

Statin Use Linked to Lower Risk for Liver Cancer and Decompensation

People with a longer duration of statin use had evidence of slower liver fibrosis progression.

August 18, 2025 By [Sukanya Charuchandra](#)

Among more than 16,000 adults with chronic liver disease, statin use was tied to significantly lower long-term risk of liver cancer and hepatic decompensation, according to study findings published in [JAMA Internal Medicine](#). The researcher also found that people taking statins were more likely to experience improvements in liver fibrosis over time.

[Hepatitis B](#), [hepatitis C](#), [heavy alcohol consumption](#) and [metabolic dysfunction-associated fatty liver disease \(MASLD\)](#) can lead to serious liver complications, including [cirrhosis](#) and hepatocellular carcinoma (HCC), the most common type of [liver cancer](#).

Raymond Chung, MD, of Brigham and Women's Hospital and Harvard Medical School, and colleagues assessed the potential link between statin use and adverse outcomes among people with chronic liver disease. Prior research suggests that statins, prescribed to lower elevated cholesterol and reduce cardiovascular risk, may help prevent liver disease progression and development of liver cancer.

The researchers used data from the Research Patient Data Registry at Mass General Brigham between July 2000 and June 2023. The study population included 16,501 people with chronic liver disease. More than half were men, and the average age was 60 years. The team looked at the incidence of hepatocellular carcinoma and liver decompensation (liver failure) among 3,160 people who used statins and 12,891 people who did not use the medications.

Over the course of follow-up, the researchers noted that 755 people developed liver cancer and 2,011 experienced liver decompensation. Statin users had a significantly lower 10-year cumulative incidence of both HCC (3.8% versus 8.0%) and hepatic decompensation (10.6% versus 19.5%). Compared with nonusers, statin users had a 33% lower risk for HCC and a 22% lower risk for decompensation. The effect was even more pronounced among those who used lipophilic, or fat-soluble, statins and among those who took statins for a longer duration.

Fibrosis progression data, based on FIB-4 scores, was available for 7,038 participants. A greater proportion of statin users with high fibrosis scores at the start of the study transitioned to the intermediate fibrosis group (31.8%) or low fibrosis group (7.0%), compared with 18.8% and 4.3%

of nonusers. What's more, statin users with intermediate fibrosis scores at baseline were less likely than nonusers to move into the high fibrosis group (14.7% versus 20.0%).

"This cohort study found that statin use was associated with a reduced risk of HCC and hepatic decompensation in patients with chronic liver disease, as well as improved FIB-4 group transitions over time," wrote the researchers. "These findings provide support for the potential role of statins in prevention of HCC and liver disease progression."

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