

Could HIV-infected organs save lives?

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If Congress reversed its ban on allowing people with HIV to be organ donors after their death, roughly 500 HIV-positive patients with kidney or liver failure each year could get transplants within months, rather than the years they currently wait on the list, new Johns Hopkins research suggests.

"If this legal ban were lifted, we could potentially provide [organ transplants](#) to every single HIV-infected transplant candidate on the waiting list," says Dorry L. Segev, M.D., Ph.D., an associate professor of surgery at the Johns Hopkins University School of Medicine and the study's senior author. "Instead of discarding the otherwise healthy organs of HIV-infected people when they die, those organs could be available for HIV-positive candidates."

Not only would HIV-positive transplant candidates get organs sooner if such transplants were legalized, Segev says, but by transplanting those patients and moving them off the waiting list, the time to transplant would be shorter for non-HIV-infected patients.

The ban on [organ donation](#) by HIV-positive patients is a relic of the 1980s, when it was still unclear what caused AIDS, at the time a devastating new epidemic sweeping the United States. Congress put the ban into the National Organ Transplant Act of 1984 and it has never been updated, despite the fact that HIV is no longer an immediate death sentence but a chronic disease managed with medication.

The number of HIV-positive patients receiving kidney or liver

transplants — with non-HIV-infected organs — is on the rise as doctors become more comfortable with the idea, and patients are having good outcomes, Segev says. In 2009, more than 100 HIV-positive patients got new kidneys and 29 got new livers. HIV-infected patients may encounter accelerated rates of liver and kidney disease due in part to the toxic effects of antiretroviral therapy, the medications that keep HIV at bay.

Segev and his colleagues set out in their study, published early online in the *American Journal of Transplantation*, to estimate the number of people who die each year in the United States who are good potential [organ donors](#) except for that they are HIV-positive. They culled data from two main sources — the Nationwide Inpatient Study, which has information on in-hospital deaths of HIV-infected patients, and the HIV Research Network, a nationally representative registry of people with HIV. The team determined that the number of annual deaths with what are believed to be organs suitable for transplantation was approximately the same as estimated by each data source — an average of 534 each year between 2005 and 2008 in the Nationwide Inpatient Study and an average of 494 each year between 2000 and 2008 in the HIV Research Network.

While no transplants of HIV-infected organs into HIV-infected patients have been done in the United States because of the ban, Segev says doctors in South Africa have started doing this type of transplant with excellent results.

Segev suggests that, in transitioning to a system where HIV-infected donor organs can be transplanted into HIV-infected patients, doctors can call on the lessons and experience of transplanting hepatitis C patients with organs from people with the same disease. This practice, which has not always been the standard, has substantially shortened the waiting list for these recipients without significantly compromising patient or graft survival. The decision of whether or not to use these organs is not a legal

one, but one made by the clinician.

Using HIV-infected organs is not without concerns. There are medical and safety issues that need to be addressed. Doctors need to make sure that the harvested organs are healthy enough for transplant and that there is minimal risk of infecting the recipient with a more aggressive strain of the virus. There is also a fear that an HIV-infected organ could accidentally be transplanted into an HIV-negative recipient. Segev says that hepatitis C-infected organs are clearly marked as such and similar protocols can be developed with HIV-infected organs.

"The same processes that are in place to protect people from getting an organ with hepatitis C accidentally could be put in place for HIV-infected organs," Segev says. "When you consider the alternative — a high risk of dying on the waiting list — then these small challenges are overshadowed by the large potential benefit."

Segev says eliminating the prohibition on HIV-infected organ donation would have immediate results. At first, he predicts, there would be more HIV-infected organs than people on the waiting list. Then, as doctors realized that their HIV-infected patients would no longer have to wait five-to-seven years for a transplant, Segev says he thinks more and more HIV-infected patients would sign up for the shortened list for an HIV-infected organ.

"The whole equation for seeking a transplant for someone with [HIV](#) and kidney or [liver failure](#) would change if this source of organs became available," he says. "We want the decisions taken out of the hands of Congress and put into the hands of clinicians."

Provided by Johns Hopkins Medical Institutions

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