Preventing Liver Cancer

Viral hepatitis, fatty liver disease and heavy alcohol use are leading causes of liver cancer.

September 9, 2024 By Liz Highleyman

The most common type of primary liver cancer, hepatocellular carcinoma (HCC), usually results from injury to the liver. The liver is also a common site of metastasis for cancers that originate elsewhere in the body.

Liver cancer is the fastest-growing cause of cancer death in the United States. HCC is often diagnosed late, when it is more difficult to treat, but this malignancy can be prevented.

Hepatitis B virus (HBV), hepatitis C virus (HCV), metabolic dysfunction-associated steatotic liver disease (MASLD), heavy alcohol consumption and exposure to toxins can lead to inflammation and fibrosis, or buildup of scar tissue in the liver. Over time, this can progress to cirrhosis and liver cancer.

HBV and HCV are blood-borne viruses that can spread via drug injection equipment or personal items that come into contact with blood. They may also be transmitted sexually or from mother to child during pregnancy. The Centers for Disease Control and Prevention (CDC) recommends that all adults be screened for HBV and HCV at least once, regardless of their risk factors.

Fortunately, hepatitis B can be prevented with a vaccine, which is recommended for all infants at birth and for children, adolescents and adults who were not previously vaccinated. Hepatitis B can be treated with drugs that control viral replication, but they seldom lead to a cure.

Conversely, there is no vaccine for hepatitis C, but almost everyone can be cured with direct-acting antivirals taken for two or three months.

MASLD and its more severe form, metabolic dysfunction-associated steatohepatitis (MASH), result from fat accumulation in the liver, which can trigger inflammation and fibrosis. They are linked to obesity and type 2 diabetes; management has relied on lifestyle changes such as weight loss and

exercise. In March, the Food and Drug Administration approved the first MASH treatment, Rezdiffra (resmetirom), and many experimental drugs are in the pipeline.

Exposure to toxic substances can also trigger the development of cirrhosis and liver cancer. Alcohol consumption is the most common risk factor. The CDC recommends that women should have no more than one alcoholic drink per day and men should have no more than two. Other liver toxins include industrial chemicals, aflatoxins found in mold and certain medications and herbal remedies. Smoking is another risk factor. Some studies suggest that coffee and aspirin may be protective.

Early-stage HCC often has no symptoms, so people at risk are advised to undergo routine screening. Antiviral treatment for hepatitis B or C and management of MASLD can reduce the likelihood of liver cancer, but risk remains elevated for people who have developed cirrhosis.

The American Association for the Study of Liver Diseases (AASLD) recommends regular HCC screening for people with cirrhosis due to any cause. Monitoring is also advised for many middle-aged people with chronic hepatitis B, even if they do not yet have cirrhosis. AASLD recommends screening every six months using a combination of liver ultrasound scans and blood tests for alpha-fetoprotein, a tumor biomarker.

“Patients with chronic liver disease should be counseled to maintain a healthy weight, have a balanced diet, avoid tobacco and alcohol and achieve adequate control of comorbid conditions including components of the metabolic syndrome,” according to AASLD. “A healthy lifestyle has multiple benefits and may decrease HCC risk.”
