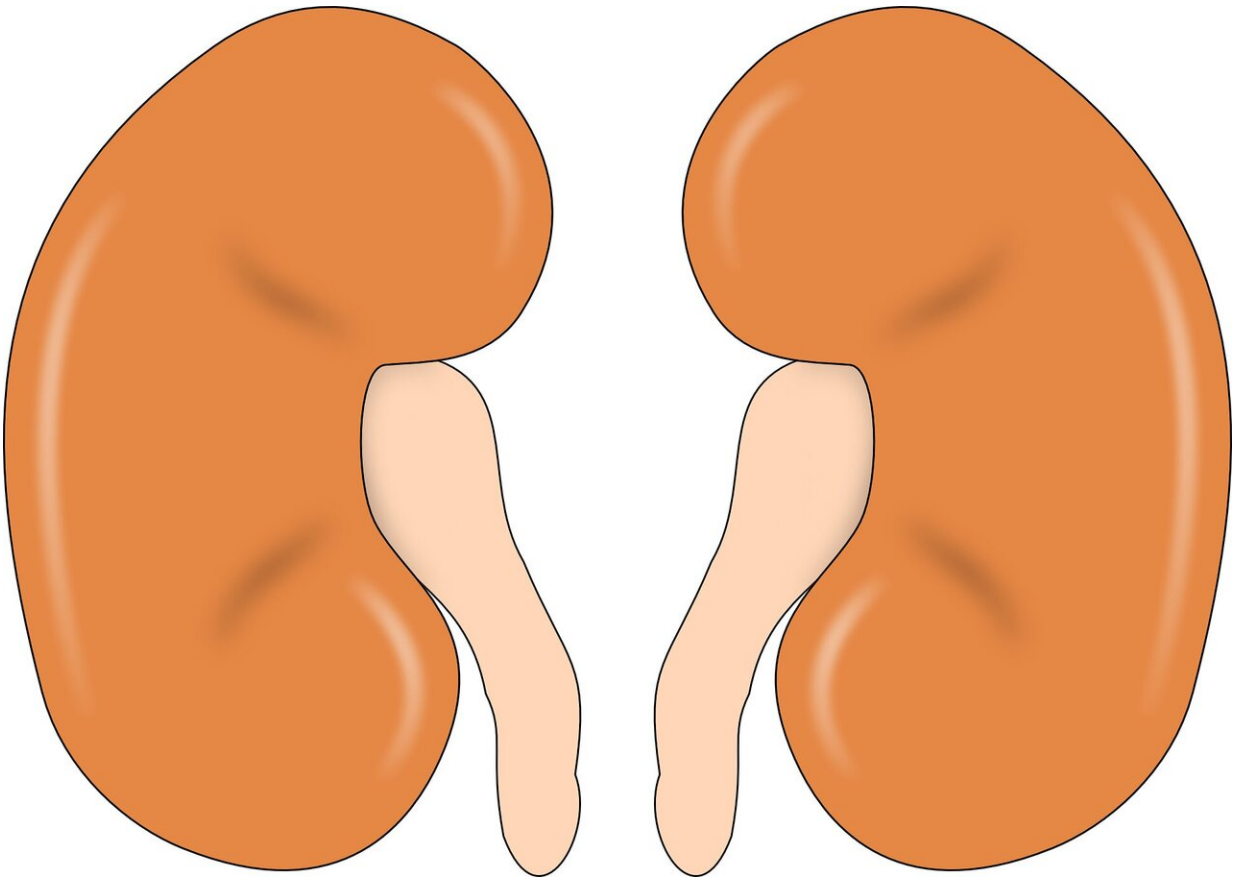
Medical Xpress

Kidney transplant, the cost of accounting for patients' preferences

July 17 2020



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From the moment a kidney becomes available, there are just 24 hours to identify the recipient and carry out the transplant. Waiting lists are

extremely long, available organs are few and not all of them are 'ideal.' Furthermore, a recipient has the ability to 'refuse' a kidney, for instance by continuing with the dialysis treatment while waiting for a better moment, thus complicating the race against time to carry out the transplant. This issue involving the scarcity of resources and an array of delicate choices, could be resolved in a more efficient manner if the allocation system accounted for the patients' preferences, alongside parameters of compatibility, age and waiting time.

These are the results of a study recently published in the *Journal of Health Economics* by Giacomo Pasini, professor of Economics at Ca' Foscari University of Venice, co-authored by Mesfin G. Genie—who received a Ph.D. in Economics at Ca' Foscari and is now working at the University of Aberdeen—and Antonio Nicolò of the University of Padua. The field work was made possible thanks to a strategic project fund granted by the University of Padua.

The economists interviewed 248 patients on the waiting list for a kidney transplant at the Kidney and Pancreas Transplantation Unit of the University of Padua's School of Medicine, one of the key centers in Italy, with over 2000 operations completed.

The experiment allowed the researchers to analyze the patients' preferences regarding different variables such as waiting time, post-graft life expectancy, infection risk and the neoplastic risk.

Patients who are not willing to take any risks, for example, might want to wait longer to get the 'perfect' kidney. Conversely, patients who find the dialysis treatment particularly unbearable, such as parents of young children whose life quality is seriously hindered by the number of hours they need to spend in the hospital, could be willing to accept an augmented risk kidney, just so they can get the transplant as soon as possible.

"We found a significant heterogeneity in the preferences of patients who are waiting for a transplant—explains Giacomo Pasini—Furthermore, we have proved how including patients' preferences in the kidney allocation algorithm would considerably improve both the patients' satisfaction and the expected graft survival"

The study has also tackled the internationally relevant topic of the so-called 'marginal' kidney—that is to say potentially suitable kidneys, but inferior to standard criteria.

Examples are: kidneys from deceased older donors or those of a young person who died in a car crash, as a residual infection risk cannot be excluded.

"Marginal kidneys are currently offered only to those patients who have been on the waiting list for a long time—stated Professor Pasini—our article suggests there might be more patients who are willing to accept a marginal kidney right away. Broadly speaking, we are putting forward a way to improve the kidney allocation system that could improve both the efficiency of the procedure (an increase in the number of transplants completed) and the life quality of the patients".

More information: Mesfin G. Genie et al, The role of heterogeneity of patients' preferences in kidney transplantation, *Journal of Health Economics* (2020). DOI: 10.1016/j.jhealeco.2020.102331

Provided by Università Ca' Foscari Venezia