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## DOES HYPERTENSION POSE A HEALTH RISK TO OLDER ADULTS WHO WISH TO DONATE A KIDNEY?

*Study finds higher rates of kidney failure in donors with high blood pressure.*

### Highlights

- Among older living kidney donors, those with hypertension had higher risk of developing kidney failure through 15 years after donation; however, the absolute risk was small.
- Hypertension was not linked with a higher risk of early death among older donors.

**Washington, DC (June 25, 2019)** — In an analysis of clinical information on older living kidney donors, hypertension was linked with a higher risk of developing kidney failure. The study, which is published in an upcoming issue of *CJASN*, provides new information that may help inform discussions with older individuals when they consider donating a kidney.

Receiving a kidney from a living donor is the best treatment for patients with kidney failure, but it is important to ensure that individuals who wish to donate an organ are able to safely do so. Older age is not a barrier for kidney donation; however, for many older individuals hypertension is common. It is unclear whether hypertension elevates the risk of kidney failure or early death among older donors .

To investigate, Fawaz Al Ammary, MD, PhD (Johns Hopkins University School of Medicine) and his colleagues analyzed national registry data on 24,533 older kidney donors from 1999 to 2016, including 2,265 who had hypertension at the time of donation. This information was linked to data from the Centers for Medicare & Medicaid Services and the Social Security Death Master File to determine which donors developed kidney failure or died. The study is the largest to examine what risks older donors with hypertension may face in the long term.

Donors were observed for a median follow-up time of 7.1 years after kidney donation (and up to a maximum of 18 years). During the study period, 24 donors developed kidney failure and 252 died. Hypertension at the time of donation was linked with higher risk of kidney failure, but not mortality. The 15-year risk of kidney failure was 0.8% for older donors with hypertension vs. 0.2% for older donors without hypertension. The risk of

kidney failure was 3.1-times higher for donors with hypertension compared with those without hypertension who had otherwise similar clinical characteristics.

When the researchers restricted their analysis to include only donors from the 2004-2016 period (because documentation of antihypertensive therapy was unavailable before this time), they observed a stronger association—a 6.2-fold higher risk for kidney failure among donors with hypertension. There was no significant association between donor hypertension and 15-year mortality.

“Fortunately, the number of kidney failure events in this population is small. Albeit a rather small risk, practice guidelines for live kidney donor evaluation need to be revisited,” said Dr. Al Ammary. “While controlled hypertension in otherwise eligible older individuals may not be viewed as an absolute contraindication for kidney donation, these findings may inform conversations between the provider and the older individuals with hypertension when they consider donating a kidney.”

The investigators plan to conduct additional studies in this area to advance the field of organ transplantation in light of the growing number of older individuals who may offer an important source of organs for living donation.

In an accompanying editorial, Kenneth Newell, MD, PhD (Emory University School of Medicine) and Richard Formica, Jr., MD (Yale University School of Medicine) noted that the findings “should not be used to ‘allow’ or ‘exclude’ individuals from proceeding with living kidney donation but rather should be incorporated into a comprehensive educational program to better inform donors about the long-term consequences of their decision to be a living kidney donor. In addition these findings identify a cohort of medically complex living kidney donors who should be offered the opportunity to enroll in specialized programs to provide lifetime surveillance for and treatment of conditions associated with an increased risk of end stage kidney disease.”

Study co-authors include Xun Luo MD MPH, Abimereki D. Muzaale, MD MPH, Allan B. Massie, PhD MHS, Deidra C. Crews, MD ScM, Madeleine M. Waldram, BA, Mohamud A. Qadi, MPH, Jacqueline Garonzik-Wang, MD PhD, Macey L. Henderson, JD PhD, Daniel C. Brennan, MD, Alexander C. Wiseman, MD, Richard C. Lindrooth, PhD, Jon J. Snyder, PhD, Josef Coresh, MD PhD, and Dorry L. Segev, MD PhD.

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The article, entitled “Risk of End-Stage Kidney Disease in Older Live Kidney Donors with Hypertension,” will appear online at <http://cjasn.asnjournals.org/> on June 25, 2019, doi: 10.2215/CJN.14031118.

The editorial, entitled “ESKD Risk in Living Kidney Donors ‘Like Me’,” will appear online at <http://cjasn.asnjournals.org/> on June 25, 2019.

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