

Kidneys from deceased donors with acute renal failure expand donor pool

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Kidneys recovered from deceased donors with acute renal failure (ARF) - once deemed unusable for transplant - appear to work just as well as kidneys transplanted from deceased donors who do not develop kidney problems prior to organ donation, according to a new study by researchers at Wake Forest University Baptist Medical Center.

The findings, reported in the October issue of *Surgery*, suggest the possibility of safely expanding the donor [kidney](#) pool by at least 10 to 15 percent, potentially making an additional 1,000 kidneys or more per year available to those waiting for a [donor organ](#).

"There is a critical shortage of donor organs and we are continually making efforts to expand the donor pool," said Robert J. Stratta, M.D., professor of surgery and director of transplantation at Wake Forest Baptist and senior investigator on the study. "While kidneys from deceased donors with ARF have been considered unusable in the past, our study shows they can work quite well. The function of the new kidney may be slow or delayed - and patients may have to continue dialysis for a week or two until the kidney is up and running - but that's really the only downside. Choosing to utilize these kidneys will greatly shorten the waiting time for people who are willing to accept a kidney from this kind of donor."

Stratta and colleagues transplanted 25 kidneys from 17 deceased donors with ARF, which is impaired kidney function that can result from many things, including traumatic injury, exposure to medications toxic to the kidneys, infection, dehydration, shock, and the breakdown of muscle fibers. Unlike chronic kidney failure, ARF can often be reversed if the underlying cause is treated or removed, Stratta said.

All of the kidneys were refused by multiple centers before being offered for transplantation at Wake Forest Baptist. The patients receiving the kidneys

had an average waiting time of 24 months until a [donor kidney](#) was made available to them and each chose to accept the organ. All of the recipients were monitored for at least 11 months post-transplant. At an average follow-up of 20 months, patient and graft survival rates were 100 percent and 92 percent, respectively - comparable, Stratta said, to the outcomes typically seen when healthy deceased donor kidneys are transplanted.

"As long as the donor kidneys are still producing urine and do not have evidence of scarring from pre-existing conditions such as diabetes or a history of high blood pressure, they appear to restore to a healthy condition when transplanted," he said.

"Each transplant center has its own level of comfort regarding the criteria they use to determine what organs they will and will not accept for transplant," Stratta added. "In the past, kidneys from donors with ARF were considered an absolute 'no.' Then they became a relative 'no.' After this study, I think it's safe to say that they are a relative 'yes' - there is a subset of these donor kidneys that can be safely and successfully transplanted with very good short-term results."

Over the last decade, the number of patients waiting for a kidney transplant has outpaced growth in the number of transplants performed each year. Between 1997 and 2006, the number of patients waiting for a kidney transplant increased by 81 percent from 49,208 to 88,877. During the same time, the number of annual kidney transplants performed in the United States increased by only 41 percent from 11,703 to 16,483. This escalating disparity in the number of end stage renal disease patients on the waiting list relative to those actually receiving kidney transplants has been accompanied by a startling increase in the number of deaths while waiting for transplants, from 2,184 in 1997 to 4,456 in 2006. In addition, median waiting times for kidney transplants have doubled in the last decade.

"Now that we know we can successfully transplant these kidneys and they will work just as well as other deceased donor kidneys, it becomes a decision of personal preference - the transplant center's level of comfort with using these kidneys, the patient's preference with accepting the kidney, and the general public's decision on whether or not to donate life," Stratta said.

Source: Wake Forest University ([news](#) : [web](#))

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