Hepatocellular carcinoma (HCC) begins in the liver as either a single tumour or several small nodules. Globally, liver cancer was the third most common cause of all cancer-related deaths in 2020. HCC is the most common form of liver cancer among adults, accounting for approximately 75% of all primary liver cancer cases.

In 2020, more than twice as many men were diagnosed with liver cancer than women.*

Advanced-stage HCC prognosis is poor, with a 5-year survival rate of only 7% and a median survival of less than one year*

Common risk factors

Hepatitis
Hepatitis viruses infect the liver. Worldwide, the most common risk factor for HCC is chronic infection with hepatitis B or C virus.

Alcohol use
Drinking alcohol in excess over the long term can cause liver damage, which increases the risk of HCC.

Overweight
Being overweight can result in non-alcoholic fatty liver disease (NAFLD) and diabetes, both of which are linked to higher rates of HCC.

Cirrhosis
Cirrhosis is a late stage of scarring in the liver frequently caused by hepatitis and chronic alcoholism. Each time the liver is injured it tries to repair itself – replacing healthy cells with scar tissue over time.

Smoking
Smoking increases the risk of HCC by accelerating liver fibrosis. Former smokers have a lower risk than current smokers, but both groups have a higher risk than those who have never smoked.

Environmental factors
Exposure to certain chemicals or aflatoxins can increase the risk of HCC. Aflatoxins are poisonous substances produced by naturally-found moulds that can contaminate food crops.

Common signs and symptoms

People with HCC typically do not present with symptoms in early-stage disease, often causing delays in diagnosis. Symptoms may be caused by a different condition, particularly common in those with cirrhosis.*

Appetite or weight loss
Nausea and vomiting
Yellowing of the skin and whites of eyes
Upper abdominal pain and swelling
General weakness and fatigue
White, chalky stool

*This data represents hepatocellular carcinoma and intrahepatic cholangiocarcinoma
Understanding the four stages of liver cancer

HCC is staged according to the severity of the disease using the Barcelona Clinic Liver Cancer (BCLC) system. Identifying the stage is important for doctors to determine a patient’s treatment options.

### Stages of HCC

- **Very early stage (Stage 0)**
  - The tumour is smaller than 2cm, the liver is working normally and there are no symptoms.

- **Early stage (Stage A)**
  - There are up to three tumours, all less than 3cm. Liver function is normal and there are no symptoms.

- **Intermediate stage (Stage B)**
  - There are multiple tumours, but there are no symptoms and liver function is normal.

- **Advanced stage (Stage C)**
  - Tumours have spread to blood vessels, lymph nodes or other organs. Symptoms are present, but liver function remains normal.

- **End stage (Stage D)**
  - Significant damage to the liver causes severe symptoms and a decline in function. The focus of treatment is to alleviate symptoms.

### Treating HCC

Treatment may require a team of specialists to address underlying liver disease or dysfunctions, including oncologists, hepatologists and radiologists.

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#### Treatment approaches during Stages 0, A and B

- **Surgery** to remove the tumour is the main treatment in early stages, but 50-70% of patients may experience cancer recurrence and progression within five years.

- **Thermal ablation** uses heat to destroy cancer cells in very early-stage patients. It is also referred to as radiofrequency ablation or microwave therapy.

- **Liver transplant** may be a curative treatment option in early stages. Due to limited availability of donors, long wait times and the risks associated with transplantation, few patients with HCC receive a transplant. Other types of treatment may be used to delay progression while patients wait.

#### Treatment approaches during Stages B and C

- **Systemic therapy** is used in Stage C patients. It may also be used in Stage B patients who are not eligible for early-stage treatments, or those who have progressed during treatment. There is still a critical unmet need for patients in advanced stages of HCC, and new therapies are urgently needed. Ongoing research of Immuno-Oncology therapies has shown promise in this challenging setting.
References


