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Researchers urge use of hepatitis C-positive kidneys as one solution to kidney shortage

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The average wait time for a kidney transplant is five years and there are more than 100,000 people on the waiting list. However, there are thousands of viable hepatitis C-positive kidneys that are discarded each year solely because they're infected. A new perspective paper written by researchers at the Perelman School of Medicine at the University of Pennsylvania and published in The *New England Journal of Medicine* suggests that "new antiviral therapies with cure rates exceeding 95 percent should prompt transplant-community leaders to view HCV (hepatitis C virus)-positive organs as a valuable opportunity for transplant candidates with or without pre-existing HCV infection."

The authors, led by Peter P. Reese, MD, MSCE, an assistant professor in the Renal, Electrolyte and Hypertension Division, and David Goldberg, MD, MSCE, an assistant professor in the Gastroenterology Division at Penn, acknowledge that intentionally infecting patients with hepatitis C through transplantation will require significant oversight and consideration. However, they assert that the benefit to patients who would otherwise have had little chance of kidney transplantation far outweigh the concerns. They write that "the resulting expansion of the donor pool could save hundreds of lives each year."

For example, the authors suggest that hepatitis C-positive kidneys should be offered to uninfected patients who have a high risk of health deterioration if they continue dialysis—including elderly patients or those with serious co-existing conditions, such as cardiovascular disease—disadvantageous blood types or other conditions that would

mean many years of waiting for an appropriate hepatitis C-negative kidney to become available. In fact, they assert that "providing HCV-positive kidneys and HCV therapy to HCV-negative recipients will lead to better outcomes than dialysis."

In order to make this work, the authors describe necessary steps of a rigorous informed consent process that outlines the risks and uncertainties, close involvement of institutional review boards, and multicenter trials to collect data. The authors also acknowledge that although the costs of transplanting hepatitis C-infected kidneys into uninfected recipients would be high, they may be offset by savings from reduced dialysis time for recipients who would otherwise wait longer for a kidney.

More information: "Transplanting Hepatitis C–Positive Kidneys" *N Engl J Med*, 2015. DOI: 10.1056/NEJMp1505074

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