What are the treatments for late-stage liver cancer?

If there are more than one tumour in the liver or distant metastases, pharmacological treatment is usually recommended. They include oral targeted therapy (e.g. Sorafenib and Lenvatinib) and immunotherapy (e.g. Anti-PD-1 and anti-PDL-1). Clinical results show improved survival (up to 8 months) and tumor shrinkage (50% reduction in size in 10% of cases) with pharmacological treatment for late-stage cancer.

Is there any screening method for liver cancer?

The fact that early liver cancer is asymptomatic makes it difficult to detect or screen in the early stage. Therefore the key to prevention remains regular checks, especially if you are a hepatitis B or C virus carrier and at a higher risk of developing liver cancer.

After all, is liver cancer preventable?

Just like other cancers, the risk can be reduced by leading a healthy lifestyle, including a balanced diet and regular exercise.

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.

Those who are at risk of contracting hepatitis B virus and negative for hepatitis B should receive hepatitis B vaccination as early as possible.
Liver cancer is the fifth commonest cancer in Hong Kong. It accounted for 5.5% of all new cancer cases in 2017.

Primary liver cancer is very common in the Chinese population. Higher incidence is noted in the male population, making it the fourth commonest cancer in men in 2017.

The commonest liver cancer is Hepatocellular Carcinoma (HCC). It accounts for over half of liver cancer death cases in Hong Kong.

What are the risk factors of liver cancer?

While no definite cause is known, liver cancer is deemed to be attributable to the following factors:

- A history of liver diseases, including hepatitis and cirrhosis
- Hepatitis B or C carriers
- More common in the male population
- Pollutants in the environment, e.g. Polyvinyl Chloride (PVC) in plastic products
- A family history of hepatoma or haemochromatosis, especially in close relatives
- Excessive alcohol consumption
- Non-alcoholic steatohepatitis

Who are in the high-risk group?

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, some people should consult their doctors and consider cancer surveillance with screening for alpha-fetoprotein or ultrasonography every 6 to 12 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 diagnosed?

If you are suspected of developing liver cancer, a blood test is usually performed to determine the serum alpha-fetoprotein level. The higher the level is, the more likely one has liver cancer.

Tissue samples are also extracted for microscopic examination by liver biopsy under ultrasound or CT guidance. Other imaging techniques, such as MRI, hepatic angiogram and PET scan can also provide valuable information about the extent of the disease and help determine the best treatments for individual patients.

How is primary liver cancer treated?

Each of the following options may be given alone or in combination with others, depending on one’s condition.

- Surgical resection is recommended for early-stage liver cancer, i.e. still confined to the liver. Recent advances in robotic surgery mean early-stage tumours can be removed by minimally invasive surgery.
- Local thermal ablation is suitable for small tumours which are not amenable to surgery. Cyberknife M6 is also recommended if the location of tumour makes it unsuitable for radiofrequency ablation.

- Intra-arterial therapy, e.g. chemoembolisation or yttrium-90 microspheres radioembolization, is a treatment option for large tumours which are still confined to the liver and are not suitable for surgery or local ablation.
- Systemic treatment (e.g. chemotherapy, targeted therapy, and immunotherapy) is recommended when the disease has already spread beyond the liver and all of the above treatments have come to no avail.

What treatments are available for mid-stage liver cancer (7 cm to 10 cm in size)?

Performed by a Radiologist, the following interventional therapies may control tumours and improve survival if they are confined to the liver but still inoperable:

- **Transarterial Chemobolisation (TACE)**
  TACE can block or slow down blood supply to a tumour while delivering chemotherapeutic drugs. With the patient under general anaesthesia, a catheter will be inserted into the hepatic artery through the femoral artery. Materials soaked in chemotherapeutic drugs, e.g. a gelatin sponge, can then be injected into the arteries feeding the tumour, depriving it of blood supply.

- **Selective Internal Radiation Therapy with Yttrium-90 Microspheres (SIRT-Y90)**
  SIRT-Y90 is an internal radiation therapy for liver tumours when surgical removal is not feasible. The radioactive Yttrium-90 microspheres are injected via a catheter into the tumour-feeding artery through the femoral artery, reducing blood supply to the tumours and destroying them with radiation. Research shows that SIRT-Y90 is effective at treating large tumours (>10 cm in size).