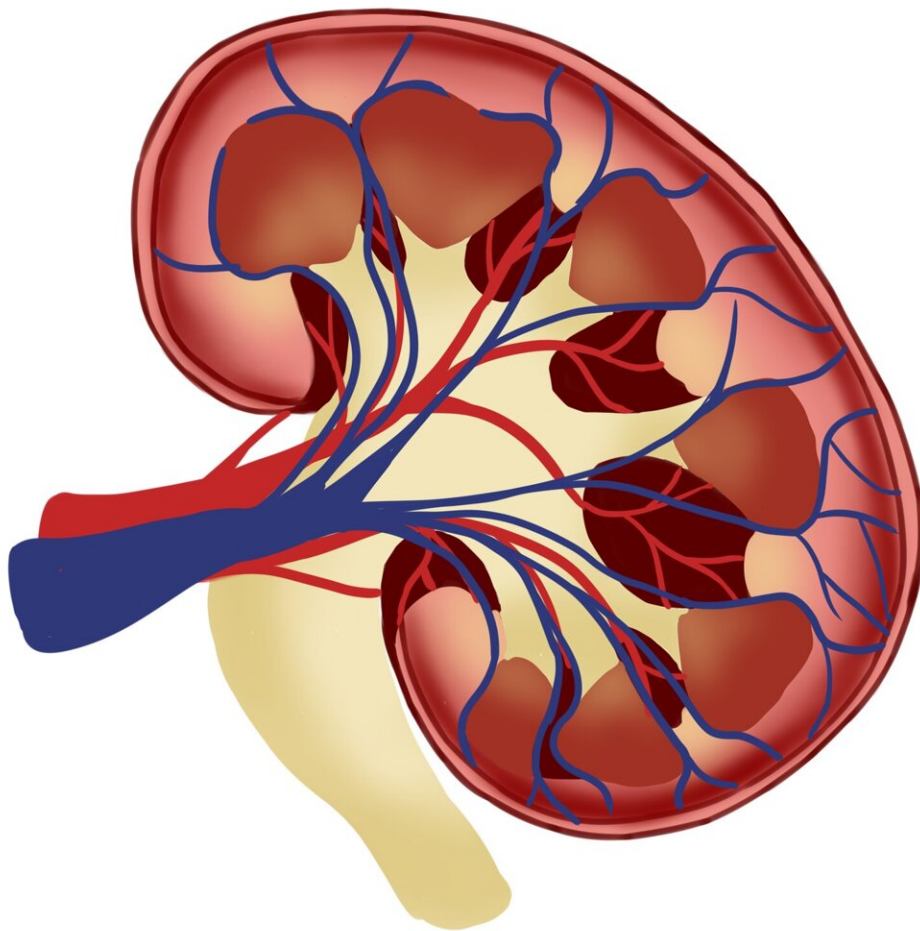


Neonatal kidney transplantation offers new hope in the organ shortage crisis, study shows

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New research, presented at the [European Society for Organ Transplantation](#) (ESOT) Congress 2023, demonstrates that neonatal kidney transplantation can offer a 'game-changing' solution to the pressing organ shortage crisis.

To assess the feasibility of neonatal organ donation, researchers analyzed [neonatal mortality](#) in the United States and the long-term development of these kidneys after transplantation as well as the ethical and social considerations surrounding the procedure.

The study revealed that out of the 21,000 infants who lost their lives in 2020, more than 12,000 could have been considered as viable organ donors.

The organ shortage is one of the greatest challenges facing the field of organ transplantation. As of January 2022, there were 100,000 patients on the waiting list for [kidney transplantation](#) in the US, with just 24,669 kidneys transplanted in the previous year. Alarming, this [donor](#) pool shortage contributed to the deaths of 5,000 patients on the waiting list.

This crisis is not unique to the US. Across Europe, organ supplies cannot meet the increasing demand, and annually an average of 15–30% of patients on waitlists die.

As human life expectancy increases while [chronic conditions](#) like diabetes, obesity and [liver disease](#) become more prevalent, there is an increased need for transplants and a reduction in the number of available organs.

In 2018, kidneys were the most frequently transplanted organ across the EU, accounting for over 60% of all transplants. Previous research has confirmed the viability of transplanting kidneys from pediatric donors into adults.

Notably, neonatal kidneys have demonstrated catch-up growth and excellent long-term performance (>25 years), exceeding that of living donors. Current transplantation techniques have also proved to be safe and effective for neonatal kidneys.

Dr. Dai Nghiem, lead author of the study, comments, "We believe that neonatal [kidney](#) transplantation offers a 'game-changing' solution to the organ shortage crisis. This study looked at the US alone, but if you replicate the findings across the globe then we have a huge untapped pool of available organs that can be used for transplants."

"Understandably, pediatric organ donation presents distinct ethical and social challenges compared to adult donation," added Dr. Dai Nghiem. "For families and caregivers, making the decision to donate can be an incredibly tough process, especially the organs of their newborn."

"There is also a concern among the transplant community about the difficulty of the procedure along with its experimental nature. Through the exchange of experience among pioneering centers, we hope to address these concerns, foster acceptance of this forgotten source of organ donors and ultimately save more lives through [organ transplantation](#)."

Professor Gabriel Oniscu, ESOT President Elect and Co-Chair of the ESOT Congress 2023, adds, "While recognizing the highly emotive nature of this issue and the ongoing ethical and legal considerations, the study's findings underscore the importance of acknowledging neonates as potential organ donors."

"To achieve this, it is imperative that every European country has dedicated pediatric donation protocols in place that encompass neonatal organ donation procedures."

"This [proactive approach](#) aims to heighten awareness among Neonatal Intensive Care Unit professionals regarding the possibilities of neonatal donation, promoting discussions with parents that could help save many lives."

More information: Nghiem D, Neonatal organ donation for kidney shortage; Is this the time? Presented at the European Society for Organ Transplantation Congress; 17 September 2023; Athens, Greece.

Provided by European Society for Organ Transplantation

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