Kidney Donor Failure Index:

A new transformation of the Kidney Donor Risk Index

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Background – Current Policy

Kidney Donor Profile Index (KDPI): Percentile measure of risk of a potential deceased kidney donor relative to other potential donors

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Background - Issue

- A KDPI 85 donor in 2024 has a notably higher underlying predicted risk of graft failure than a KDPI 85 donor in 2014 did.
- This study proposes a new index, the kidney donor failure index (KDFI), that *both* is easily interpretable and has a consistent interpretation from year to year.
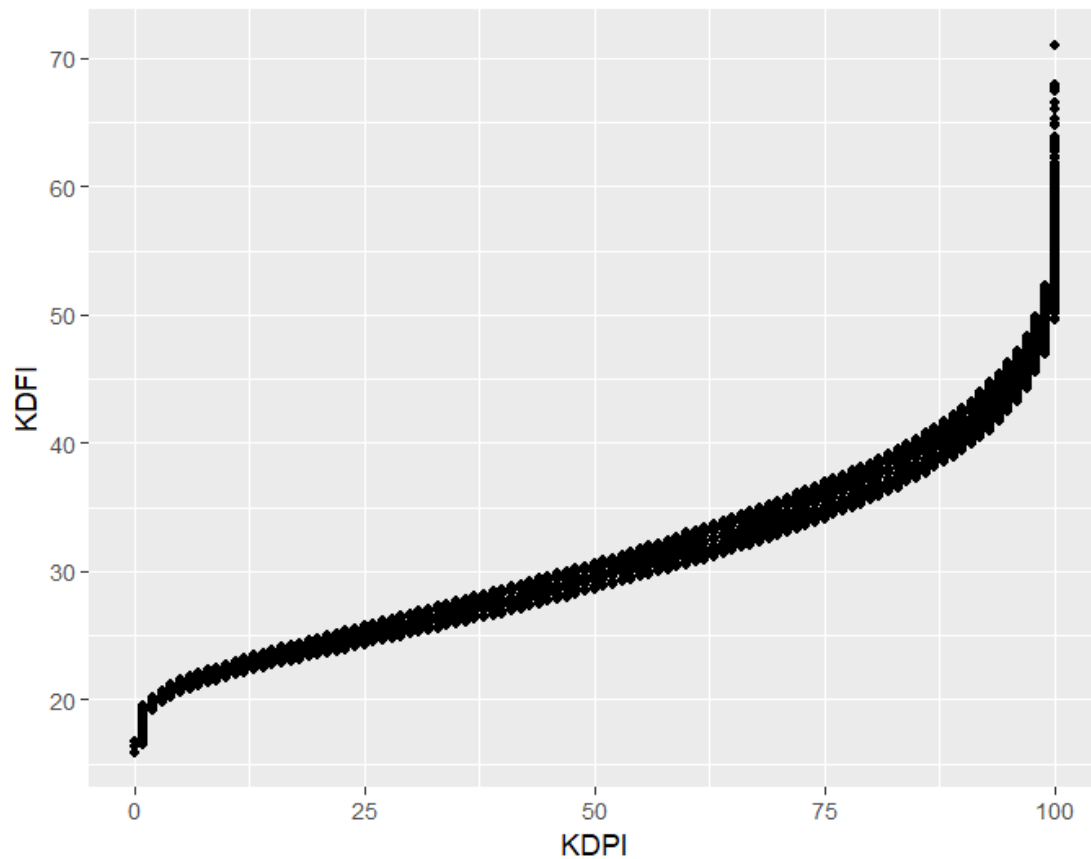
Methods - KDFI

$$KDFI = 100 - (100 * e^{-KDRI * 5\ yr\ cumulative\ hazard})$$

Interpretation: Predicted percent of average patients with a donor like this who will experience death or graft failure by 5 years posttransplant.

Methods – KDPI/KDFI Comparison

KDPI and **KDFI** were calculated from **KDRI** for donors recovered from Jan 1, 2018, to Dec 31, 2023.

Results

Results:

- **95%** of donors had a **KDFI** between **20.4** and **48.8**.
- Allocation relevant KDPIs - **20, 35, and 85** - map to KDFIs **24.6, 27.3 and 39.9**.

Conclusions

- The interpretation of KDFI is stable over time even if the underlying KDRI model changes.

- KDFI may better reflects that graft survival is relatively good with any kidney.

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