NEW KIDNEY ALLOCATION POLICY COULD IMPROVE THE SUCCESS OF TRANSPLANTATIONS IN THE U.S.

Models show that the policy will improve patient and transplant survival

Highlights

- Simulation models predict that a newly approved kidney allocation policy will lead to a 7.7% increase in median patient life-years per transplant and a 3.2% increase in median allograft years of life.
- The policy may also improve access to transplantation for highly sensitized candidates but reduce access for older patients.

Last year, more than 10,000 deceased donor kidney transplants took place in the United States.

Washington, DC (May 15, 2014) — A newly approved US policy regarding allocation of kidneys from deceased donors will likely improve patient and transplant survival, according to a study appearing in an upcoming issue of the Journal of the American Society of Nephrology (JASN). The true effects of the new policy are yet to be seen, however, and officials will evaluate its intended and unintended consequences on an ongoing basis.

In 2013, the Organ Procurement and Transplantation Network in the United States approved a new national deceased donor kidney allocation policy that officials hope will lead to better long-term kidney survival and more balanced waiting times for transplant candidates. Implementation of the policy is expected to occur later this year.

The policy applies a new concept, called longevity matching, whereby deceased donor kidneys in the top 20th percent of quality are first allocated to candidates with the longest expected survival after transplantation and then to the remaining candidates. The new policy also includes several other changes, such as giving priority to so-called sensitized patients, who have reactive antibodies that limit their compatibility with donors.

Ajay Israni, MD, MS (Scientific Registry of Transplant Recipients [SRTR], Hennepin County Medical Center, and the University of Minnesota) and his colleagues created simulation models to compare the effects of the new allocation policy with the policy that is currently in place. Among the major findings:
• Under the new policy, transplanted organs are expected to survive longer in recipients (median of 9.10 years vs 8.82 years).
• There will be an estimated 7.7% increase in median patient life-years per transplant and an estimated 3.2% increase in median allograft years of life under the new allocation policy. Assuming 11,000 transplants, this could lead to a gain of 10,010 life-years of patient survival and 3,080 years of allograft survival.

“The simulations demonstrated that the new deceased donor kidney allocation policy will improve overall post-transplant survival and improve access for highly sensitized candidates, and it will have minimal effect on access to transplant by race/ethnicity,” said Dr. Israni. There will likely be small declines in transplants for candidates aged 50 years and older, however.

In an accompanying editorial, Jesse Schold, PhD (Cleveland Clinic) and Peter Reese, MD, MSCE (University of Pennsylvania) noted that the study underscores the significant complexity of organ allocation. “Compared with the status quo, we can welcome some improvements in overall graft survival within the transplant population and better opportunities for some disadvantaged patients… as well as certain tradeoffs,” they wrote. “However, there are also likely to be unanticipated changes in patient, provider, and payer behavior, as well as unforeseen secular changes.”

Study co-authors include Nicholas Salkowski, PhD, Sally Gustafson, Jon Snyder, PhD, John Friedewald, MD, Richard Formica, MD, Xinyue Wang, Eugene Shteyn, Wida Cherikh, PhD, Darren Stewart, Ciara Samana, Adrine Chung, Allyson Hart, MD, and Bertram Kasiske, MD. This work led by the SRTR was conducted under the auspices of the Minneapolis Medical Research Foundation, federal contractor for the SRTR. The views expressed therein are those of the authors and not necessarily those of the US Government, the Organ Procurement and Transplantation Network, or the United Network for Organ Sharing.

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