CALCULATOR ESTIMATES SUCCESS OF KIDNEY TRANSPLANTS INVOLVING PARTICULAR DONOR-RECIPIENT PAIRS

Highlights

- A new calculator estimates the likelihood that a given patient who receives a kidney transplant from a particular living donor will maintain a functioning kidney.
- The calculator may be especially useful for kidney paired donation.

More than 100,000 people are on the kidney transplant waiting list in the United States.

Washington, DC (June 8, 2017) — Researchers have developed a calculator that estimates the likelihood that a given patient who receives a kidney transplant from a particular living donor would have a functioning kidney 5 and 10 years after transplantation. The calculator, which is described in an upcoming issue of the *Clinical Journal of the American Society of Nephrology* (CJASN), would provide useful information to kidney transplant candidates in general, but would be especially useful for a candidate who is choosing among different potential donors.

To develop the calculator, a team led by John Kalbfleisch, PhD and Valarie Ashby, MA (University of Michigan) analyzed data on 232,705 recipients of kidney transplants from 1998 to 2012 who were listed in the Scientific Registry of Transplant Recipients. After taking into consideration donor and recipient characteristics, the investigators found that certain mismatches with respect to gender, weight, body size, genetic make-up, and age were associated with increased risks of graft failure. The findings were used to create a calculator of estimated graft survival following transplantation of kidneys from living donors.

Dr. Kalbfleisch noted that an area where this calculator may be especially useful is in kidney paired donation (KPD). Many kidney transplant candidates have willing living donors, but there are often incompatibilities with respect to blood type or genetic makeup between the two. In KPD programs, pools of incompatible donor and recipient pairs are formed with the aim of arranging exchanges to help overcome these incompatibilities. In some instances, a candidate with a compatible donor may decide to join a KPD pool with the purpose of seeking a better match through an exchange. When compatible pairs join
a pool, this can be beneficial to other pairs in the pool as well. “Our calculator allows the candidate with a compatible donor to compare the estimated graft survival for a kidney from their donor, versus one from another donor in the KPD pool,” said Dr. Kalbfleisch.

Study co-authors include Alan Leichtman, MD, Michael Rees, MD, Peter Song, PhD, Mathieu Bray, MS, and Wen Wang, MS.

Disclosures: Dr. Rees reports receiving grant support for the Alliance for Paired Donation from Novartis and Sanofi Pharmaceuticals and Optum. The authors reported no other financial disclosures.


The content of this article does not reflect the views or opinions of The American Society of Nephrology (ASN). Responsibility for the information and views expressed therein lies entirely with the author(s). ASN does not offer medical advice. All content in ASN publications is for informational purposes only, and is not intended to cover all possible uses, directions, precautions, drug interactions, or adverse effects. This content should not be used during a medical emergency or for the diagnosis or treatment of any medical condition. Please consult your doctor or other qualified health care provider if you have any questions about a medical condition, or before taking any drug, changing your diet or commencing or discontinuing any course of treatment. Do not ignore or delay obtaining professional medical advice because of information accessed through ASN. Call 911 or your doctor for all medical emergencies.

Since 1966, ASN has been leading the fight to prevent, treat, and cure kidney diseases throughout the world by educating health professionals and scientists, advancing research and innovation, communicating new knowledge, and advocating for the highest quality care for patients. ASN has nearly 17,000 members representing 112 countries. For more information, please visit www.asn-online.org or contact the society at 202-640-4660.

# # #

Tweet: Calculator estimates success of kidney transplants involving particular donor-recipient pairs.

Facebook: Researchers have developed a calculator that estimates the likelihood that a given patient who receives a kidney transplant from a particular living donor would have a functioning kidney 5 and 10 years after transplantation. The calculator, which is described in the Clinical Journal of the American Society of Nephrology, would provide useful information to kidney transplant candidates in general, but would be especially useful for a candidate who is choosing among different potential donors.

The American Society of Nephrology®, ASN®, Kidney Week®, CJASN®, JASN®, NephSAP®, and ASN Kidney News® are registered trademarks of ASN