans, a liver biopsy may sometimes be needed to be sure of the diagnosis. If the cancer has not already spread and if there is a chance it can be removed, then a biopsy might not be performed.

This is due to the small risk of the cancer spreading along the path of the needle when the biopsy needle is removed.

In this situation, the diagnosis is confirmed after an operation to remove the tumour.

Treatment

The type of treatment for patients with HCC will depend on its stage (that is, its size and whether it has spread beyond its original site) and the patient's general health. The main treatments used are surgery, tumour ablation, chemotherapy, targeted cancer therapy and radiotherapy.

Surgery

Surgery is potentially curative and is therefore the treatment of choice for patients with early stage HCC. If only certain parts of the liver are affected by cancer and the rest of the liver is healthy, then surgery may be possible to remove the affected part or parts. This type of surgery is called a liver resection. Another form of surgery is a liver transplant. This involves the removal of the entire liver and replacement with a healthy donated liver. Such a major operation may be performed when the cancer is in the liver only and a donated liver is available. If surgery is not possible, then other treatments may be offered to help control the cancer, thereby reducing symptoms and improving quality of life.

Tumour Ablation

Tumour ablation aims to destroy primary liver cancer cells using either heat (radiofrequency ablation; RFA) or alcohol (percutaneous ethanol injection; PEI). This procedure is usually done in the scanning department so that ultrasound or computerised tomography (CT) can help the doctor to guide a needle through the skin and into the cancer within the liver. A local anaesthetic will be given. RFA treatment uses laser light or radio waves passed through the needle to destroy cancer cells by heating them to a very high temperature. PEI treatment uses alcohol injected through the needle into the cancer to destroy the cancer cells. Tumour ablation may sometimes be repeated if the tumour grows again.

Chemotherapy

Chemotherapy is the use of anti-cancer drugs to destroy cancer cells or stop them from dividing. It can help to control symptoms by shrinking the cancer and slowing its progression. Chemotherapy drugs are usually given as injections into the vein (intravenously), although they can sometimes be given as tablets.

Chemotherapy may also be administered as part of a treatment called chemoembolisation. Chemoembolisation involves the injection of chemotherapy drugs directly into the cancer in the liver, together with a gel or tiny plastic beads to block blood flow to the cancer (embolisation).

Not everyone is suitable for chemotherapy as it can only be given if the liver function is good enough.