

Hepatobiliary cancer

The liver, the gall bladder and the bile ducts form the hepatobiliary system. Cancers here are on the rise.

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Cancers of the liver and bile duct

The liver is the body's chemical factory, and is responsible for a wide range of activities. It produces and regulates biochemicals and essential proteins for functions such as blood clotting and a robust immune system; converts food to energy; neutralises and metabolises drugs and chemicals; regulates hormones; and produces digestion-aiding bile.

The liver is the only organ in the body that can repair itself. This hardworking organ works in conjunction with the gall bladder, which stores bile, and the bile ducts which transport the bile from the liver to the intestines. These organs are collectively known as the hepatobiliary system.

Cancers of the hepatobiliary system can have a devastating effect on the body, as they cause the system to shut down. This in turn causes toxins to build up, impairs digestion, and disrupts production and release of hormones and important biochemicals. Cancer can affect the liver or the bile ducts. If the affected bile duct is located in the liver, it is an intra-hepatic cancer; if the tumour is in the bile duct outside the liver, the cancer is extra-hepatic.

Liver cancer on the rise

In Singapore, one common form of hepatobiliary cancer is liver cancer. It is the fourth most common cancer among males in Singapore. Some countries, such as China and those in Southeast Asia and Sub-Saharan Africa, experience high rates of the disease, which may be due to a higher rate of hepatitis B or C, one of the main causes of liver cancer. Other risk factors include:

- Liver cirrhosis, a disease where the liver tissue is replaced by hard scar tissue
- Bile duct disease called primary sclerosing cholangitis
- Exposure to a mould called aflatoxin found on peanuts, nuts, corn and grains
- Diabetes
- Gender; males are more at risk
- A family history of liver cancer

Signs of cancer in the hepatobiliary system are not often obvious, but one may feel unwell, have poor appetite, experience weight loss, suffer from itchy skin or have a yellow discolouration on the skin or in the eyes. The latter symptom arises when there is a blockage of the bile duct, causing bile, which is yellowish, to build up in the bloodstream. Chronic tummy pain or a swollen stomach may also be a symptom if the tumour causes fluids to build up in the abdomen. A tumour in the liver may also impair its ability to work, causing waste products to build up and collect in the skin, resulting in itching. Cancers of the hepatobiliary system can be diagnosed with a blood test and/or an

ultrasound scan and those at high risk should do an annual screening.

Treating liver and bile duct cancer

An early diagnosis of cancer is the best way to secure a good outcome. Typically, treatment involves a combined approach of targeted chemotherapy and surgery. The type and extent of surgery needed depends on where the cancer is located and how large the tumour is. The goal in surgery is to remove all the cancer cells as well as some healthy tissue (called a clear margin) to reduce the chances of the cancer coming back.

If the cancer is isolated to a part of the liver or is within a segment of intra-hepatic bile duct, the affected part of the liver (called a segment) is removed. In time, the healthy liver will grow back and work normally.

The larger the cancer is, the more affected surrounding areas may need to be removed, such as the gall bladder, bile ducts, pancreas and surrounding lymph nodes. If the bile duct is removed, the surgeon will re-route the ducts so that bile can flow directly from the liver into the small intestine. In cases where the cancer has spread to large parts of the liver or bile ducts, the diseased liver will need to be entirely removed and replaced with part of a healthy liver from a living or deceased donor.



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