

Kidney transplants: Expanding the pool of available organs

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In the United States over 80,000 people are on the kidney transplant waiting list, and thousands die each year waiting for transplants. For most dialysis patients, kidney transplantation increases their chances of survival.

In the last decade physicians and surgeons began using organs from donors who suffered [cardiac death](#) [donors after cardiac death (DCD)] as an alternative to organs transplanted after donor brain death (DBD). DBD kidneys are believed to be superior for successful transplant. In DBD transplants, the circulatory system is maintained until the organ is preserved. In contrast, with DCD organs, the shutdown of the circulatory system and the attendant loss of blood supply to the [kidney](#) may cause damage to the transplant organ.

In a study appearing in an upcoming issue of the [Journal of the American Society of Nephrology](#), Maarten G. Snouijs, MD (Maastricht University Medical Center, the Netherlands) and co-authors analyzed 2,575 Dutch transplant candidates to see how receiving a DCD kidney affected their overall chances of survival.

"Over the past decade, DCD has evolved into an important new source of donor kidneys," Snouijs explained. "However, in many countries the large donor pool of DCD kidneys has not been fully utilized." That is because questions remain as to the benefits of DCD transplants. Are patients better off receiving a DCD kidney or waiting for a kidney donated after brain death?

Kidneys donated after brain death are "generally believed to be superior," according to Snoeijs. However, of the 2,575 wait-listed patients in this study, 26 percent received a DBD kidney and 18 percent received a DCD organ, so more than half either died or remained on the waiting list.

When DCD kidneys were transplanted, the failure rate in the first few months was nearly twice as high as for DBD kidneys. However, patients who received DCD kidneys had a 56 percent higher chance of survival, compared to those who stayed on dialysis waiting for a DBD kidney.

"We think these results may have a large influence on DCD [kidney transplantation](#), which may eventually lead to a substantial reduction of the waiting list and improved survival of patients with end-stage renal disease," said Snoeijs.

The study adds to "the preponderance of evidence" in favor of using DCD organs, according to an accompanying editorial by Nicholas Shah, MD, and Anthony Langone, MD (Vanderbilt University School of Medicine, Nashville, TN). They conclude, "Transplant centers should maximally utilize DCD kidneys to optimize the quality of life and minimize mortality of their patients on the waiting list."

Like other observational studies, the current study is limited by the possibility of selection bias. "Due to careful statistical corrections, however, we consider it unlikely that the effect of DCD kidney transplantation on survival has been overestimated because of patient selection bias," according to Snoeijs.

Provided by American Society of Nephrology

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