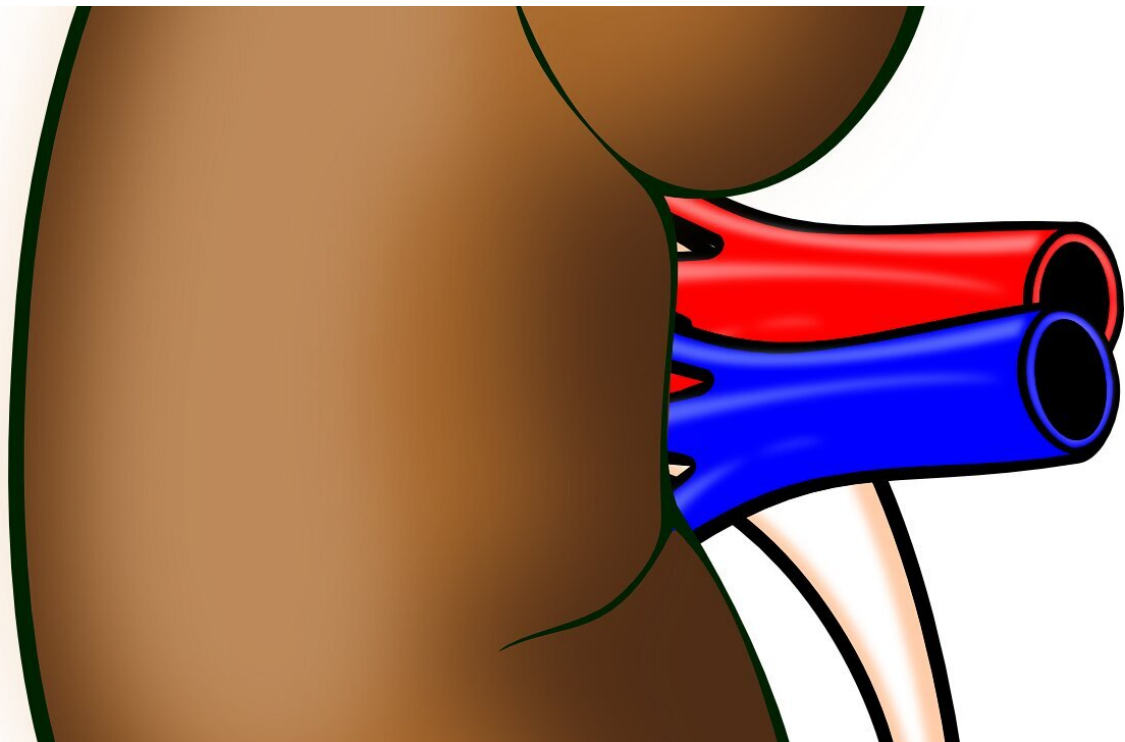


# US kidney transplant survival rates continue to improve

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Long-term survival rates of kidney transplant patients in the U.S. have increased over the last three decades, but there are opportunities to further improve these outcomes, according to a review article published today in *The New England Journal of Medicine*.

For many patients with end-stage kidney disease, transplants are a better option than a lifetime of dialysis. But some kidney grafts will fail eventually. Prolonging the survival time of kidney grafts not only improves patient lifespan, boosts quality of life and reduces [health care costs](#), but it also means that more kidneys are available for the approximately 90,000 people who are waiting for a [transplant](#) in the U.S.

"There has been a gratifying improvement in kidney transplant survival, both for patients and the kidney graft itself, from 1996 to the current era," said the review's lead author, Sundaram Hariharan, M.D., professor of medicine and surgery at the University of Pittsburgh School of Medicine, and senior transplant nephrologist at UPMC. "These improvements have occurred despite unfavorable increases in obesity, diabetes and other conditions in patients and donors."

The article—coauthored by Ajay Israni, M.D., transplant nephrologist at Hennepin Healthcare, and a professor of medicine at the University of Minnesota, and Gabriel Danovitch, M.D., transplant nephrologist and professor of medicine at the University of California, Los Angeles, who contributed equally to the review—describes these positive trends in the U.S. and suggests opportunities to further enhance kidney transplant survival.

Kidney transplantation involves grafting a healthy kidney from a deceased or living donor, who is carefully screened to ensure they are compatible with the recipient. To help prevent their bodies from rejecting the new organ, transplant patients must take [immunosuppressive drugs](#) for the rest of their lives.

The study found that long-term survival of kidney grafts has increased over time. For example, the five-year survival rate of kidneys from deceased donors increased from 66.2% in 1996–1999 to 78.2% in 2012–2015. Similarly, survival of those from living donors increased

from 79.5% to 88.1% in the same period.

"We have learned a lot through research and by taking care of kidney transplant patients," said Hariharan. "Newer tissue typing and tissue matching platforms, changes in organ allocation systems, living donor paired exchanges, transplant surgical techniques, immunosuppressive medications, anti-viral medications, refined diagnostic methods of kidney rejection by biopsy, aggressive post-transplant surveillance and overall post-transplant medical management have contributed to better survival rates."

The researchers emphasize that COVID-19 is a serious threat to kidney transplant recipients, and mortality rates from the disease are high in these people. COVID-19 vaccines can help reduce the rate and severity of infections, but they are less effective in transplant patients compared with the general population. A third, or "booster," dose of the vaccine may be beneficial for these people.

"It's also very important that kidney transplant patients follow Centers for Disease Control and Prevention guidelines on social distancing and masking," said Hariharan.

Despite advances in kidney transplant survival, the U.S. rates fall short of those in other developed nations. This is likely because Medicare insurance covers immunosuppressant drugs for just three years after transplantation.

But in December 2020, a new U.S. law was passed that will eventually provide lifetime coverage of these essential medications.

"The passing of this law is a great victory for kidney transplant patients, and we anticipate further improvements in long-term kidney transplant survival over the next decade," said Hariharan.

The article outlines other opportunities to further enhance kidney graft survival, such as early referral of patients for transplants, [kidney exchange programs](#), better diagnostic tools to identify early acute rejection, innovative therapies for both T-cell- and antibody-mediated rejection, adoptive T-cell therapy for certain post-transplant viral infections and optimization of [immunosuppressive medications](#).

Better education of patients about the importance of adhering to therapy also is important for improving transplant survival. According to Hariharan, a silver lining of the COVID-19 pandemic has been wider adoption of telemedicine, expanding patient access to post-transplant care.

Provided by University of Pittsburgh

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