Resection Surgery Leads to Improved Liver Cancer Survival

Liver resection led to better outcomes at three and five years posttreatment compared with nonsurgical approaches.

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Liver resection, or removal of part of the liver, led to better long-term survival compared with localized treatment approaches in people with hepatocellular carcinoma (HCC), the most common type of liver cancer, according to study results published in JAMA Surgery

“Liver resection should be considered the first therapeutic option in patients with early multinodular HCC who are not eligible for transplant,” the study authors concluded.

Over time, chronic hepatitis B or hepatitis C, fatty liver disease, heavy alcohol use and other causes can lead to serious liver disease, including cirrhosis and liver cancer. Hepatocellular carcinoma is often diagnosed late and is difficult to treat.

Treatment for cancer that has not spread beyond the liver may include localized therapies or resection surgery, which removes parts of the liver that contain tumors. Localized therapies include percutaneous radiofrequency ablation (PRFA), which uses radio waves to destroy tumors, and transarterial chemoembolization (TACE), which delivers chemicals to block blood vessels that supply tumors. Treatment for patients with multiple tumors can be a difficult decision. Most Eastern guidelines recommend liver resection, while Western guidelines favor localized therapies.

Alessandro Vitale, PhD, MD, of the University of Padua in Italy, and colleagues sought to understand the potential survival benefit of liver resection compared with PRFA or TACE in people with multinodular liver cancer.

For this retrospective study, the researchers used data from 5,331 people in the Italian HE.RC.O.LE.S registry who underwent liver resection and 7,056 patients in the ITA.LI.CA database who received PRFA or TACE.

The analysis included 720 people with multinodular liver cancer. A majority (75%) were men, and about half were older than age 70. Of these, 296 underwent liver resection, 240 received PRFA and 184 were treated with TACE.

The average survival duration was 69 months in the liver resection group, 54 months in the PRFA group and 34 months in the TACE group. For the liver resection group, survival rates were 89% at one year, 71% at three years and 56% at five years. For the PRFA group, survival rates were 94%, 65% and 40% respectively. For the TACE group, the corresponding rates were 91%, 49% and 29%. Looking only at the 318 people who received first-line treatment, liver resection again resulted in better survival compared with the two nonsurgical methods.

While survival was high in all three groups at one year, the advantage of liver resection became more apparent with longer follow-up. What's more, people who underwent liver resection were at lower risk for cancer-related death compared with either of the nonsurgical therapy groups.

"[T]he investigators present convincing data that liver resection leads to superior three- and five-year survivals," Yuman Fong, MD, and Jonathan Kessler, MD, of City of Hope Cancer Center, write in an accompanying commentary. "They also demonstrate on multivariate analysis that outside of baseline liver function, resection is the most important factor for long-term survival."

Fong and Kessler noted that with modern techniques, it is increasingly likely that people with multiple tumors will undergo localized ablation procedures for deep lesions while having superficial lesions removed using minimally invasive laparoscopic or robotic surgery.

"All of our local therapies are getting better," they wrote. "Making each available under different clinical circumstances and combining these when appropriate provides patients with the best chance at cure with the least invasiveness."

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