The Xenotransplantation Breakthrough: A Groundbreaking Approach to Increasing Organ Supply

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I have no conflict of interests related to this talk
Views are mine and do not represent official OPTN policy

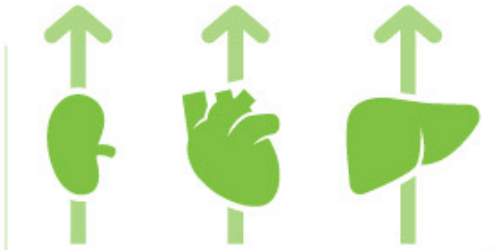
Do we really need xenotransplants?

- Are we successful?
- Have we failed?

Success is real

2021 | Most lives ever saved in one year

More than 40,000 lifesaving transplants – *a first!**



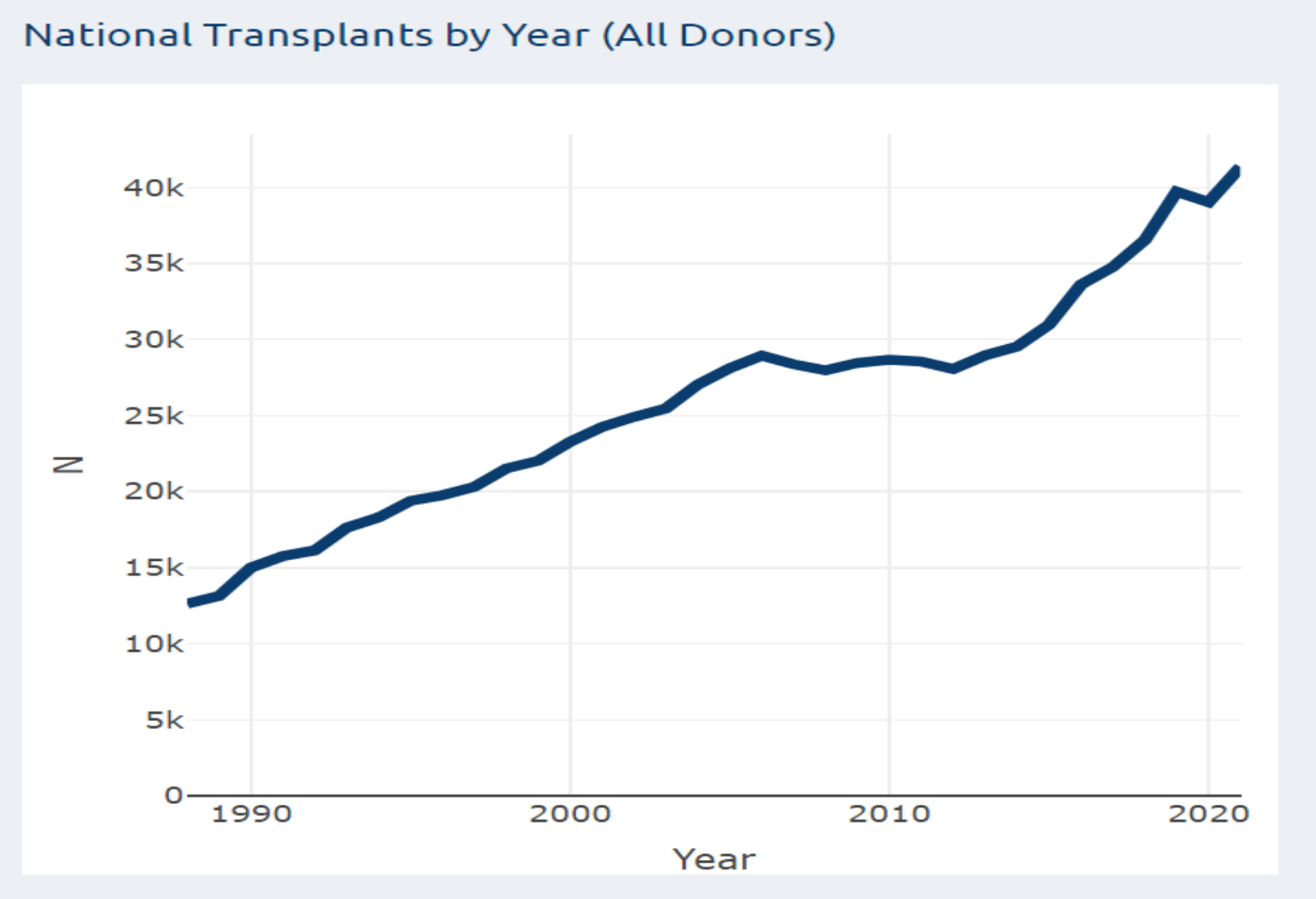
Record numbers of **kidney, heart & liver** transplants*

11th record year in a row for deceased donation*

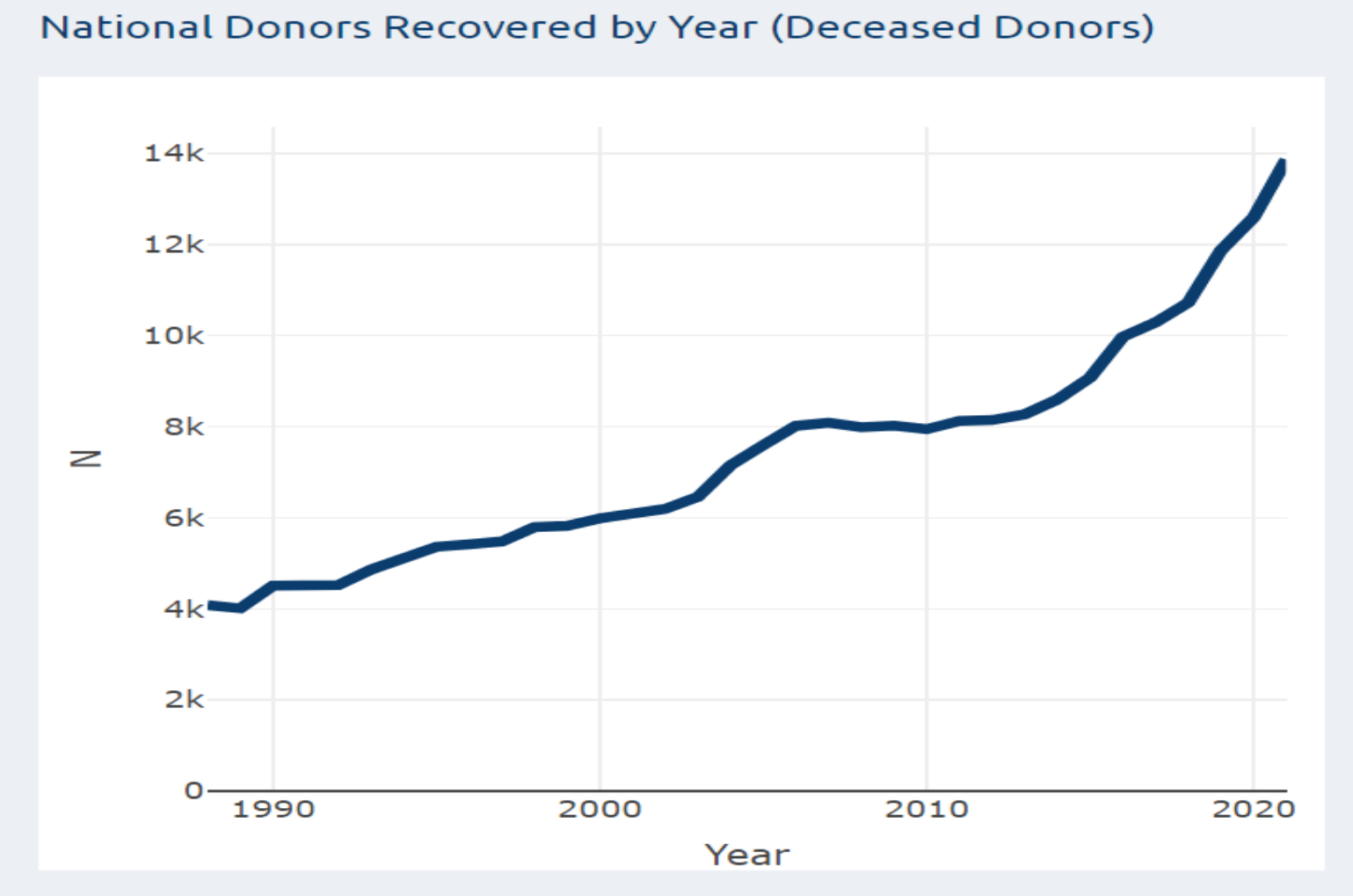
*Based on OPTN data as of Jan. 10, 2022. Data subject to change based on future data submission or correction.

OPTN

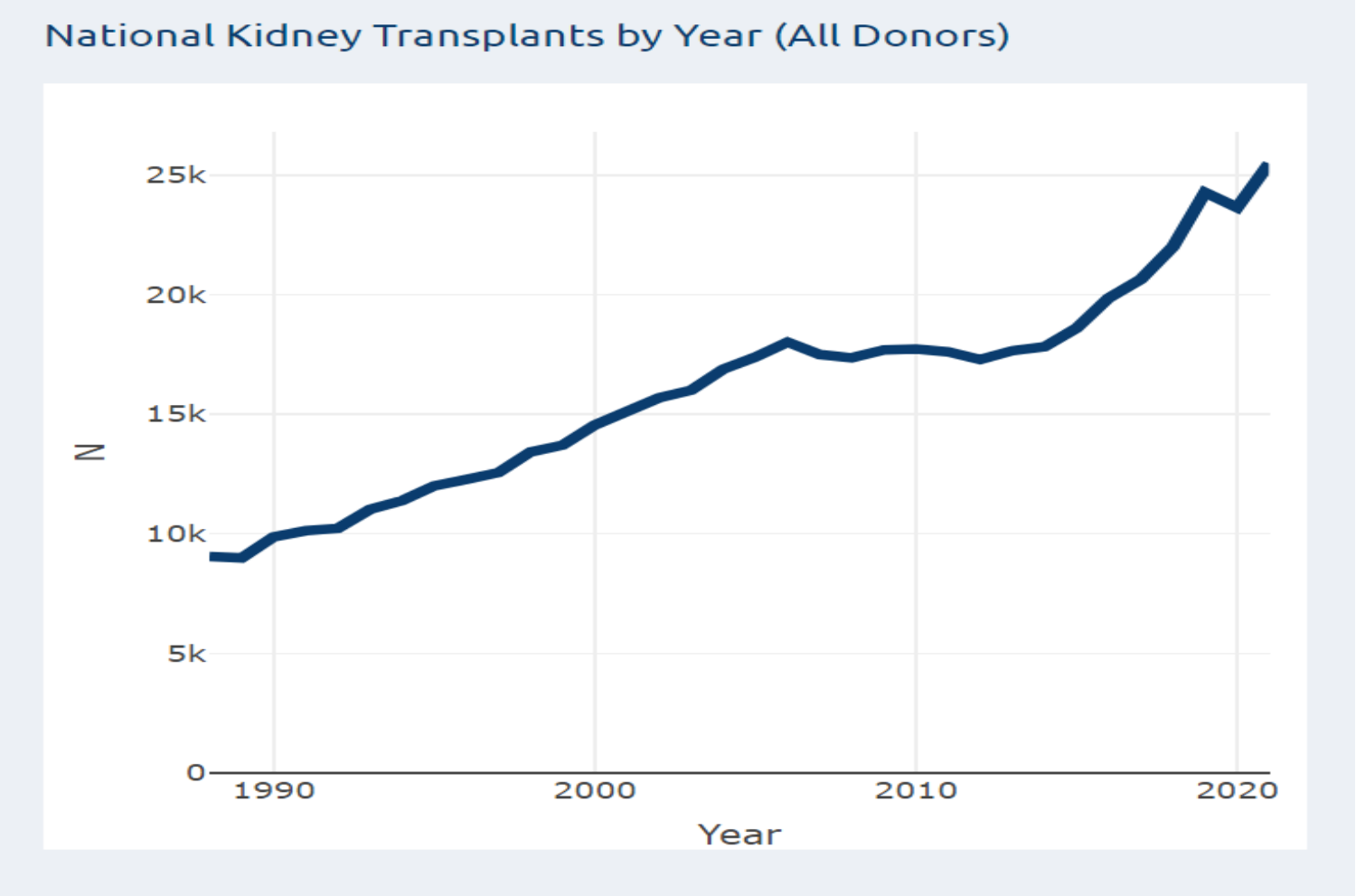
Transplants numbers over time



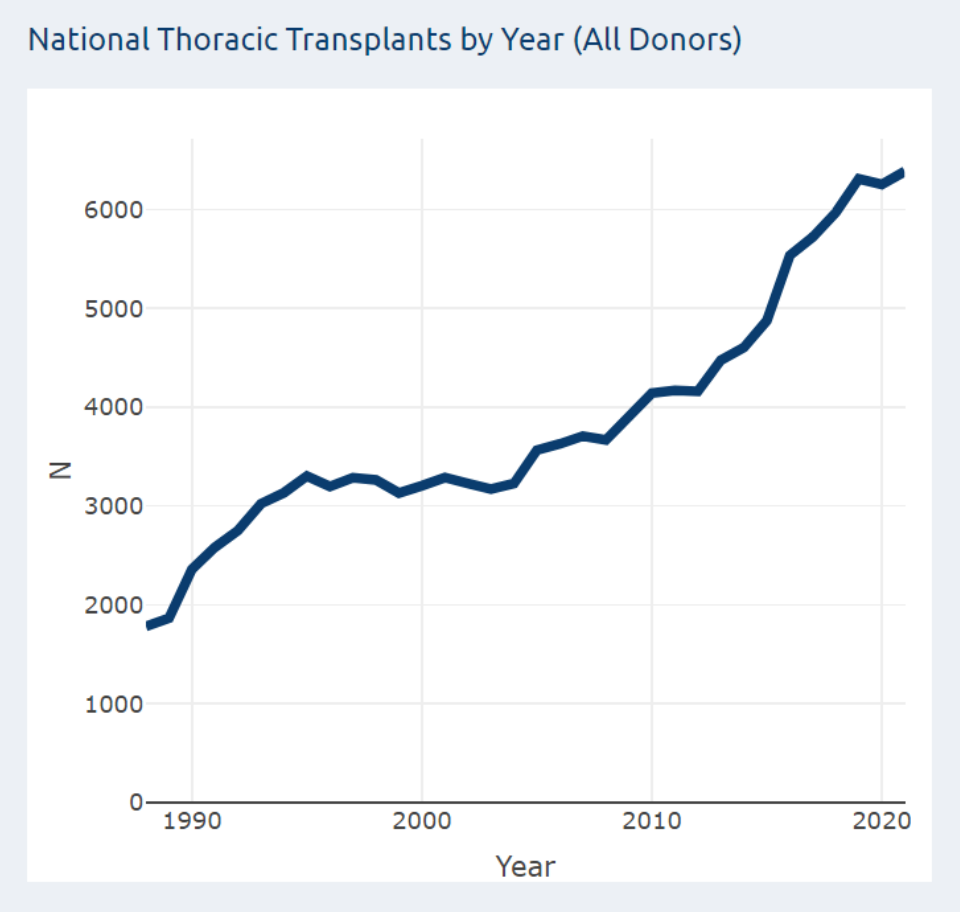
Donor numbers over time

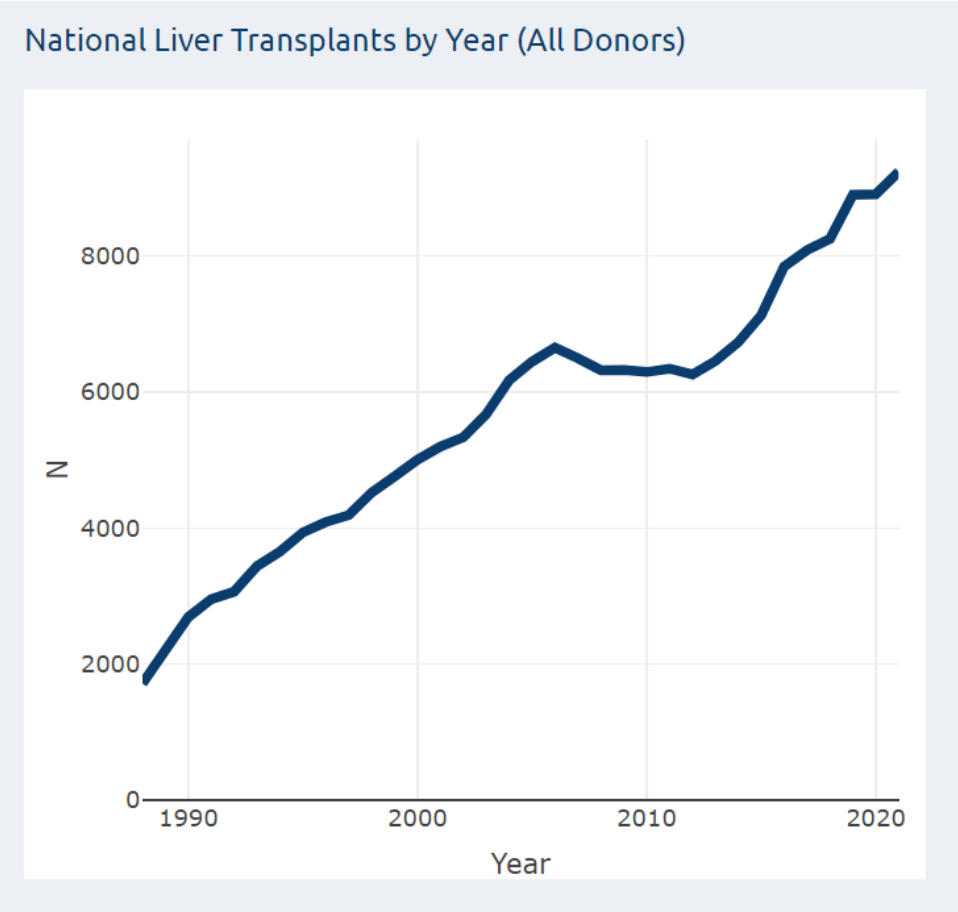


Kidney transplants



Thoracic and liver transplants



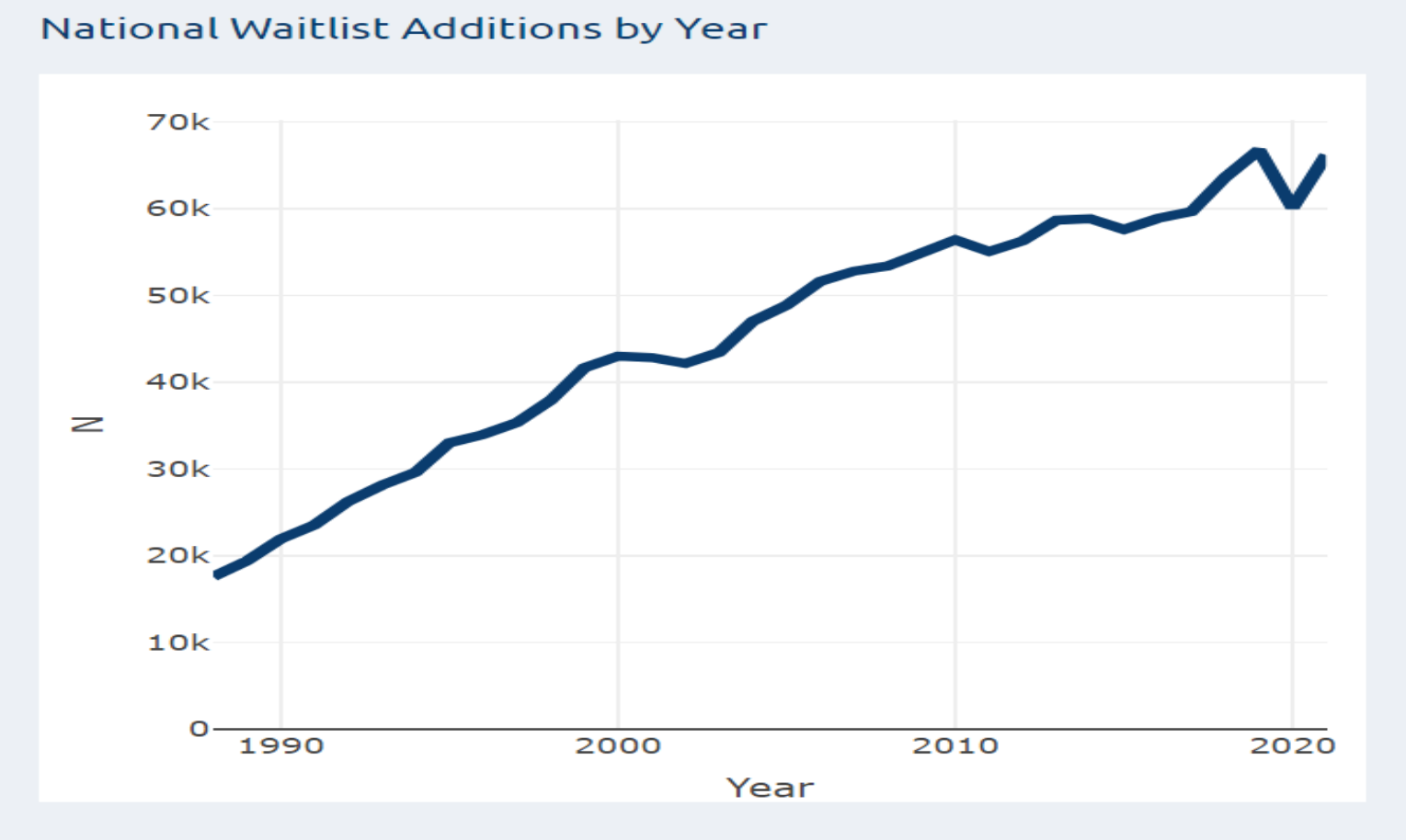


Main street, Annapolis MD

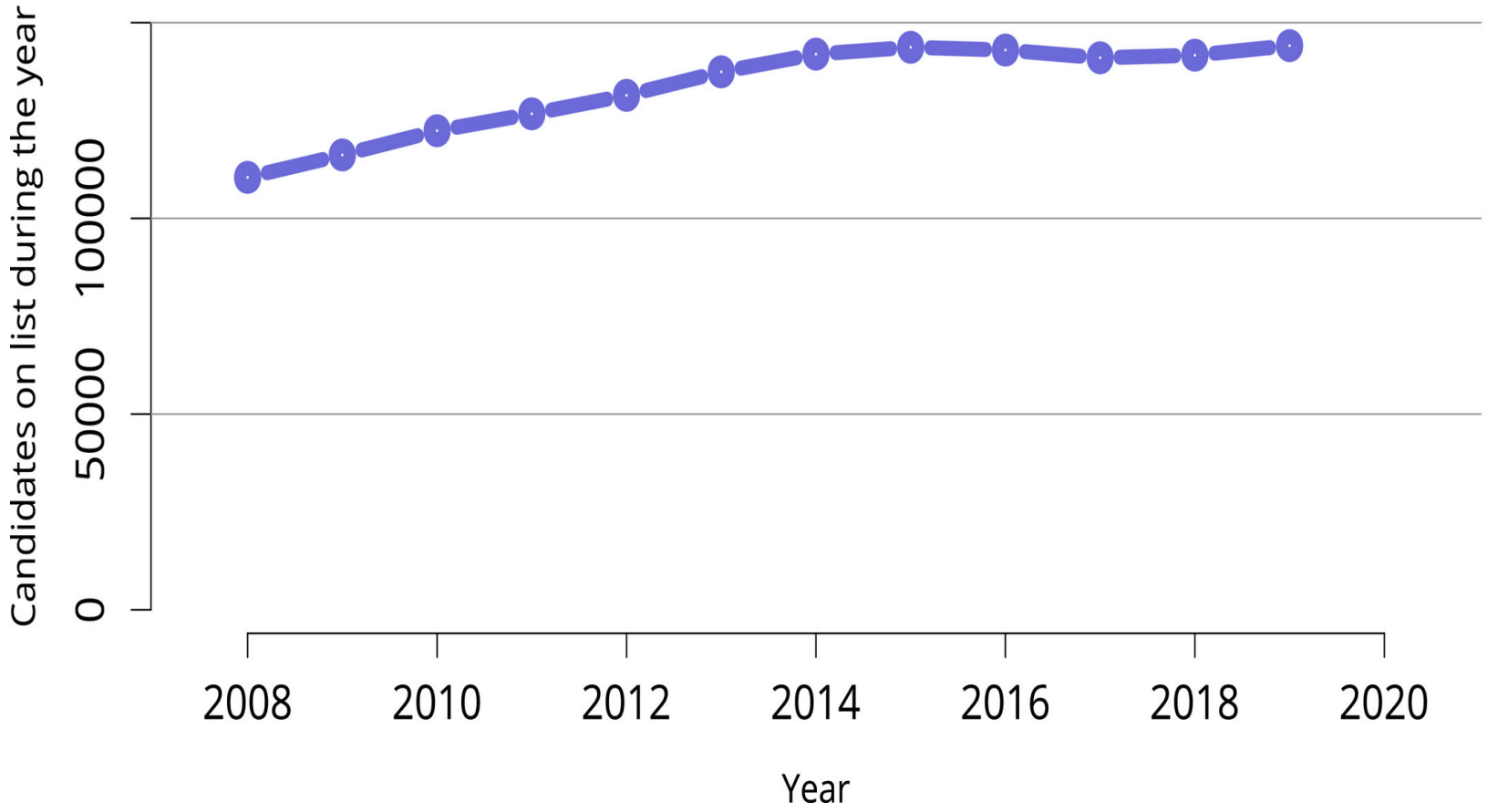
What about the demand for transplants?

Transplant demand: Pittsburgh + St Louis

Waitlist additions



Candidates on the list



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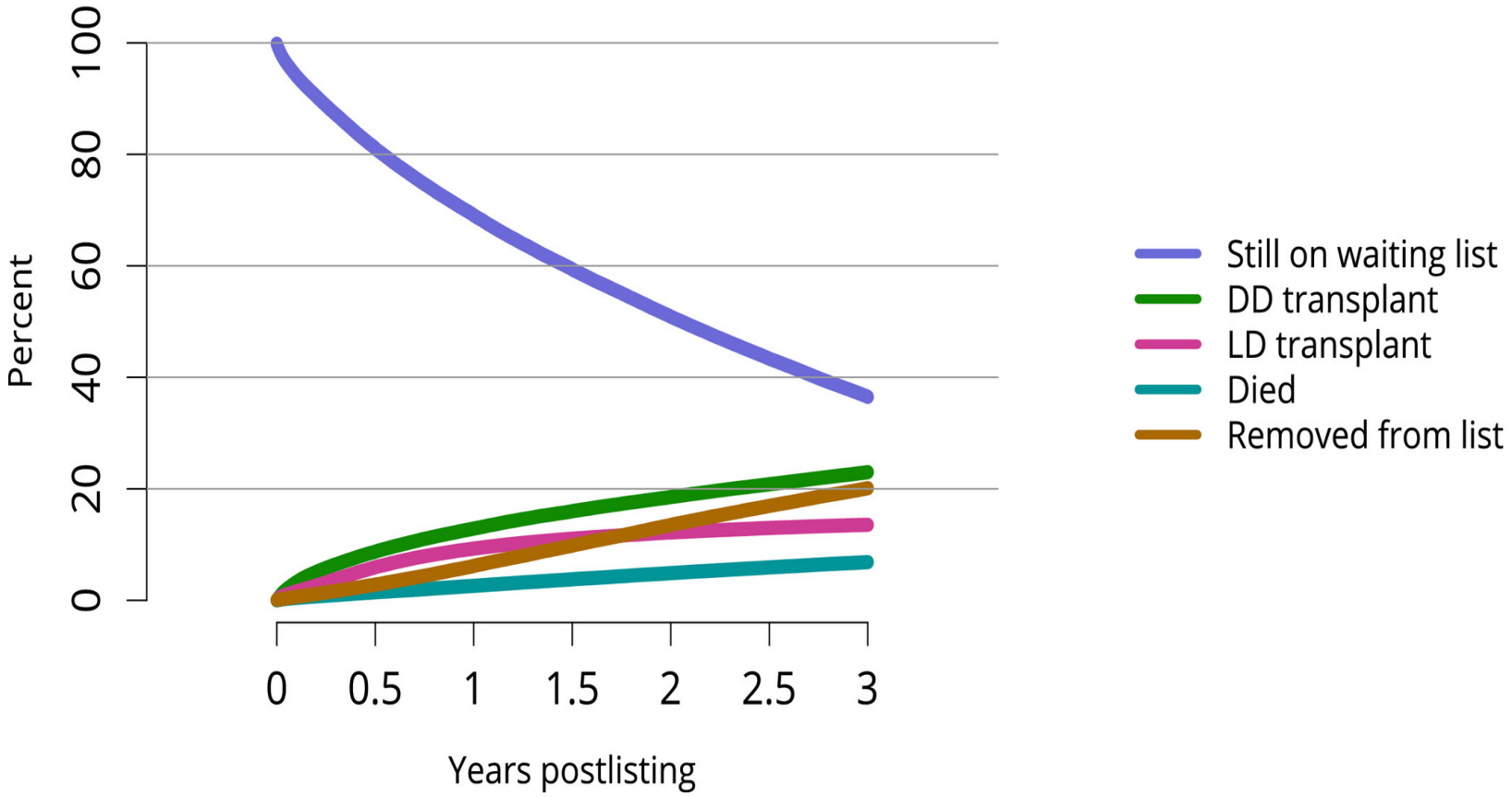
Waitlist outcomes



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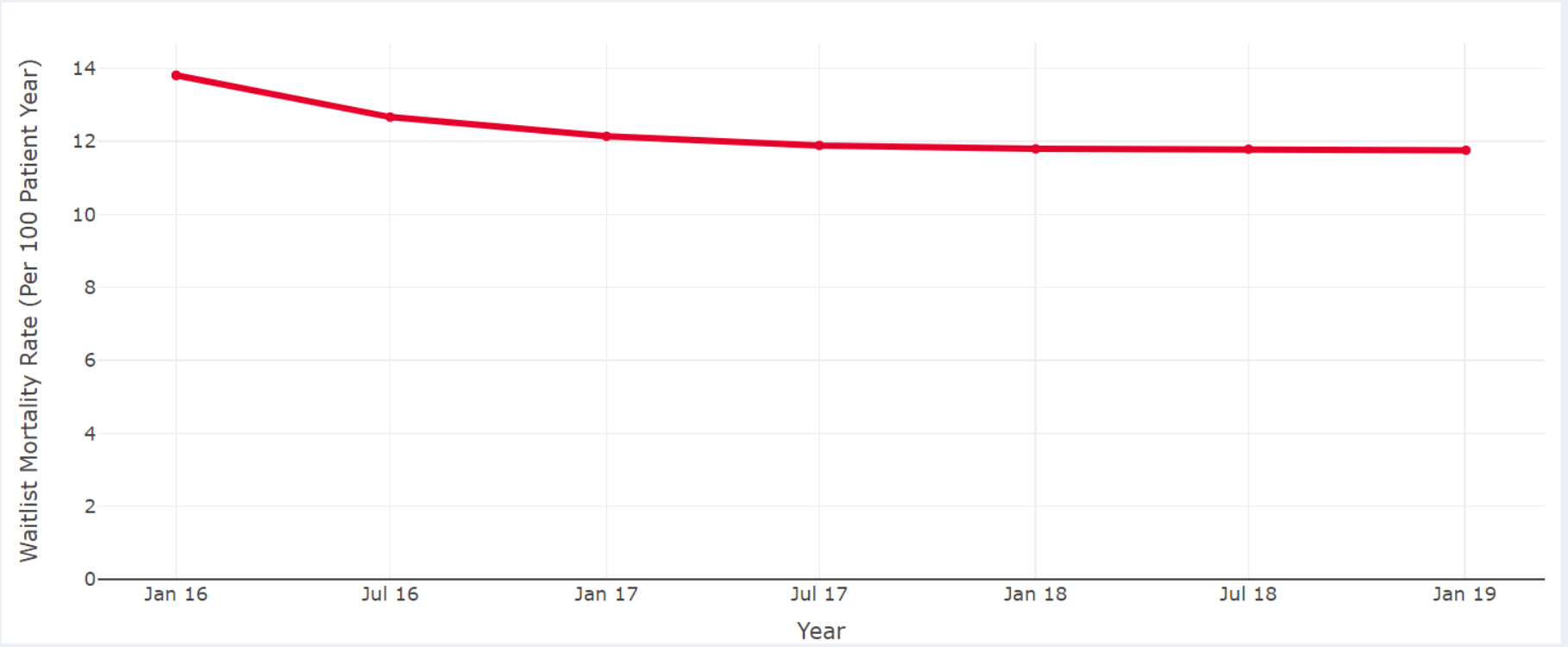
What about transplant outcomes?

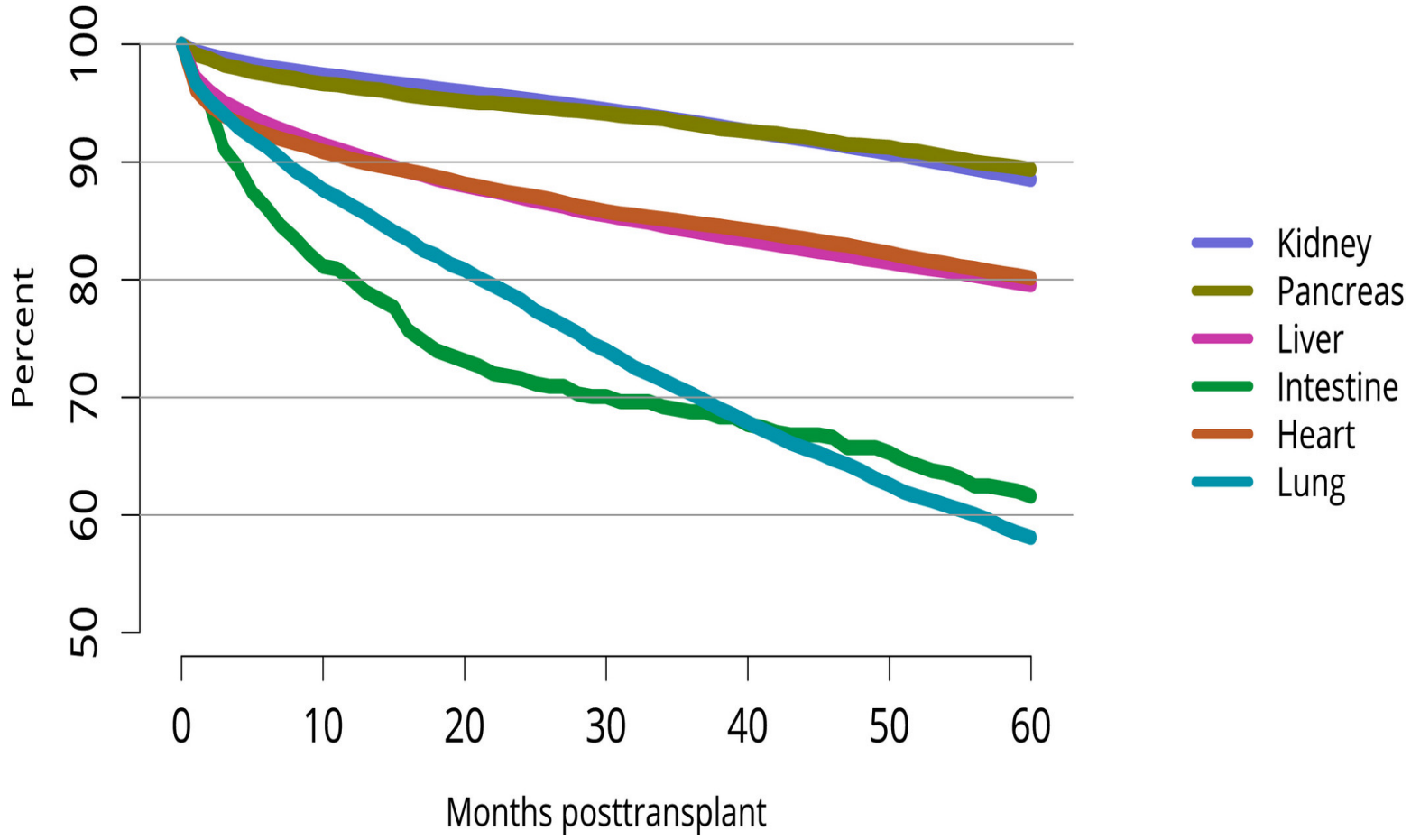
Waitlist mortality rate

National SRTR Liver Waitlist Mortality Rate



Scientific Registry of Transplant Recipients. Program-Specific Reports. https://www.srtr.org/reports/program-specific-reports. Accessed September 02, 2021

Patient survival



American J Transplantation, Volume: 21, Issue: S2, Pages: 11-20, First published: 17 February 2021, DOI: (10.1111/ajt.16493)

Who has oversight of xenotransplants?

- FDA regulates as a biologic: Center for Biologics Evaluation and research
- FDA regulates genetic engineering of animals: Center for Veterinary Medicine
- PHS policy: Humane Care and Use of Laboratory Animals
- OPTN: no direct role; legal authority limited by statute to human organs. OPTN policy has potential impact on xenotransplantation

Xenotransplant potential impacts

Supply of organs
Improved patient outcomes
Equity
Logistics
Cost