

# High-risk donor livers used with greater frequency in transplantations

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The shortage of available organs for transplantation has driven up use of high-risk donor livers. New research published in the October issue of *Liver Transplantation*, a journal of the American Association for the Study of Liver Diseases, reported that high volume transplant centers more frequently utilized livers with a high donor risk index, but achieved better risk-adjusted graft and recipient survival rates compared with lower volume centers.

During the past forty years the liver transplantation field has made remarkable progress in improving quality of life, with the mortality rate for waitlisted candidates and size of the national waitlist decreasing over the last ten years. According to the Organ Procurement and Transplantation Network (OPTN), more than 110,000 liver transplantations have been performed in the U.S. since 1988. However, despite these strides nearly 2,000 candidates on the waitlist die each year.

To address the critical issue of organ shortage, transplant centers in the U.S. have expanded criteria that qualify more high-risk livers—what was previously known as marginal or compromised organs—from deceased donors. Medical experts believe earlier transplantation with higher-risk organs outweigh the associated risk of remaining on the waiting list and measure donor suitability using the donor risk index (DRI)—an assessment of donor characteristics that includes age, race, and cause of death. Typically, a lower DRI is associated with better outcome.

For the present study Dr. Shimul A. Shah and colleagues from the University of Massachusetts Medical School identified 31,587 deceased donor liver transplants from the Scientific Registry of Transplant Recipients database between 2002 and 2008. Recipients who were 18 years of age and older were included, and partial or multiple liver transplants were excluded. Over 100 transplant centers were included with high volume centers (HVC) conducting 78-215 procedures annually; medium volume centers (MVC) at 49-77, and low volume centers (LVC) at 5-48.

Results showed that HVC utilized donors with higher mean DRI at 2.07 compared to MVC and LVC at 2.01 and 1.91, respectively. Centers with greater procedure volume were found to have decreased risk of graft failure and recipient death. "Our study was the first to demonstrate the survival benefits associated with center-specific procedure volume and DRI," said Dr. Shah, a surgeon at UMass Memorial Medical Center. "With increasing numbers of waitlist candidates and critical shortage of available organs, it is vital that every available liver be fully utilized and we continue to evaluate outcomes with high-risk [donor](#) organs."

In a related editorial also published in this month's issue of Liver Transplantation, Dr. Robert Merion, Professor of Surgery at the University of Michigan and President of the Arbor Research Collaborative for Health in Ann Arbor said, "Studies such as Shah et al. advance our understanding of associations between facility-level characteristics and outcomes. There is much knowledge of transplant candidates and their donors, but now we must focus more deeply on facility practices in order to dissect out the center effect in the field of [liver transplantation](#)."

**More information:** "Impact of Center Volume on Increased Risk Liver Transplant Outcomes." Deepak K. Ozathil, You Fu Li, Jillian K. Smith, Jennifer F. Tseng, Reza F. Saidi, Adel Bozorgzadeh, Shimul A.

Shah. Liver Transplantation; Published Online: September 26, 2011  
([DOI: 10.1002/lt.22343](https://doi.org/10.1002/lt.22343)) Print Issue Date: October 2011.

"It's Time to Look Inward." Robert M. Merion. Liver Transplantation;  
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