

Research suggests that medications for kidney transplants increase risk of skin cancer

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A study led by researchers at RCSI (Royal College of Surgeons in Ireland) has analysed the pattern of skin cancer rates in kidney transplant patients, which suggests the increased risk is related to the anti-rejection medications.

The research is published in *JAMA Dermatology* and was a collaboration between the National Cancer Registry Ireland and the National Kidney Transplant Service in Beaumont Hospital.

Patients who receive a [kidney transplant](#) are at increased risk of cancer, in particular skin cancer. The study found that this skin cancer risk falls when the [transplant](#) fails and the patients return to dialysis but rises again when they receive another transplant. However, the rate of skin cancer is still higher in patients with failed transplants than pre-transplant patients on dialysis.

Due to this pattern of skin cancer rates, the data suggests that the cancer risk is related to the stopping and starting of anti-rejection medications.

"In recipients of multiple [kidney](#) transplants, the incidence of nonmelanoma skin cancer fell during periods defined by transplant failure, but there was still an elevated risk. The incidence of cancer overall highlights the need for continued cancer surveillance during graft failure," said the study's lead author Dr. Donal Sexton, Department of

Nephrology and Kidney Transplantation, Beaumont Hospital, RCSI.

The study analysed the rates of cancer in 3,821 individual deceased and living kidney transplant recipients. Of the patients analysed, 3,215 recipients had one transplant, 522 recipients a second; and 84 recipients had three kidney transplants.

During the patient's first kidney transplant, the rate of skin cancer rose 15 times higher than before the procedure. That skin cancer rate fell by half when the transplant failed and the patient returned to dialysis; however, the rate was still seven times higher than the pre-transplant patient's rate. When they received a second transplant, the rate of skin cancer rose again to 12.8 times more than pre-transplant rate.

"Our study has provided a comprehensive analysis of [cancer risk](#) over multiple kidney transplants in the same individuals. However, the retrospective nature of the analysis makes it difficult to capture the effect of the lag between exposure, [cancer](#) development, presentation, and diagnosis, and which may vary by treatment period," said Professor Peter Conlon, Associate Professor of Medicine at RCSI.

More information: Donal J. Sexton et al, Variation in Nonmelanoma Skin Cancer Incidence by Treatment Modality Among Patients Receiving Multiple Kidney Transplants, *JAMA Dermatology* (2019). [DOI: 10.1001/jamadermatol.2018.4660](https://doi.org/10.1001/jamadermatol.2018.4660)

Provided by RCSI

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