Fatty Liver Disease Is Linked to Higher Liver Cancer Risk

People with fatty liver disease have an elevated risk of cancer, largely due to high liver cancer incidence.

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Non-alcoholic fatty liver disease is associated with a 27% higher risk of any type of cancer and a 17-fold higher risk of liver cancer, according to study results published in the journal Hepatology.

Arising from the accumulation of fat in the liver, NAFLD and its more severe form, non-alcoholic steatohepatitis (NASH), are responsible for a growing proportion of advanced liver disease worldwide. As a result of inflammation, NAFLD can lead to the buildup of scar tissue (fibrosis), cirrhosis (advanced scarring) and even hepatocellular carcinoma, the most common type of liver cancer.

While NAFLD has been linked to a higher risk of hepatocellular carcinoma and extrahepatic cancers, data on liver histology is lacking. Jonas Ludvigsson, MD, PhD, of the Karolinska Institute in Stockholm, and colleagues at Harvard University and Columbia University looked at the risk of developing liver cancer in a population with histologically defined NAFLD, meaning diagnosis based on liver tissue biopsies.

The study included 8,892 individuals in Sweden who were diagnosed with histologically defined NAFLD between 1966 and 2016. On the basis of tissue differences, these individuals were grouped into those with simple steatosis (fat buildup in the liver), NASH, noncirrhotic fibrosis and cirrhosis.

Next, these participants were each matched with up to five individuals without NAFLD by age, sex, calendar year and county. A total of 39,907 individuals without NAFLD were included in this group.

Over the course of 14 years, the team observed 1,691 cases of any type of cancer in the group with NAFLD and 6,733 cases in the group without NAFLD.

People with NAFLD had a significantly higher incidence of cancer (13.8 per 1,000 person-years) than people without NAFLD (10.9 per 1,000 person-years). Further, this difference seemed to be driven by a higher incidence of hepatocellular carcinoma among people with NAFLD.

The researchers found an increased incidence of liver cancer across all severity levels of NAFLD.

Incidence rates of hepatocellular carcinoma among individuals with simple steatosis, NASH, noncirrhotic fibrosis and cirrhosis were 0.8, 1.2, 2.3 and 6.2 per 1,000 person-years, respectively. These rates were higher in people who also had coexisting type 2 diabetes.

On the other hand, NAFLD was linked to only minimal increases in the incidence of pancreatic and kidney cancer as well as melanoma.

“These findings should be used to develop more targeted interventions designed to reduce cancer risk in patients with NAFLD,” said Ludvigsson, in a press release. “They also highlight the need for more personalized strategies to screen for HCC [hepatocellular carcinoma] in certain high-risk patients, such as those with NAFLD fibrosis and type 2 diabetes.”

Click here to read the study in Hepatology.

Click here to learn more about NAFLD and NASH.
