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KIDNEY FAILURE PATIENTS FACE HIGHER RISK OF CANCER DEATH

Both dialysis patients and kidney transplant recipients are more likely to die from cancer than individuals in the general population.

Highlight

- In a population-based study, both patients on dialysis and those who received kidney transplants experienced over 2.5-times higher risks of cancer death than age- and sex-matched individuals without kidney failure.
- In dialysis patients, the main driver for cancer death was from cancers that were present prior to starting dialysis, whereas in transplant recipients, cancer deaths were mainly driven by cancers that arose after transplantation.

Washington, DC (February 14, 2019) — A new study indicates that individuals with kidney failure, such as those undergoing dialysis and those who have received kidney transplants, experience higher risks of dying from cancer than people in the general population. The *Journal of the American Society of Nephrology (JASN)* findings point to the need for additional research to clarify the mechanisms involved in the development of cancer in kidney failure patients, and to improve cancer care in this at-risk population.

Individuals with kidney failure who are on dialysis or who receive kidney transplants face an elevated risk for developing cancer; however, few studies have assessed the death rates due to cancer in these patients. To investigate, Eric Au, MBBS (University of Sydney) and his colleagues compared the rates of cancer-related mortality in dialysis patients and kidney transplant recipients with rates in the general population.

The team examined information on Australian patients—52,936 who initiated dialysis and 16,820 who received kidney transplants from 1980 through 2014—and age- and sexmatched controls in the general population. Among the major findings:

 Over 10 years, mortality rates from cancer were 6.1% and 4.5% in dialysis and transplant patients, respectively. Both patients on dialysis and those who received transplants experienced over 2.5-times higher risks of cancer death than age- and sex-matched individuals in the general population (2.6-times higher for dialysis patients and 2.7-times higher for transplant recipients).

- Women and younger patients experienced especially high risks compared with the general population.
- In dialysis patients, the main driver for cancer death was from cancers that were present prior to starting dialysis.
- In transplant patients, cancer deaths were mainly driven by cancers that arose after transplantation, particularly cancers relating to immune deficiency and viral infection. This may relate to the long-term immunosuppressive drugs that patients are required to take after receiving an organ transplant.

"Results from this study will assist clinicians and researchers in understanding the patterns of cancer-related mortality in dialysis and transplant patients," said Dr. Au. "Further research may help us understand which patients are particularly at risk of cancer and the reasons why they have higher chances of dying from cancer."

Study co-authors include Jeremy R. Chapman, PhD; Jonathan C. Craig, PhD; Wai H. Lim, PhD; Armando Teixeira-Pinto, PhD; Shahid Ullah, PhD; Stephen McDonald, PhD; and Germaine Wong, PhD.

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The article, entitled "Overall and Site-Specific Cancer Mortality in Patients on Dialysis and after Kidney Transplant," will appear online at http://jasn.asnjournals.org/ on February 14, 2019, doi: 10.1681/ASN.2018090906.

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