

Liver transplant recipients have higher cancer risk

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A new Canadian study comparing cancer rates of liver transplant patients to those of the general population has found that transplant recipients face increased risks of developing cancer, especially non-Hodgkin's lymphoma and colorectal cancer. Risks were more pronounced during the first year of follow-up and among younger transplant recipients. These findings are published in the November issue of *Liver Transplantation*, a journal by John Wiley & Sons.

Transplantation, and the immunosuppressants which keep the body from rejecting the new organ, have been shown to increase a patient's cancer risk. However, most studies that have considered the issue have been limited by data from a single center, or by small numbers of patients.

In a new population-based cohort study, researchers led by Ying Jiang of the Public Health Agency of Canada used the Canadian Organ Replacement Registry to gather information on all liver transplant recipients and cross-reference them with national mortality and cancer incidence databases.

The researchers included 2,034 patients who received a transplant between June 1983 and October 1998, and followed them for up to 15 years. They excluded patients who had liver cancer or who had been diagnosed with any other type of cancer (except for non-melanoma skin cancer) before transplantation, or in the 30 days immediately afterwards.

After 10,370.6 person-years of follow-up, the group of transplant

recipients developed 113 cancers (not including liver cancer), compared to the 44.8 cases that were expected based on rates in the general population. The standardized incidence ratio (SIR) for all cancers was 2.5 relative to the overall Canadian population. "This ratio appears to be a lower estimate when compared with the existing literature," the authors report, possibly because liver cancer and non-melanoma skin cancers were excluded from the analysis.

"A striking finding in our study is the approximate twenty-fold increased risk of non-Hodgkin's lymphoma among liver transplant patients relative to the general population," the authors report. "As a proportion of all cancers, it represented 55.8 percent of the absolute excess number of cancers among liver transplant patients."

Also of note, they found an increased risk of colorectal cancer among liver transplant recipients relative to the Canadian general population, perhaps attributable to a higher prevalence of inflammatory bowel disease among the patients. Finally, they found that elevated cancer risk was most pronounced during the first year of follow-up.

"Our findings firmly support an increased incidence of cancer in this patient population," the authors conclude. "We recommend increased surveillance for cancer in these patients, and screening for colorectal cancer using modalities for which benefits are already well recognized."

An accompanying editorial by Joseph F. Buell of the University of Cincinnati School of Medicine agrees that as long-term survival increases for transplant recipients, cancer is becoming the predominant threat to patient longevity. "This study highlights several important observations," writes Buell. The increased incidence of cancer appears to be directly related to the intensity and length of immunosuppression, and the link between viral infection and malignancy is strong.

"Currently, two immunosuppressive agents have shown protective effects against the development of cancer," Buell points out. Mycophenolic acid and TOR inhibitors may provide an oncologic advantage for liver transplant recipients.

The article is also available online at Wiley Interscience (www.interscience.wiley.com).

Source: Wiley

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