



PRESS RELEASE

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KIDNEY BIOPSY ANALYSES CAUSE POTENTIALLY TRANSPLANTABLE ORGANS TO BE DISCARDED

Highlight

- When determining whether kidneys are suitable for transplantation in the United States, biopsy analyses don't provide useful information beyond standard donor and recipient characteristics.
- Many kidneys discarded based on biopsy findings would likely benefit U.S. patients who are waiting for a transplant.

Washington, DC (December 15, 2020) — New research indicates that analyses of kidney biopsies from deceased donors don't provide meaningful information beyond standard assessments of donor and recipient characteristics. In addition, the study revealed that relying on these analyses has prompted the discard of many potentially suitable organs for transplantation in the United States. The findings appear in an upcoming issue of *JASN*.

Despite a critical scarcity of organs available for transplantation, thousands of deceased donor kidneys are discarded each year in the United States. Approximately half of kidneys from deceased donors in the country are biopsied to assess their quality, and many of these kidneys are discarded because of structural abnormalities detected through microscopic analyses. It's unknown whether such analyses add value beyond usual donor and recipient attributes—such as physical characteristics and medical history—in predicting the survival of transplanted kidneys, however.

To investigate, a team led by Alexandre Loupy, MD, PhD (Paris Translational Research Center for Organ Transplantation) and Peter Reese, MD, MSCE (University of Pennsylvania's Perelman School of Medicine) analyzed detailed data from transplant centers in France and Belgium, where pretransplant biopsies are performed as standard practice but—unlike in the U.S.—do not guide decision-making for organ allocation.

“In this study, we took advantage of a natural experiment—differences in transplant practice between the U.S. and European centers,” said Dr. Loupy. “In France and Belgium, kidneys are not routinely biopsied as part of allocation but some centers do

biopsy kidneys after acceptance for transplant and use those findings to guide subsequent patient care.”

The researchers found that microscopic analyses did not improve the prediction of the survival or failure of transplanted kidneys beyond a set of donor and recipient characteristics.

The investigators also studied donor kidneys from deceased U.S. donors—specifically, organs discarded because of abnormalities detected through microscopic analyses—and matched them with similar kidneys transplanted in Europe. The matched kidneys had acceptable survival, illustrating lost transplant opportunities in the United States.

“Forty-five percent of U.S. kidneys discarded in this way could be accurately matched to kidneys transplanted in France. These discarded kidneys would be expected to have allograft survival of 93.1%, 80.7% and 68.9% at 1, 5 and 10 years, respectively,” Dr. Loupy said.

Study co-authors include Olivier Aubert, MD, PhD; Maarten Naesens, MD, PhD; Edmund Huang MD, PhD; Vishnu Potluri, MD, MPH; Dirk Kuypers, MD, PhD; Antoine Bouquegneau, MD; Gillian Divard, MD; Marc Raynaud, MSc; Yassine Bouatou, MD, PhD; Ashley Vo, Pharm.D; Denis Glotz, MD, PhD; Christophe Legendre, MD; Carmen Lefaucheur, MD, PhD; Stanley Jordan, MD, PhD; Jean-Philippe Empana, MD, PhD; and Xavier Jouven, MD, PhD.

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The article, titled “Assessment of the Utility of Kidney Histology as a Basis for Discarding Organs in the US: A Comparison of International Transplant Practices and Outcomes,” will appear online at <http://jasn.asnjournals.org/> on December 15, 2020, doi: 10.1681/ASN.2020040464.

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