

Transplant patients have high rate of cancer death

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Researchers at the University of Adelaide are working to better understand how patients who receive life-saving organ transplants can be spared from dying of cancer many years later.

Transplant patients are 3-5 times more likely to develop cancer than the general population. For example, one third of Australian [kidney transplant patients](#) will eventually die of cancer many years after their surgery – and a third of these deaths are due to [skin cancer](#).

"The drugs given to transplant patients are designed to prevent rejection of the transplanted organ, but this means the [immune suppression](#) caused by these drugs also makes the patients much more susceptible to cancers," says Dr Robert Carroll, Senior Clinical Lecturer with the University's School of Medicine.

"In Australia, skin cancer is a major problem for [transplant patients](#) because of our high UV levels. It's a much worse problem in this country than it is overseas.

"There's no doubt that the transplants are needed to save patients' lives. They are healthy and happy for years after the transplant. But many of those people's lives are still being cut short because of the higher cancer rate," he says.

To help understand the problem, Dr Carroll, who is a Renal and Transplantation Physician at the Royal Adelaide Hospital, and PhD

student Christopher Hope have been researching the immune systems in [kidney transplant recipients](#).

Their research has found a number of markers in the body that help to show if a transplant patient is more likely to develop cancer. The markers include higher levels of certain immune cells, such as B cells and regulatory T-cells, in the blood.

"This may give us a method of understanding which patients are at higher risk of developing cancer, but unfortunately at this stage we have no real way of preventing those cancers from occurring," Dr Carroll says.

"With as many as 800 kidney transplants being performed in Australia each year, that represents a significant cancer burden for those patients to come in the years ahead.

Dr Carroll and colleagues are now conducting further studies to see what impact reductions in the immunosuppressant drugs will have on patients. "It's about striking a fine balance between ensuring the new organ is not rejected, and helping to prevent cancer from developing in patients in the future," he says.

Provided by University of Adelaide

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