

# Kidney grafts function longer in Europe than in the United States

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Kidney transplants performed in Europe are considerably more successful in the long run than those performed in the United States. While the one-year survival rate is 90% in both Europe and the United States, after five years, 77% of the donor kidneys in Europe still function, while in the United States, this rate among white Americans is only 71%. After ten years, graft survival for the two groups is 56% versus 46%, respectively. The lower survival rates compared to Europe also apply to Hispanic Americans, in whom 48% of the transplanted kidneys still function after ten years, and particularly to African Americans, whose graft survival is a mere 33%.

Researchers from Heidelberg have described the large discrepancy for the first time, after systematically comparing data from the world's most comprehensive study on transplant results, the Collaborative Transplant Study (CTS) in Heidelberg, with transplant data from the United States. Their [research findings](#) have now been published online in the journal *Transplantation*.

The results of the study show particularly large differences in [graft survival](#) among children and [young adults](#) between Europe and the US. One reason for the poorer results in the United States may be the fact that costs of anti-rejection drugs are usually reimbursed by [Medicare](#) for only three years, while in Europe, the statutory [health insurance](#) guarantees lifelong reimbursement of costs. In the United States, patients who have undergone kidney transplants often have to pay for these drugs themselves. Costs amount to around US\$ 20,000 per year.

## Heidelberg CTS Study evaluates international data on transplantation

The CTS Study conducted for the past 30 years at Heidelberg University Hospital's Transplantation Immunology department, headed by Prof. Gerhard Opelz, has collected data on transplants performed worldwide and evaluates them. These days, kidney transplants are generally very successful. A major reason for this is the anti-[rejection](#) drugs, or immunosuppressants, which must be taken by kidney-transplant recipients on a lifelong basis.

"For the comparison of the long term graft survival in the United States and Europe, we had access to data from the US United Network for Organ Sharing (UNOS)," explained Dr. Adam Gondon, who works as an epidemiologist at the Division of Clinical Epidemiology and Aging Research of the German Cancer Research Center (DKFZ). In the United States, all data on transplants are systematically collected and available to the public, in contrast to German and most European countries, where generally no comparable national registry exists. Participation in the CTS Study is voluntary. "However, since a high percentage of the European centers participate, the data for Europe are representative," said Prof. Opelz. Around 23,500 kidney transplants in Europe were used for the current evaluation, along with data on 32,000 kidney transplants performed in the United States.

"We cannot conclusively identify the reasons for the [discrepancy](#) between the United States and Europe based on the statistical analyses performed here," said Dr. Gondon. However, the fact that the results in the first year are equally good and that they become successively worse in the United States may indicate that posttransplant care in general, and the supply of immunosuppressants or lack thereof in particular, may play an certain role here, he added.

## Dialysis more expensive than immunosuppressants

In February 2012, Canadian nephrologists already sharply criticized the current US practice in the *New England Journal of Medicine* (NEJM 366;7). If patients have to return to dialysis, their life expectancy is shortened, even if a new kidney is available. According to the experts, this rationing is neither ethically responsible nor does it make sense in economic terms, since dialysis costs around US\$ 75,000 per year, more than triple the costs of immunosuppressive treatment. So far, however, all of the political efforts in the United States have failed that call for immunosuppressive treatment to be continued for more than three years after [kidney transplant](#).

**More information:** Kidney Graft Survival in Europe and the United States: Strikingly Different Long-term Outcomes. Gondos, Adam; Döhler, Bernd; Brenner, Hermann; Opelz, Gerhard. *Transplantation*. 10 October 2012. [doi: 10.1097/TP.0b013e3182708ea8](https://doi.org/10.1097/TP.0b013e3182708ea8)

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