



# Revised Liver-Kidney Transplant Guidelines Improve Organ Allocation

A 2017 United Network for Organ Sharing (UNOS) policy governing kidney transplant following liver transplant has successfully optimized allocation of scarce donor organs, according to a multicenter study conducted by researchers at University of Miami Miller School of Medicine, UCLA School of Medicine, and Cedars-Sinai Medical Center.



Paul Martin, M.D.

“The nation’s organ transplantation system is now better able to triage cirrhotic liver patients who may need a kidney transplant,” said Paul Martin, M.D., chief of the Division of Digestive Health and Liver Diseases and coauthor of the study, which was published in *Clinical Transplantation*.

Kidney failure affects many advanced cirrhosis patients who



receive a liver transplant, and it is challenging for clinicians to determine whether a patient's kidneys will recover after an otherwise successful liver transplant. If the kidneys fail, the patient must await another transplant.

Over the past few decades, simultaneous liver-kidney transplantation has become a commonly implemented solution. While circumventing the cost and stress of two separate transplant procedures, the procedure reduces organ availability for people needing kidneys, while some dual-transplant patients may never have actually needed them.

To increase the system's equity and efficiency, UNOS introduced new criteria to improve organ allocation. These recommendations are designed to reduce the number of combined liver-kidney procedures as well as the risk of misallocating kidneys.

Evaluating and comparing UNOS data from before and after the policy change, the researchers determined that the new criteria have fostered a more appropriate and efficient allocation of organs while providing a safety net for liver transplant patients who might eventually need a new kidney as well.

During the first two years of the new policy, "it didn't appear to substantially change the number of kidney transplants being done in cirrhotic patients," Dr. Martin noted. "However, in the third year, there was an overall decrease in the number of combined liver-kidney transplants, as well as kidney transplants after liver transplantation."

If a liver transplant patient experiences kidney failure within a certain window, they are given high priority for



transplant. “This,” said Dr. Martin, “appears to protect both liver and kidney patients.”

The median waiting time for kidney transplant following a liver transplant fell from 2,827 days to 324 days. Most importantly, the researchers noted, the total number of kidney transplants in liver transplant patients—those performed during liver transplant and those done within a year after liver transplant—decreased from 1,086 to 876 in one year (2019).

Dr. Martin believes that the next step will be to identify biomarkers that indicate a cirrhotic liver patient’s risk for irreversible kidney failure. These markers could provide more precise information to help determine the most appropriate care.

“We’re using a lot of the same tests we’ve had for decades, such as measuring creatine and urine output,” said Dr. Martin. “We need data on the molecular level that will show us which patients are most at risk for kidney failure. Researchers continue to work on this at the Miller School and elsewhere.”

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