

# Nierdonatie bij leven

## In perspectief

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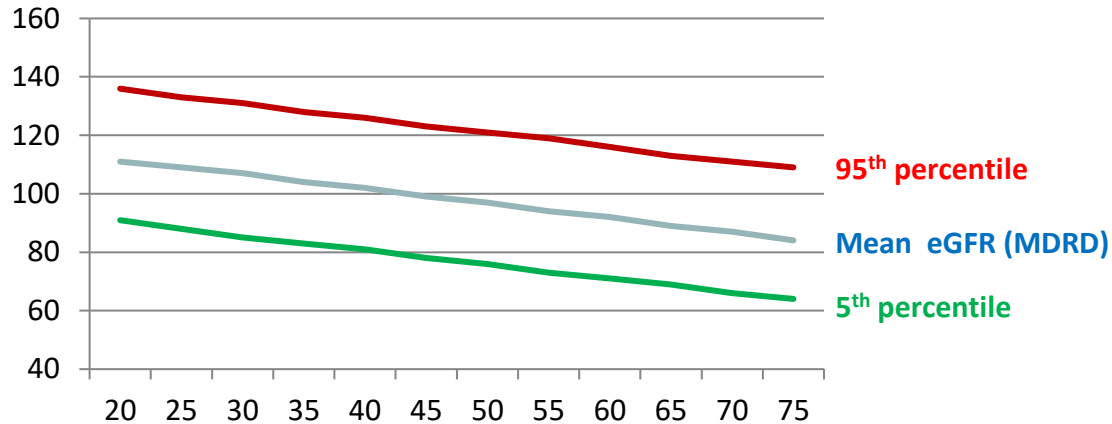
# The Living Kidney Donor



- ✓ A true (altruistic) hero
- ✓ Alleviates collective (public) impotence
- ✓ Should be treated with the greatest care

# Decline in eGFR with age

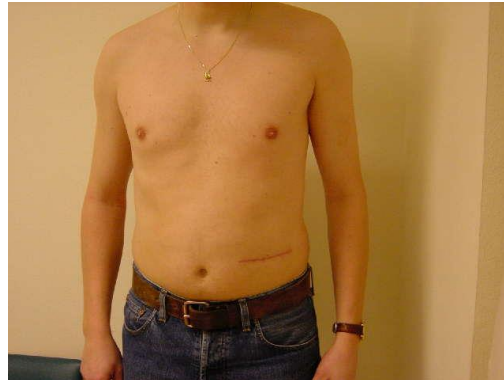
Rule AD: Measured and estimated GFR in healthy potential kidney donors. *Am J Kidney Dis* 43: 112 –9, 2004



- ✓ To assess feasibility in healthy donors you need good estimation of renal function.
- ✓ Formulas (MDRD, to a lesser extent C-G & CKD-EPI) underestimate true GFR.
- ✓ Using a standard eGFR cut-off of 80 ml/min/1.73m<sup>2</sup>
  - ✓ Approximately 30% of potential feasible kidney donors will receive negative advice.
  - ✓ These patients have a good renal residual function 5 years after donation.

Guideline: State-of-the-art surgery

## Techniques of donor nephrectomy

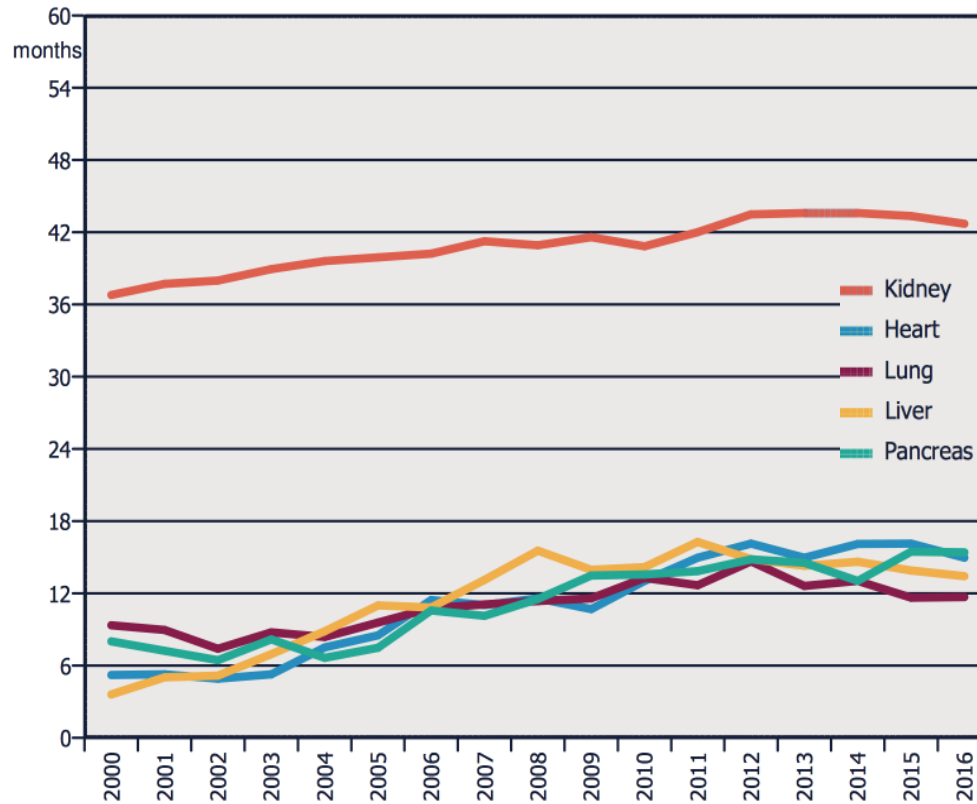


- 60% Open
    - ❖ 55% classic lumbotomy
    - ❖ 45% small incision
  - 40% (Hand-assisted) laparoscopic
    - ❖ 50% laparoscopic
    - ❖ 50% hand-assisted laparoscopic
- 
- ✓ Laparoscopic donor surgery (fully laparoscopic or hand-assisted) is the preferred technique for living donor nephrectomy, offering a quicker recovery, shorter hospital stay and less pain.
  - ✓ Mini-incision surgery is preferable to standard open surgery. (B1)

# 1. Dialysis vintage

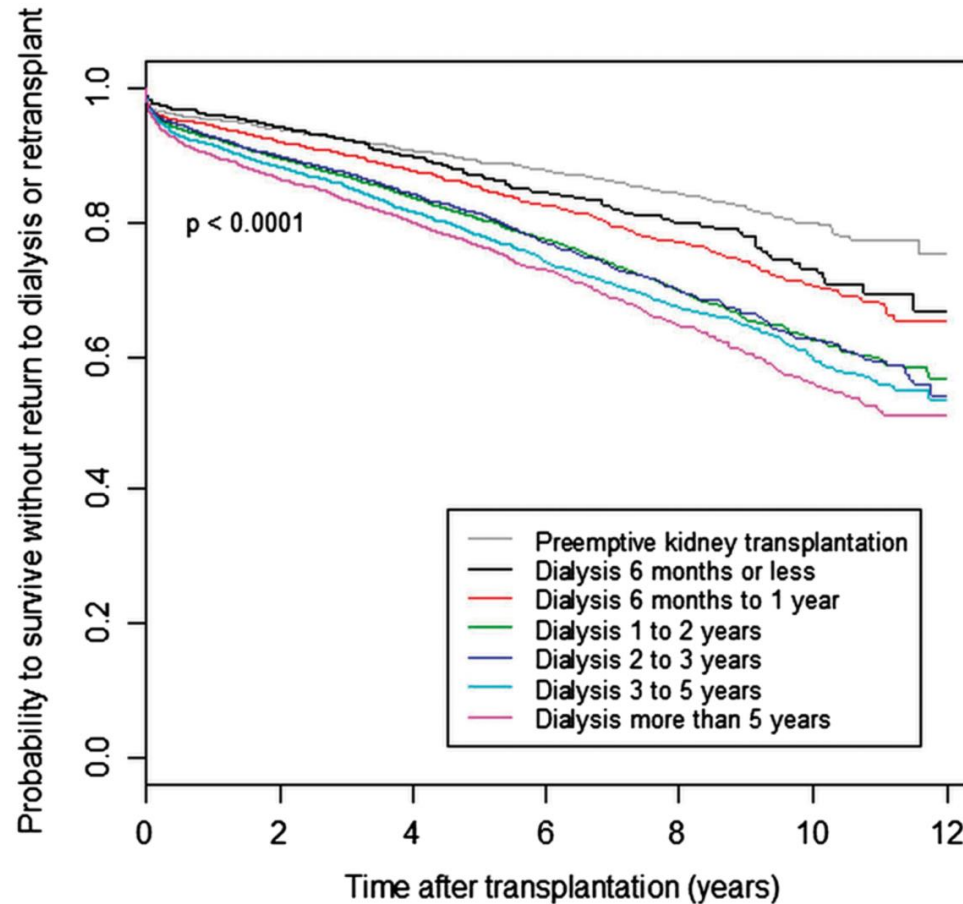
## Waiting time in Eurotransplant

Active urgency only (medians)



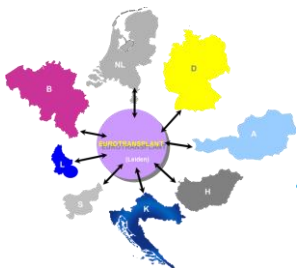
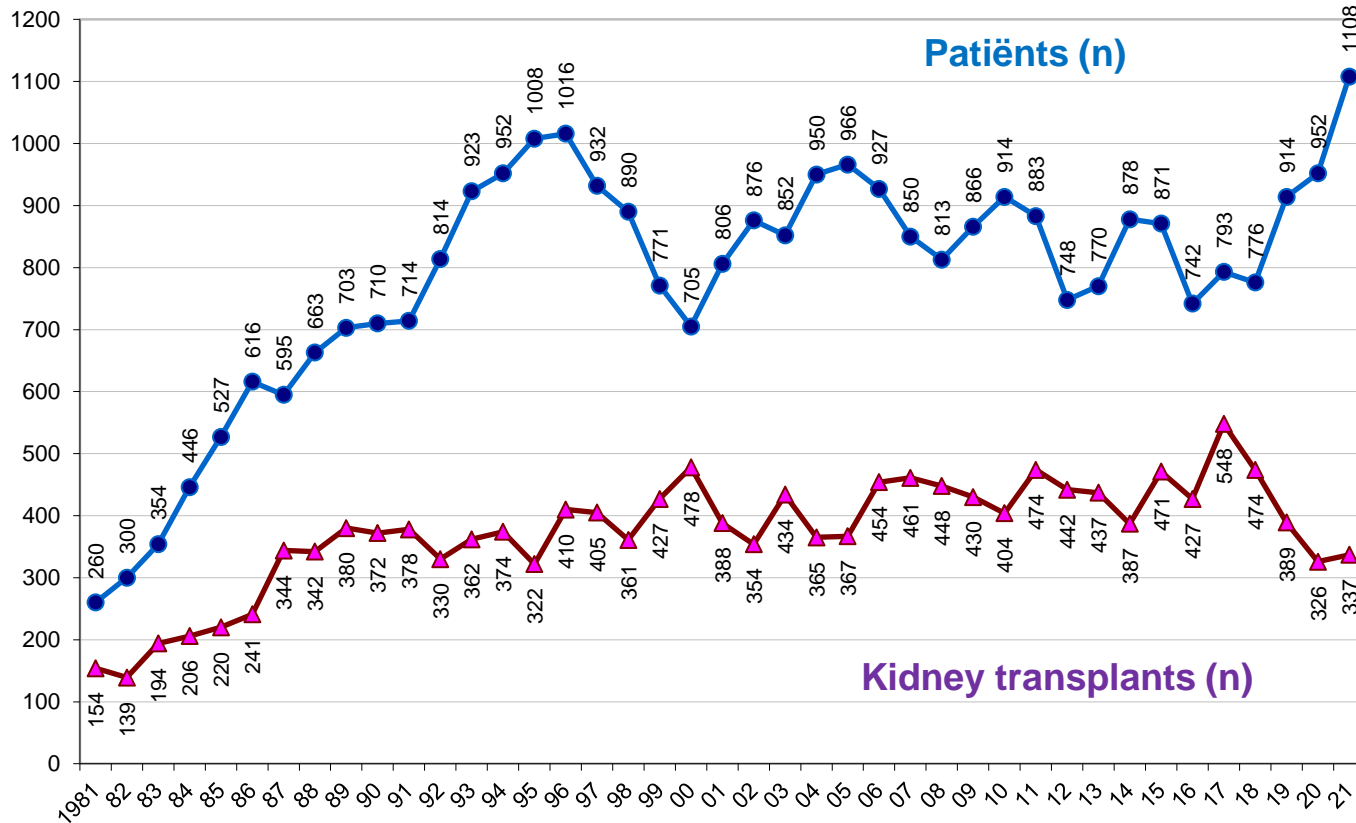
# Mortality after kidney transplantation

French registry: deceased donor (n= 22.345) <sup>1</sup>  
Outcome by dialysis vintage



# The Gap between Supply & Demand

## Kidney Waiting List: Belgium

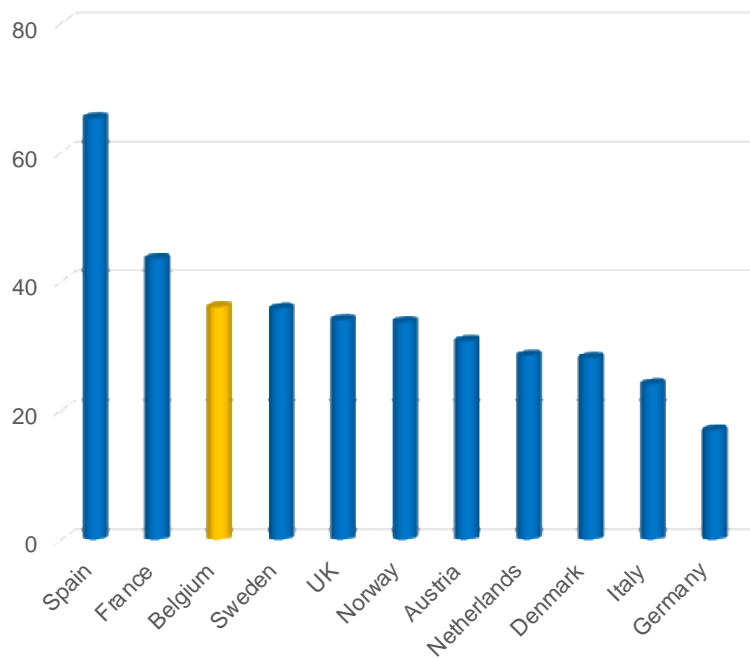


## 2. Increase the domestic kidney donor pool

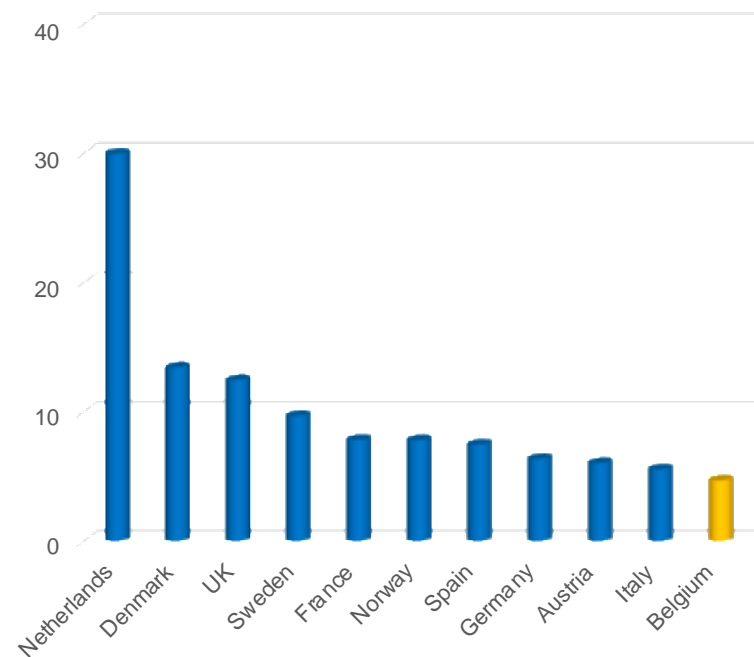
Options:

- ✓ Deceased donor pool: Extended criteria
- ✓ Living donor pool

Deceased donor kidney pmp



Living donor kidney pmp



**European region 2022: Kidney Transplant activity/country**

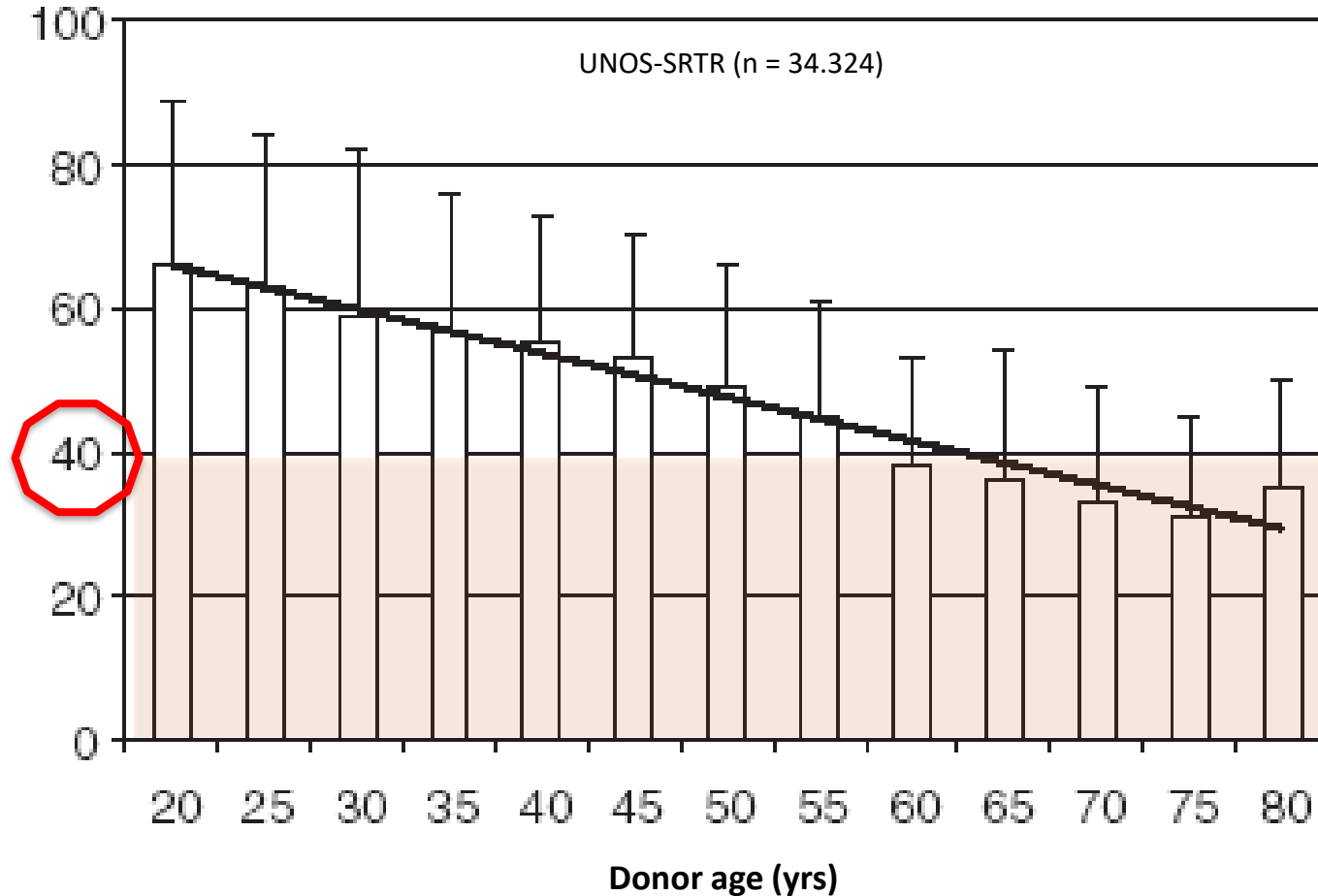
Source: GODT ([www.transplant-observatory.org](http://www.transplant-observatory.org))



'Marginale' donor & one-year eGFR <40 ml/min/1.73 m<sup>2</sup> 1<sup>e</sup>-jaar

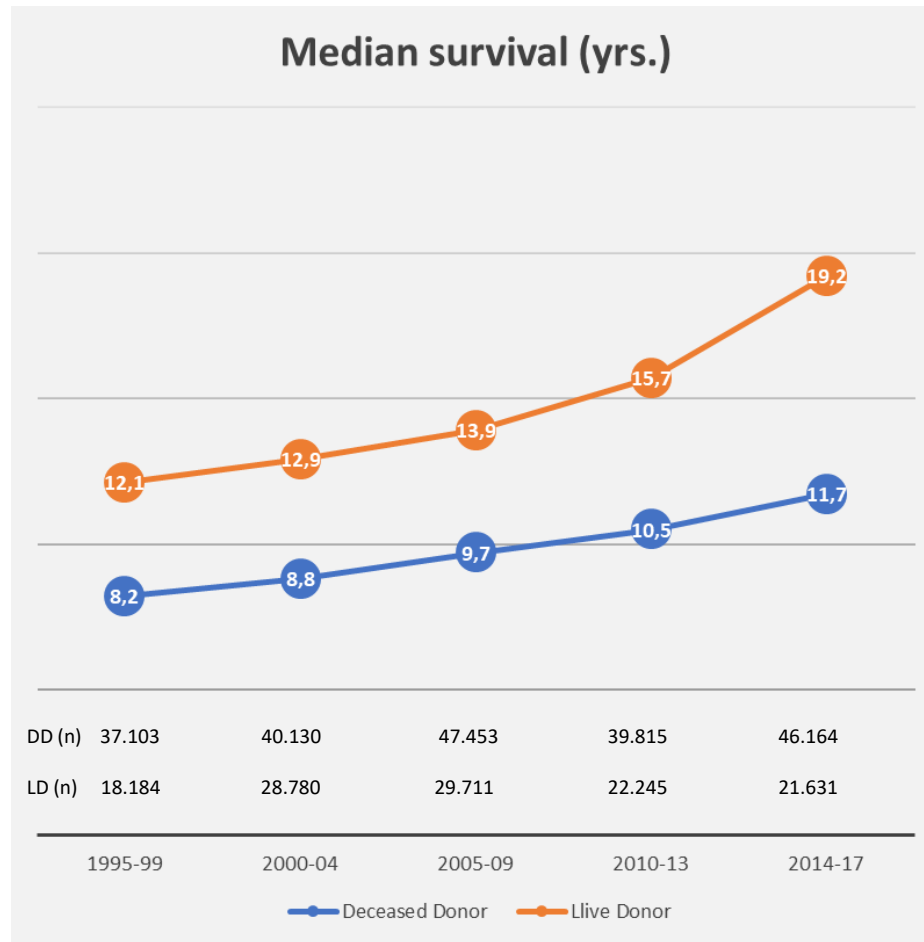
## Predictor of kidney graft loss

Recipient renal function at 6 months (C-G,ml/min) according to donor age



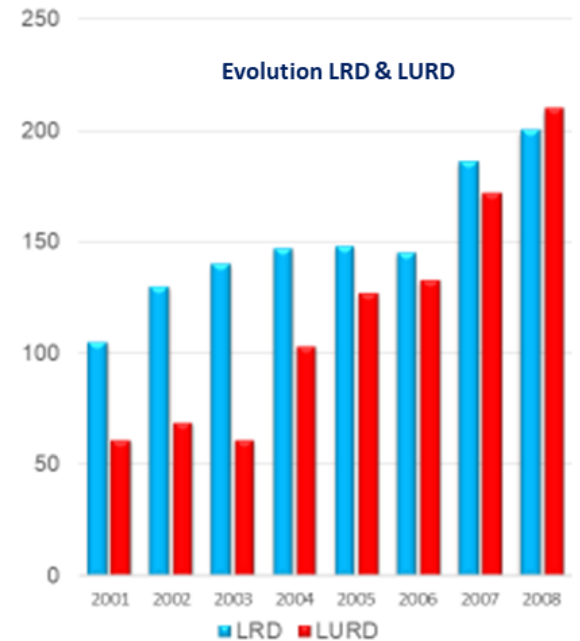
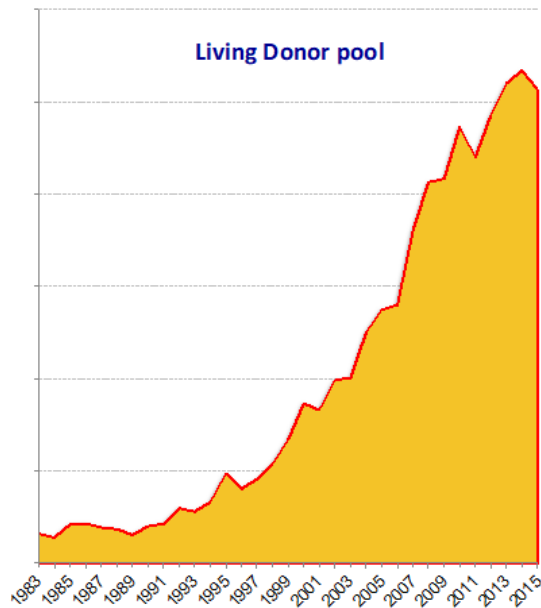
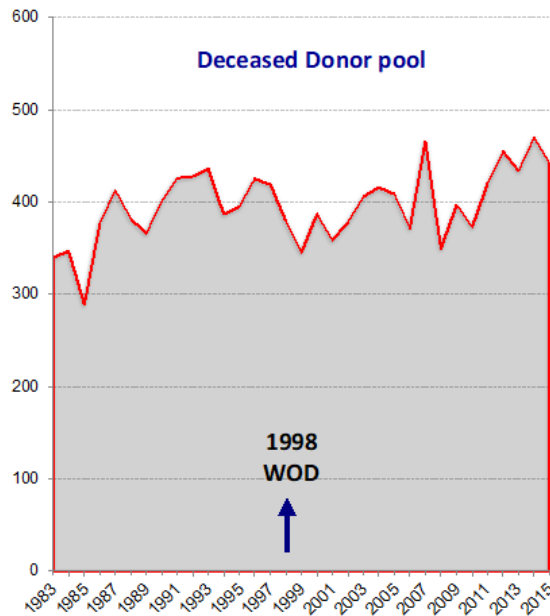
# 3. Living Donor Kidney Transplants

Kidney graft half-lives by era of transplantation



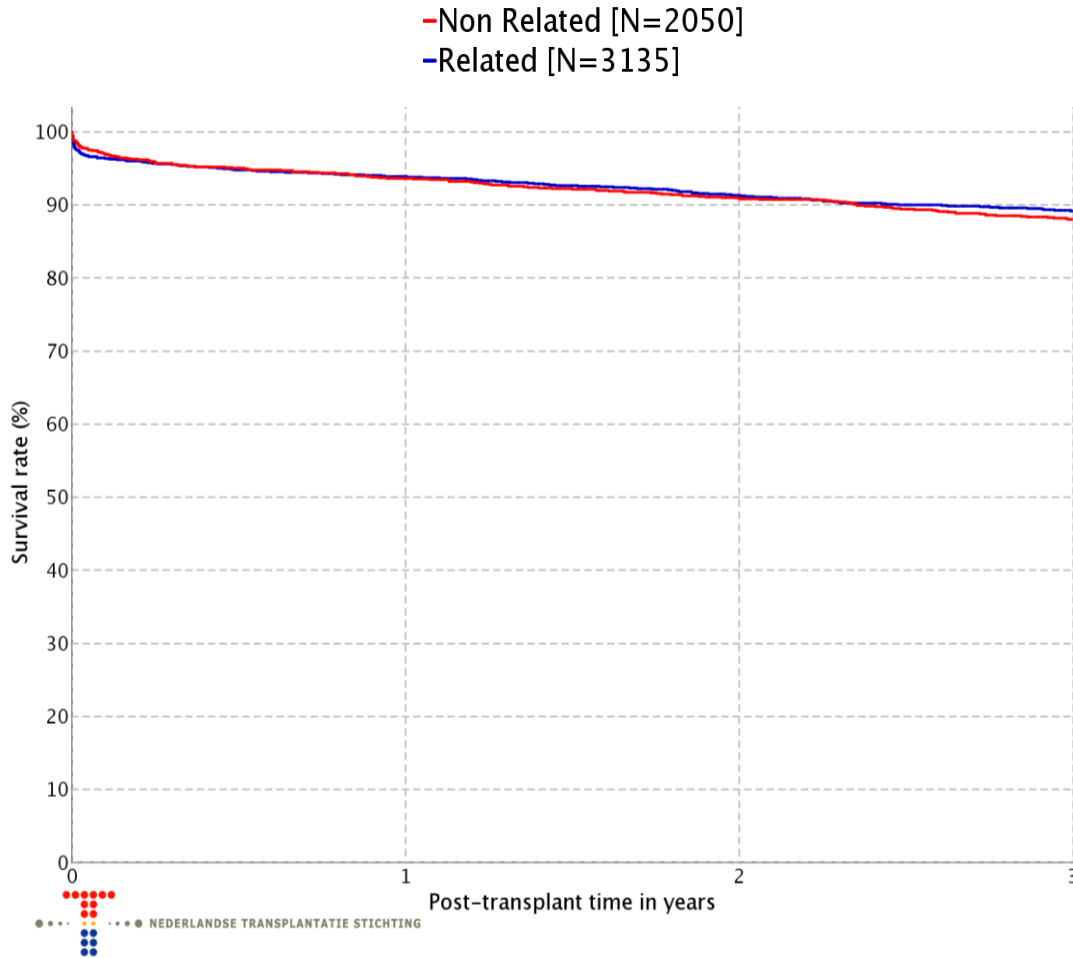
# The Gap between Supply & Demand

## Evolution living donation in The Netherlands



# Outcome

## LURD vs. LRD



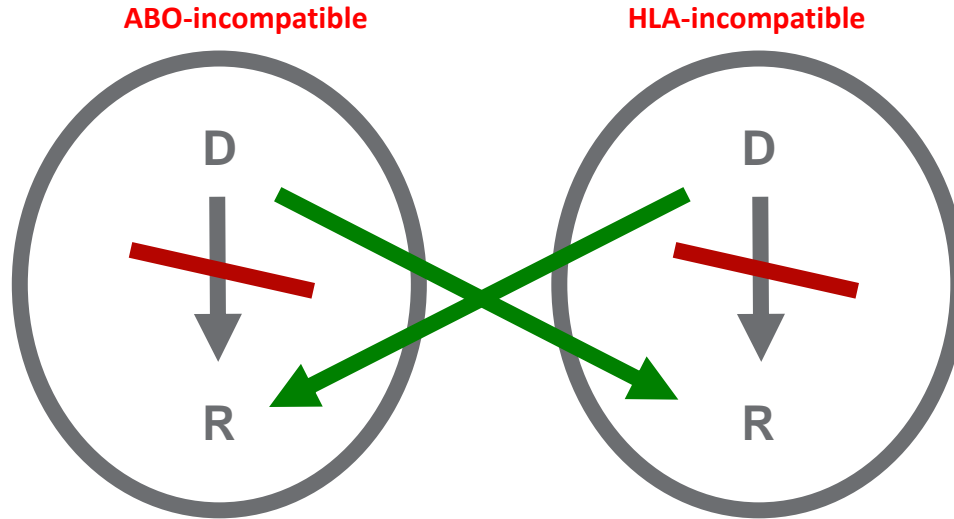
### Reasons to favor live donation:

- ✓ Reduced waiting time on dialysis
  - Longer life expectancy
  - Critical in the elderly
- ✓ Better renal function
  - Less cardiovascular events
  - Longer kidney half-lives

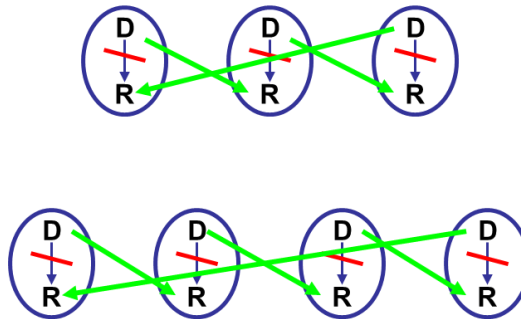
Further increase the Living Donor Pool

### 3. Reduce medical/psychological barriers: LDEP

Indirect donation



Domino-paired exchange

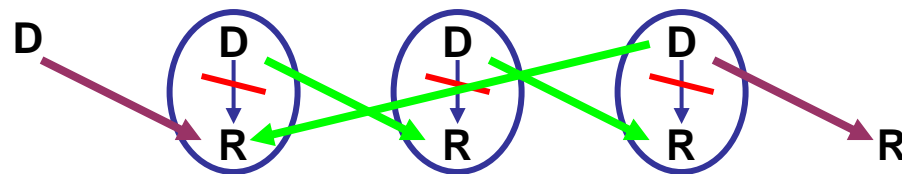


Further increase the Living Donor Pool

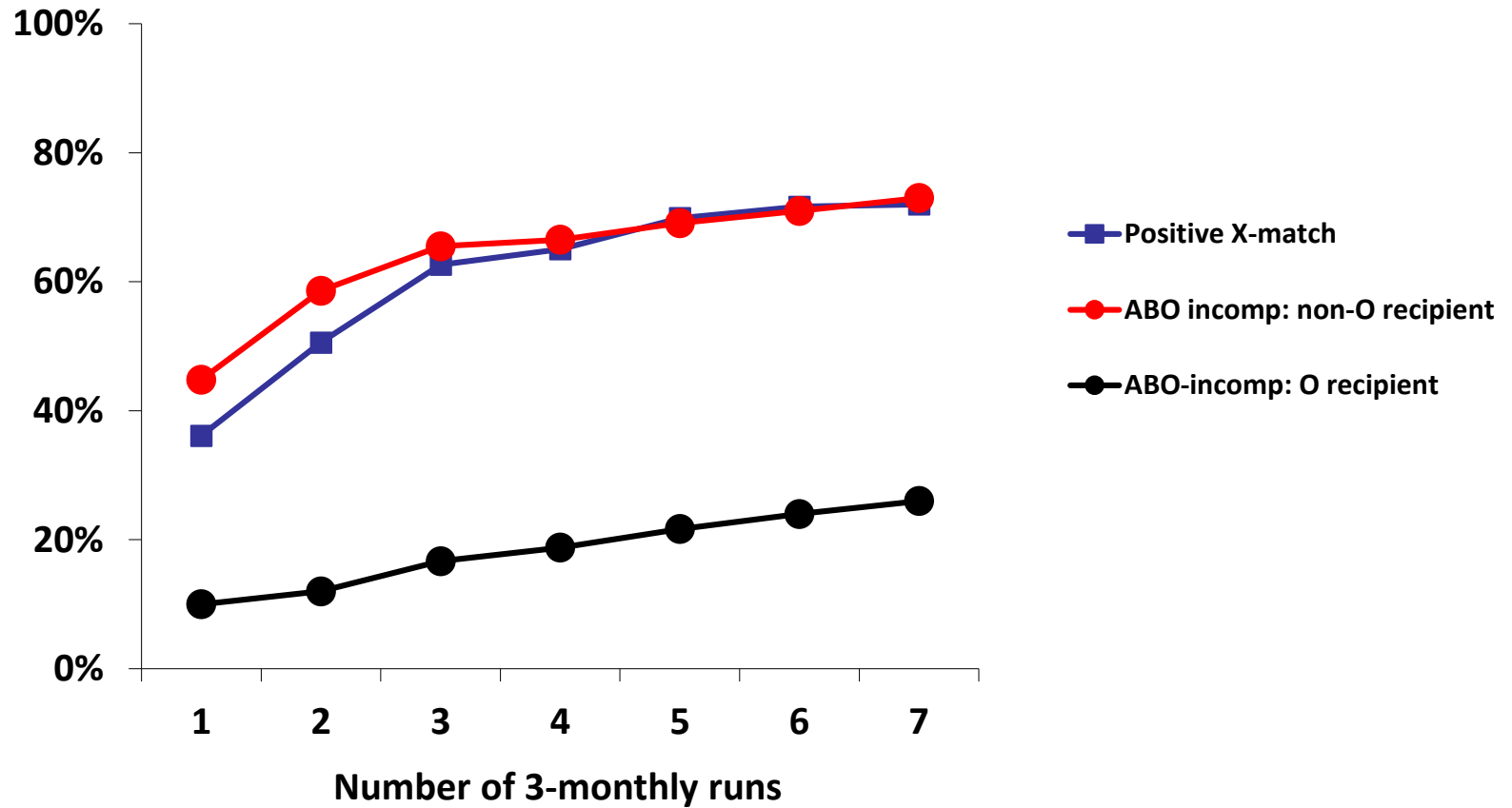
# Reduce barriers



Altruistic +/- Domino-paired



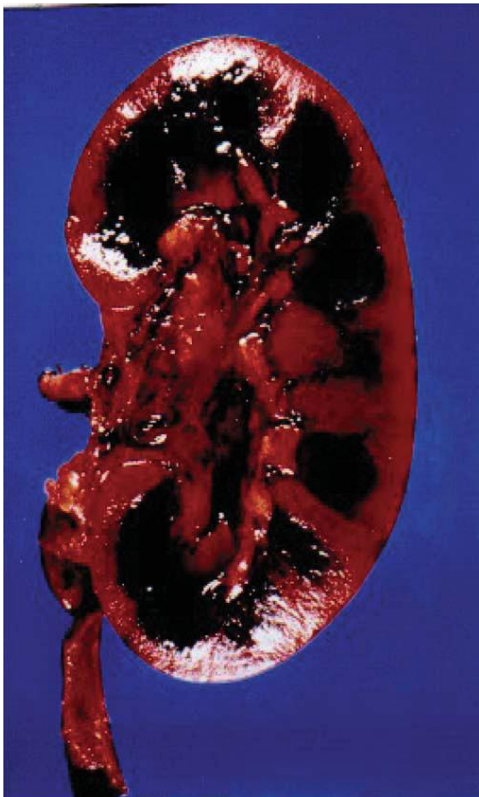
# LDEP: cumulative success rates



# The Challenge

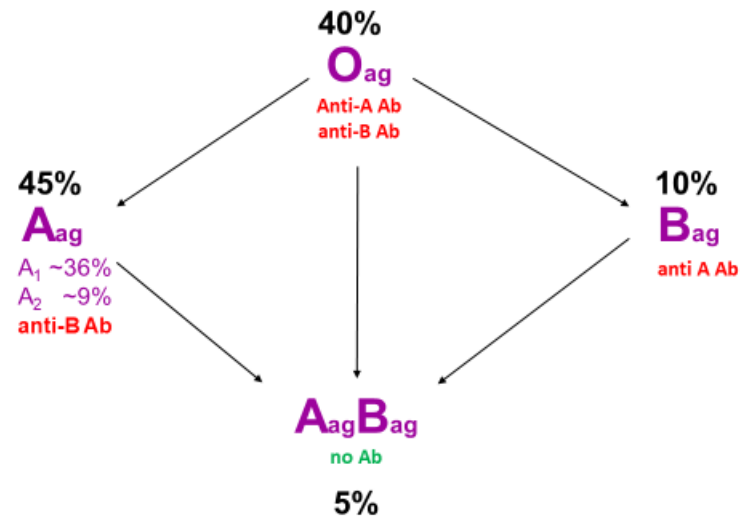
ABO-i: Prevent antibody-mediated rejection

**ABO incompatibility has long been considered an absolute contra-indication to kidney transplantation**



## Likelihoods for Unrelated individuals

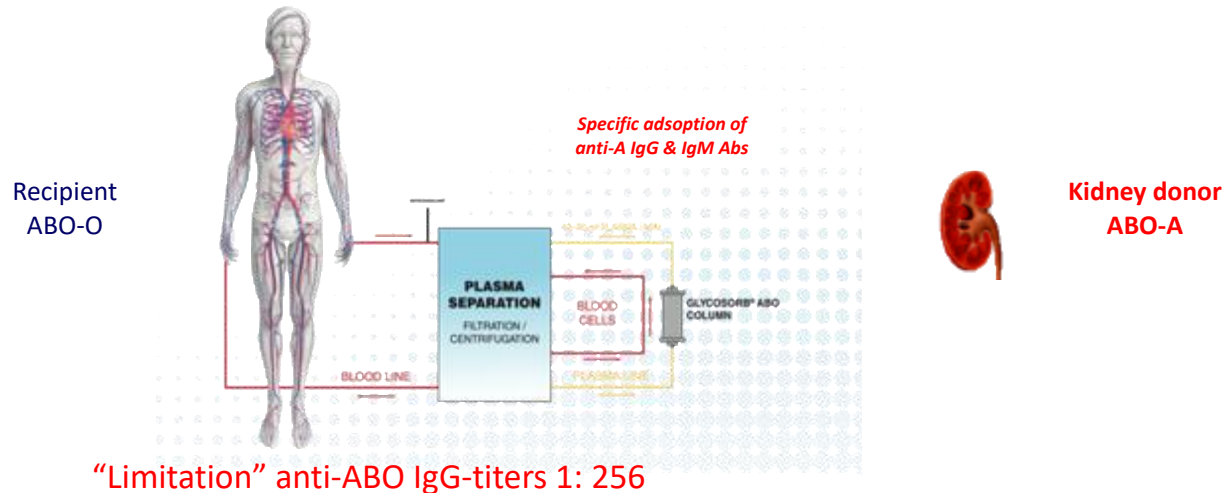
Identical = 37.5% / ABO-compatible = 26.75% / ABO-incompatible = 35.75%





# The Tool

## Immune Adsorption using ABO-specific columns



### Evolution in desensitization protocols

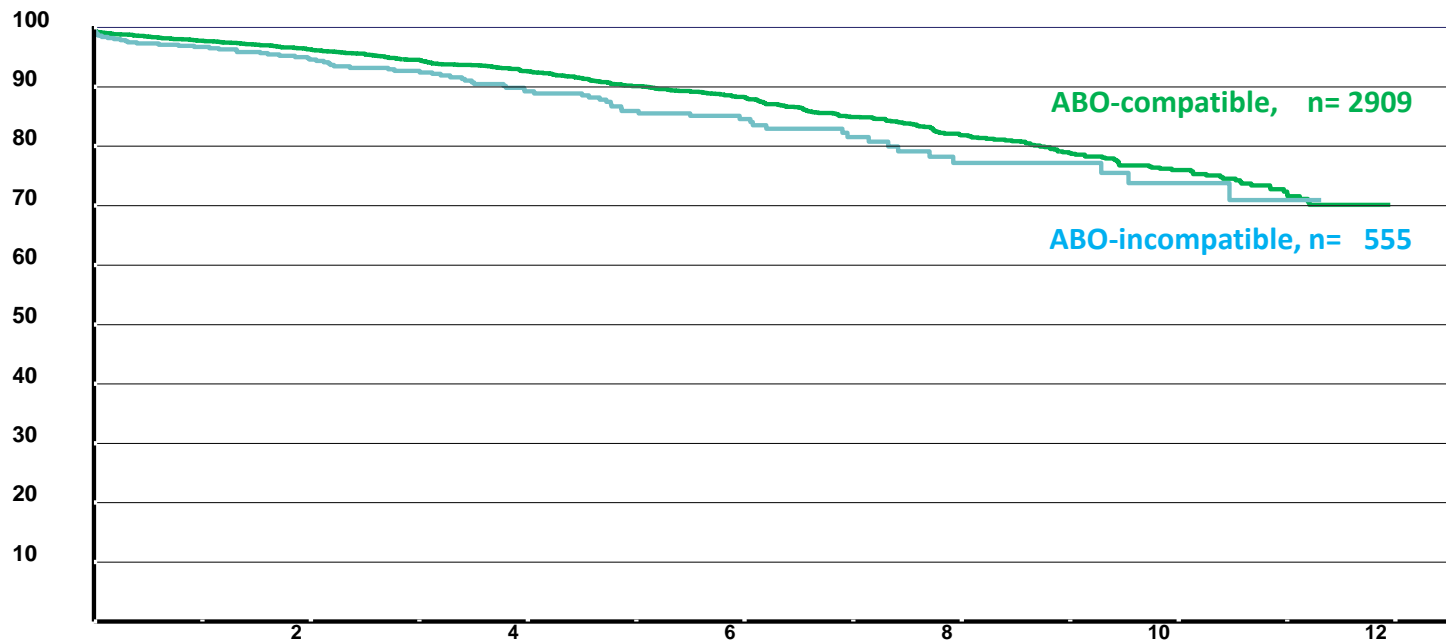
- ✓ Current standard immunosuppression
- ✓ Splenectomy replaced by B-cell depletion (*Rituximab*)
- ✓ PEX shift towards ABO-specific IA-columns (*Glycosorb*)

# Reduce medical barriers

## ABO-incompatible transplants

### Graft survival 2005-2016

Scandiatriplant



# Key reasons to favor live donation

- ✓ **Only realistic option to reduce waiting time on dialysis**
  - Prolongs life expectancy
  - Critical issue in the elderly
- ✓ **Superior kidney half-lives**
  - Better renal function / less re-listing
  - Less cardiovascular events / mortality
- ✓ **Perspective of successful further expansion**
  - Living Donor Exchange Programs
  - ABO-incompatible Programs

# Levende donor programma UZA

Update per 31/08/2023

