



NATIONAL KIDNEY REGISTRY[®]
FACILITATING LIVING DONOR TRANSPLANTS

Outcomes Report

Version 2.3

Published on 7/28/2022 · National Data Cutoff of 3/31/2022

Message from the Founder & CEO



NKR facilitated transplants continue to demonstrate lower graft failure rates and lower patient mortality rates at 1, 3 and 5 years compared to U.S. living donor transplants, in spite of a much more difficult case mix.

This NKR outcome advantage is most pronounced in sensitized patients, where the NKR is now facilitating half of all U.S. living donor sensitized patient transplants and has reduced the NKR desensitization rate below 1%. As the NKR volume grows, we expect the desensitization rate to continue to drop as highly sensitized patients are able to find clean matches (no DSA) from a larger pool of living donors.

We have added NKR death censored graft half-life to our Outcomes Report. The latest graft half-life is projected at 31.8 years, which exceeds the life expectancy of the majority of patients transplanted through the NKR. We have also added the early results of our [Kidney for Life](#) initiative, which is doubling the number of low eplet mismatch transplants facilitated each year, putting us within reach of 200 low eplet mismatch transplants in 2022. The most recent Kidney for Life antibody screening results are promising and are included in this report.

Sincerely,

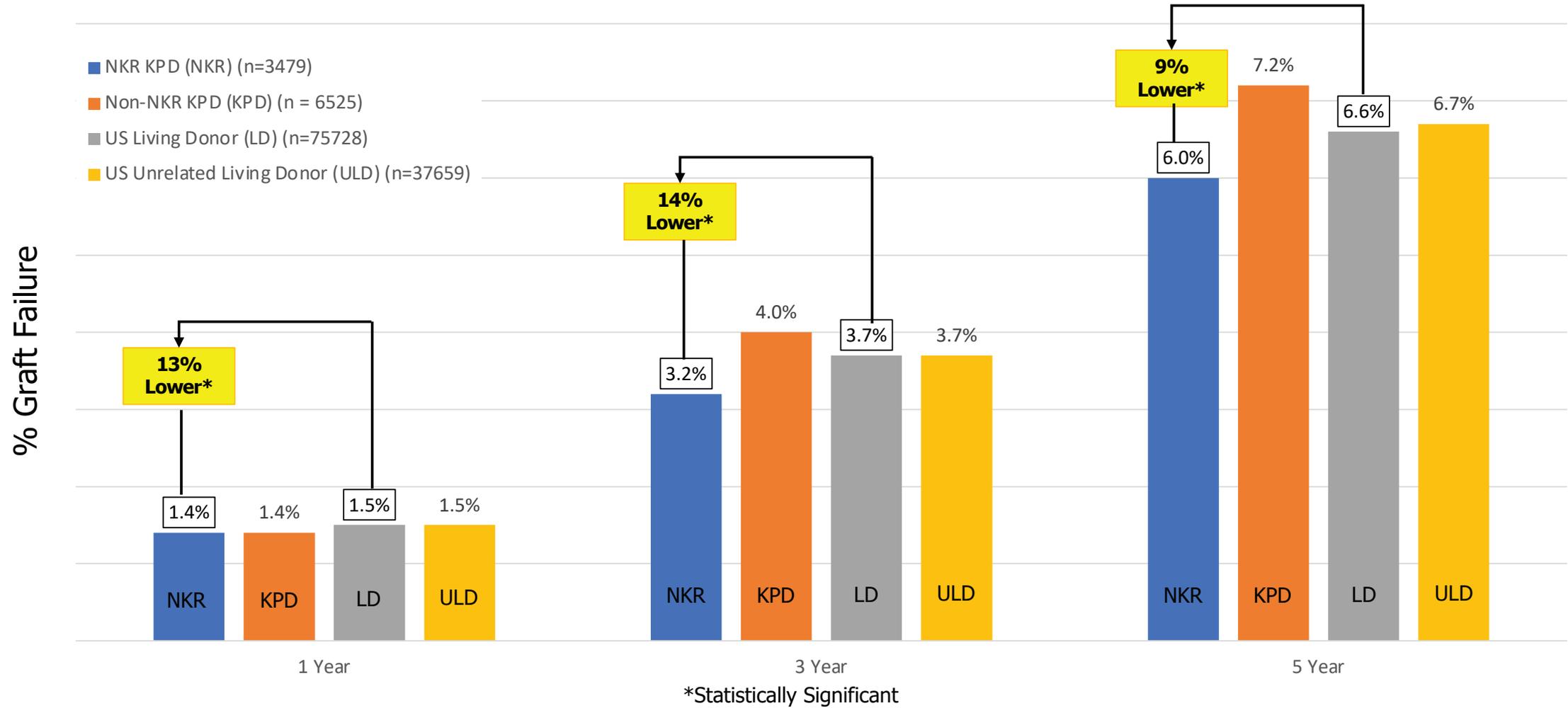
A handwritten signature in blue ink, appearing to read 'G. Hil', written over a light blue circular stamp.

Garet Hil
Founder & CEO
National Kidney Registry
Living Kidney Donor

Overview

- Outcome analyses were prepared by the Center for Surgical and Transplant Applied Research (CSTAR) directed by Dr. Dorry Segev (NYU)
- These data rely on a validated linkage of the NKR and SRTR transplant registries.
- P-values <0.05 are considered statistically significant.

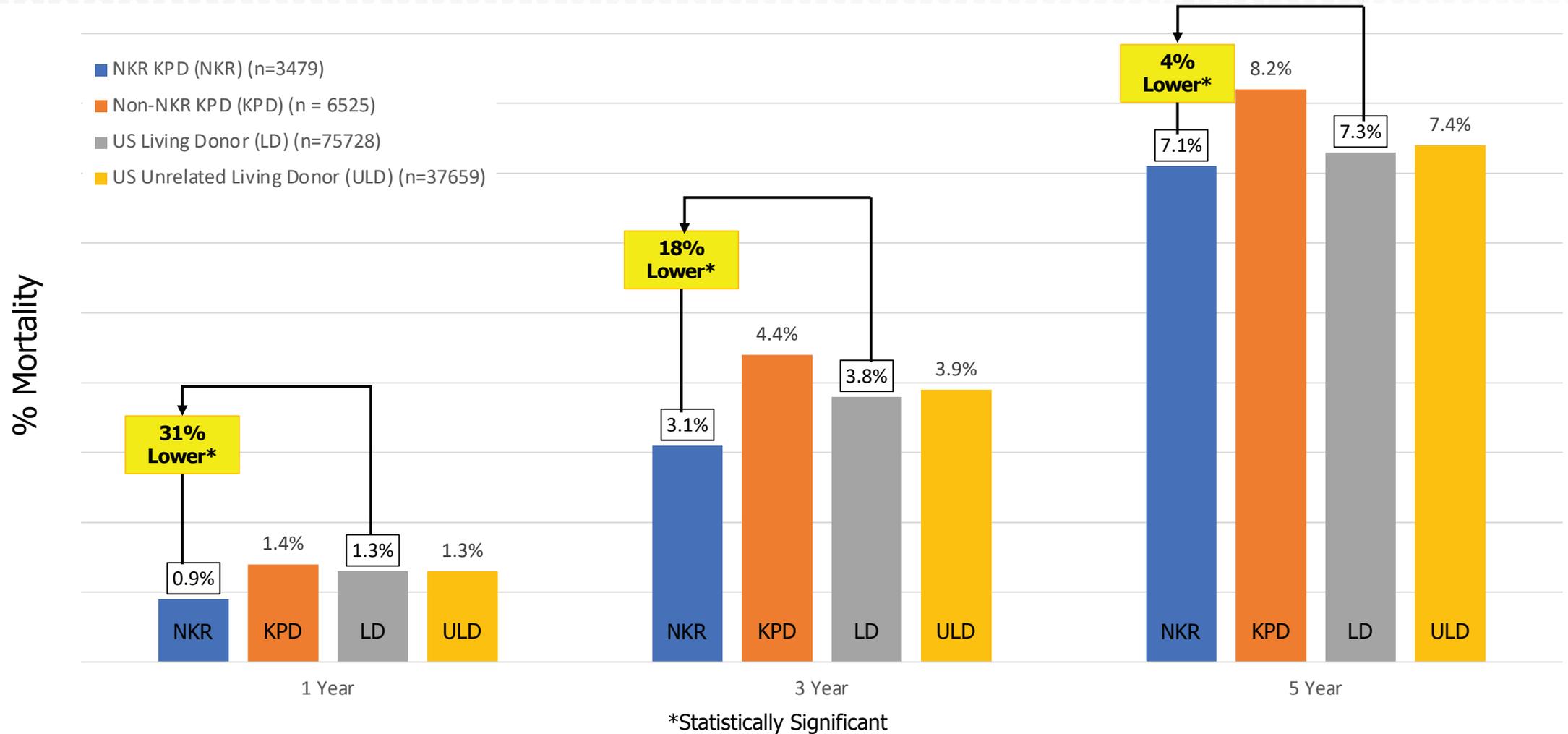
Death Censored Graft Failure Comparisons



Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
 Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
 SRTR data as of June 2022 (<https://www.srtr.org/>)



Patient Mortality Rate Comparisons

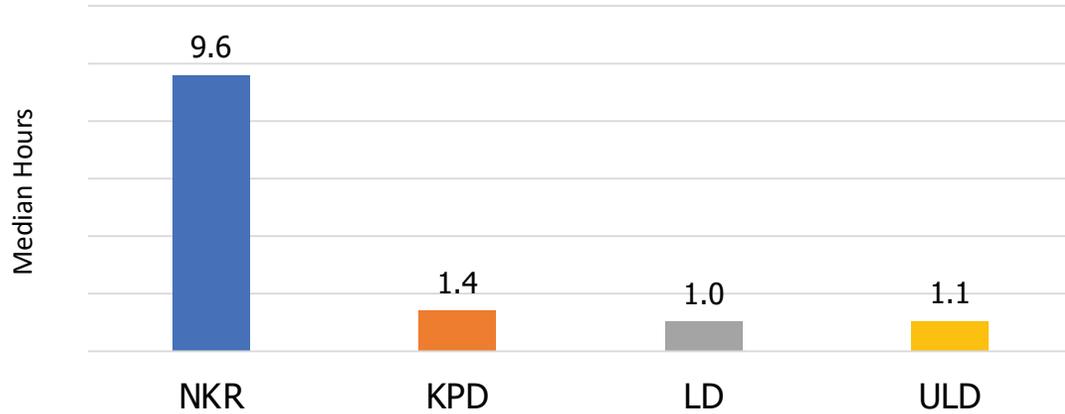


Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
 Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
 SRTR data as of June 2022 (<https://www.srtr.org/>)

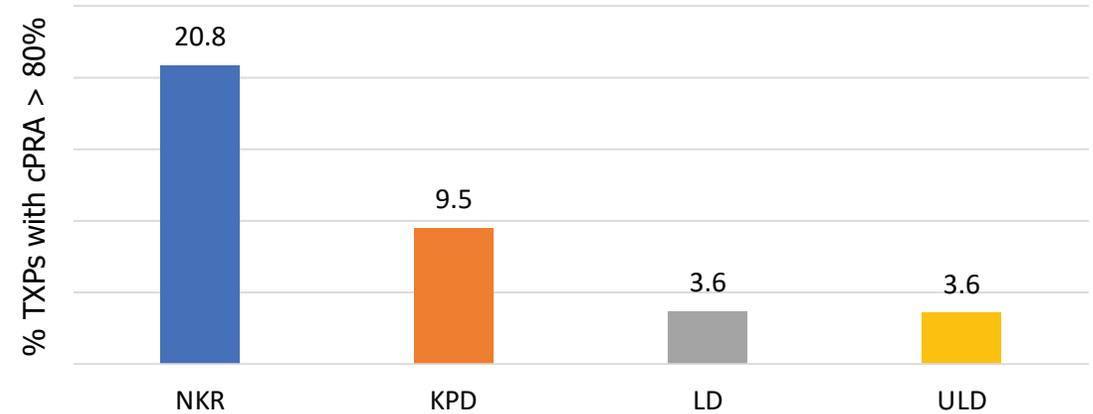


Case Mix: Better Outcomes Despite Harder Cases

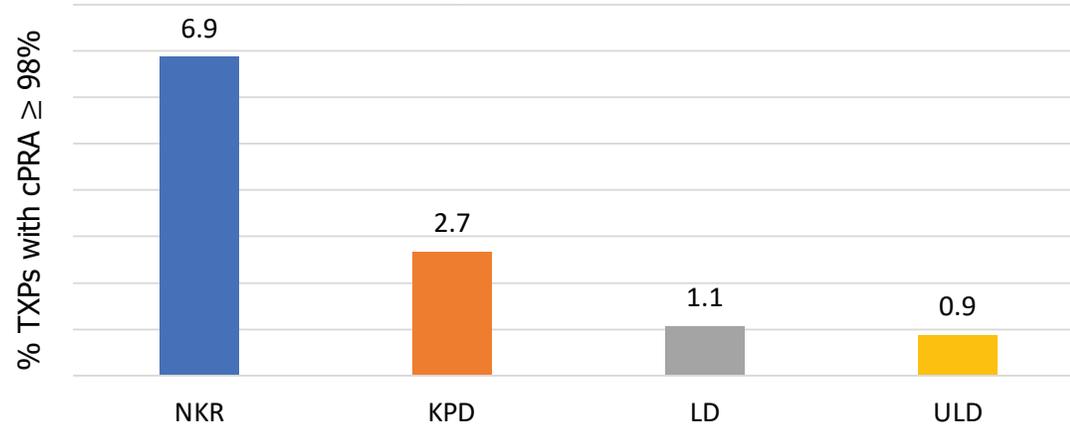
More Cold Ischemic Time



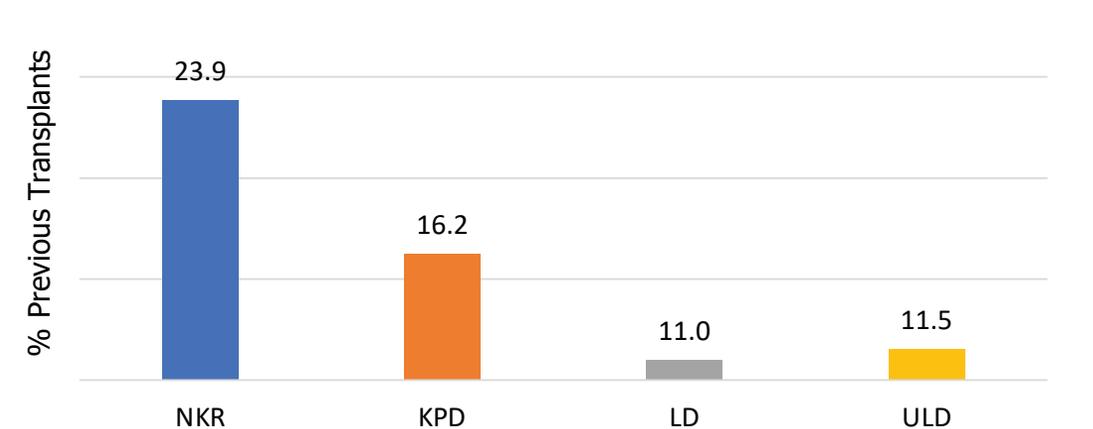
More Highly Sensitized Patients



More Hyper Sensitized Patients



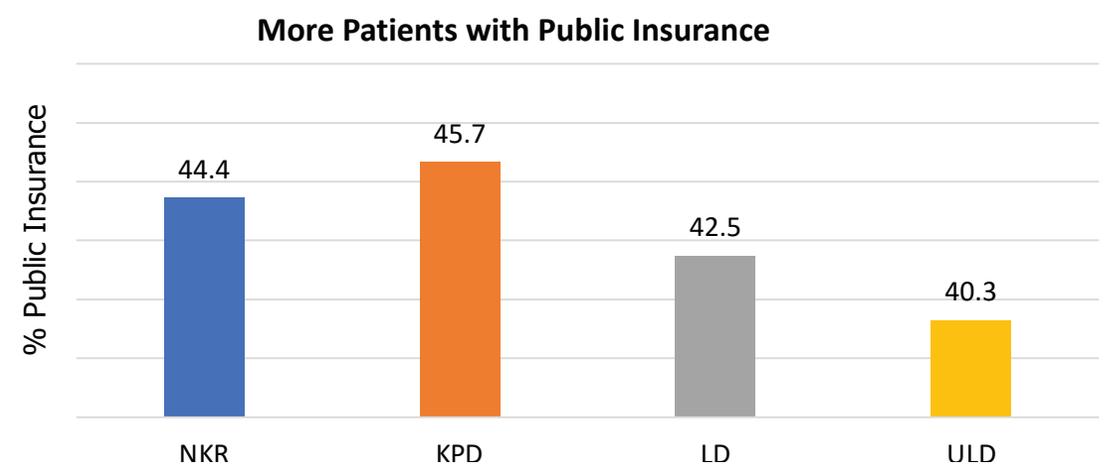
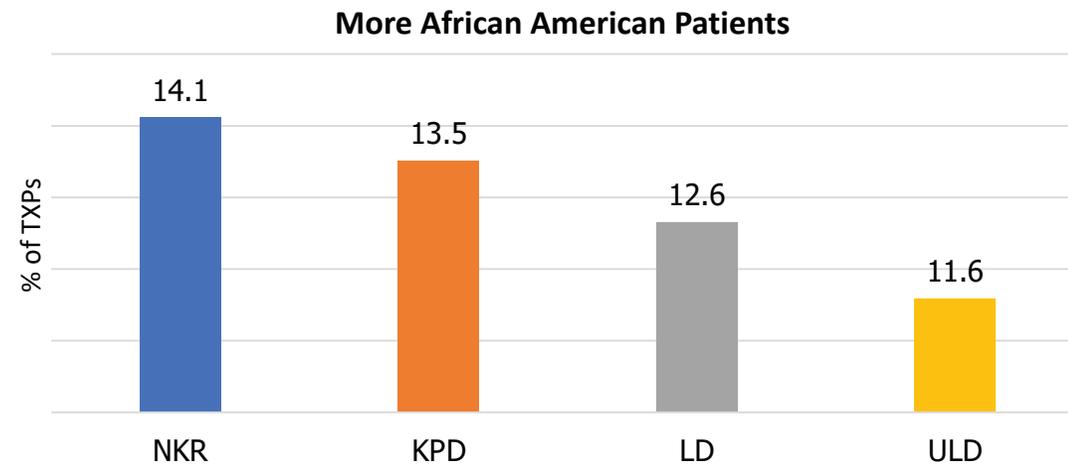
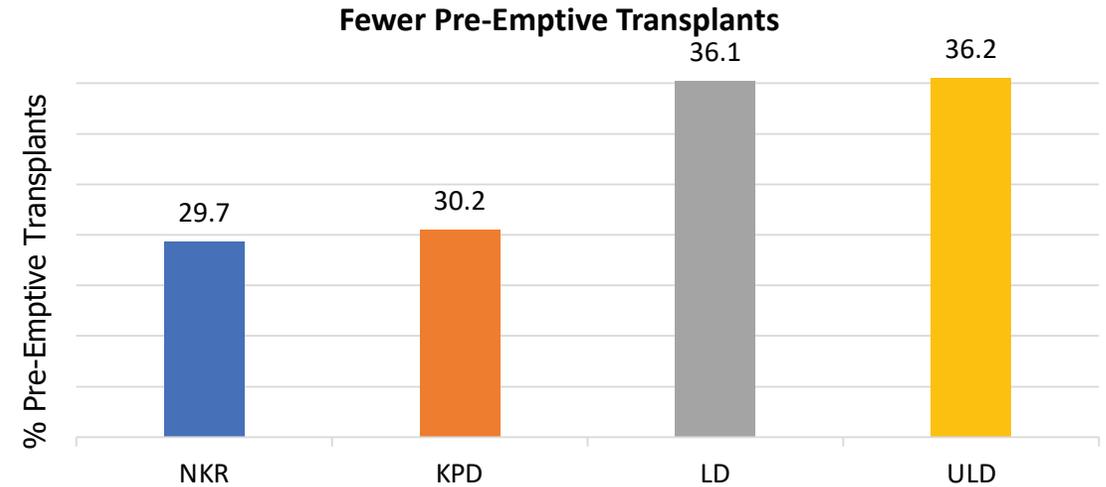
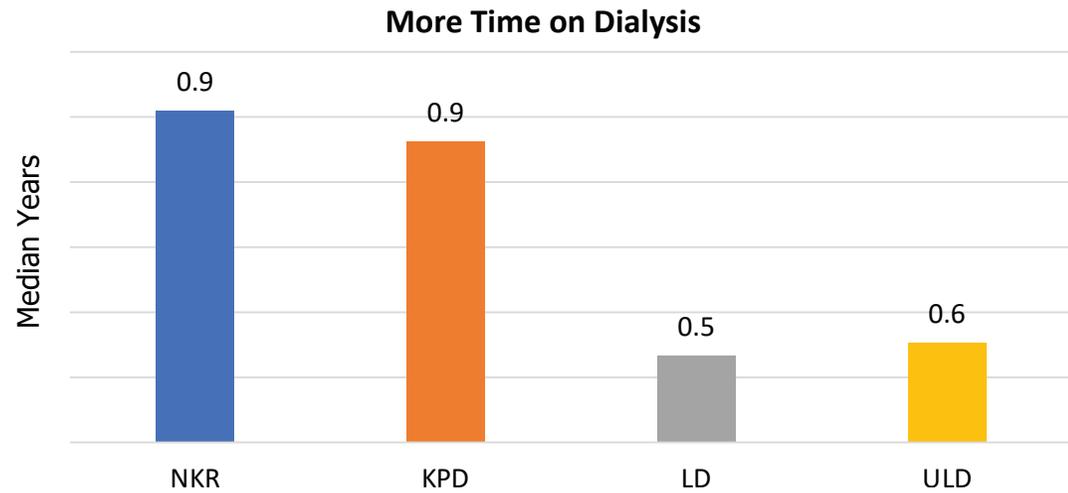
More Re-Transplants



Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
SRTR data as of June 2022 (<https://www.srtr.org/>)



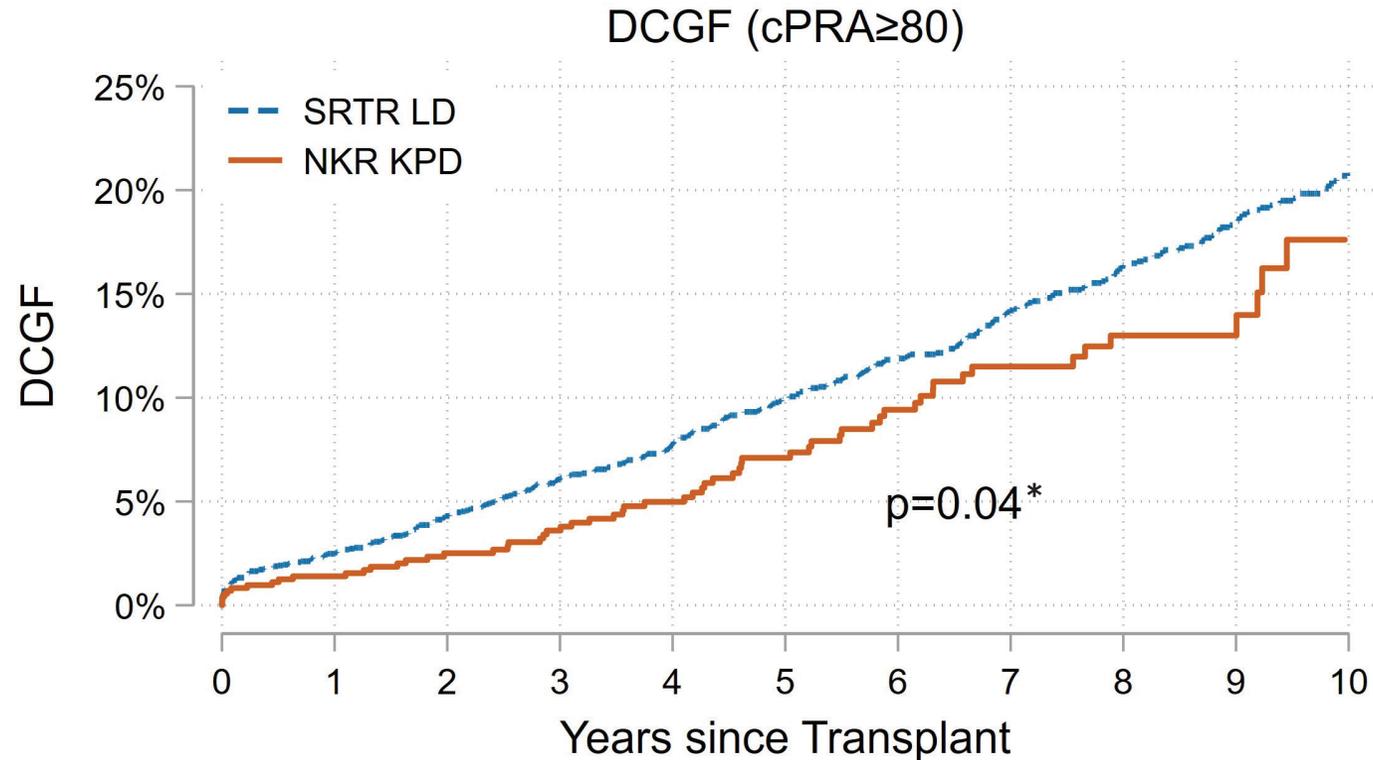
Case Mix: Better Outcomes in Spite of Harder Cases



Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
SRTR data as of June 2022 (<https://www.srtr.org/>)



Better Outcomes for Highly Sensitized Transplants



Number at risk

SRTR LD	2562	2390	2193	1985	1777	1567	1361	1163	959	784	631
NKR KPD	722	666	584	509	437	356	285	219	163	88	48

*Statistically Significant

Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
 Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
 SRTR data as of June 2022 (<https://www.srtr.org/>)

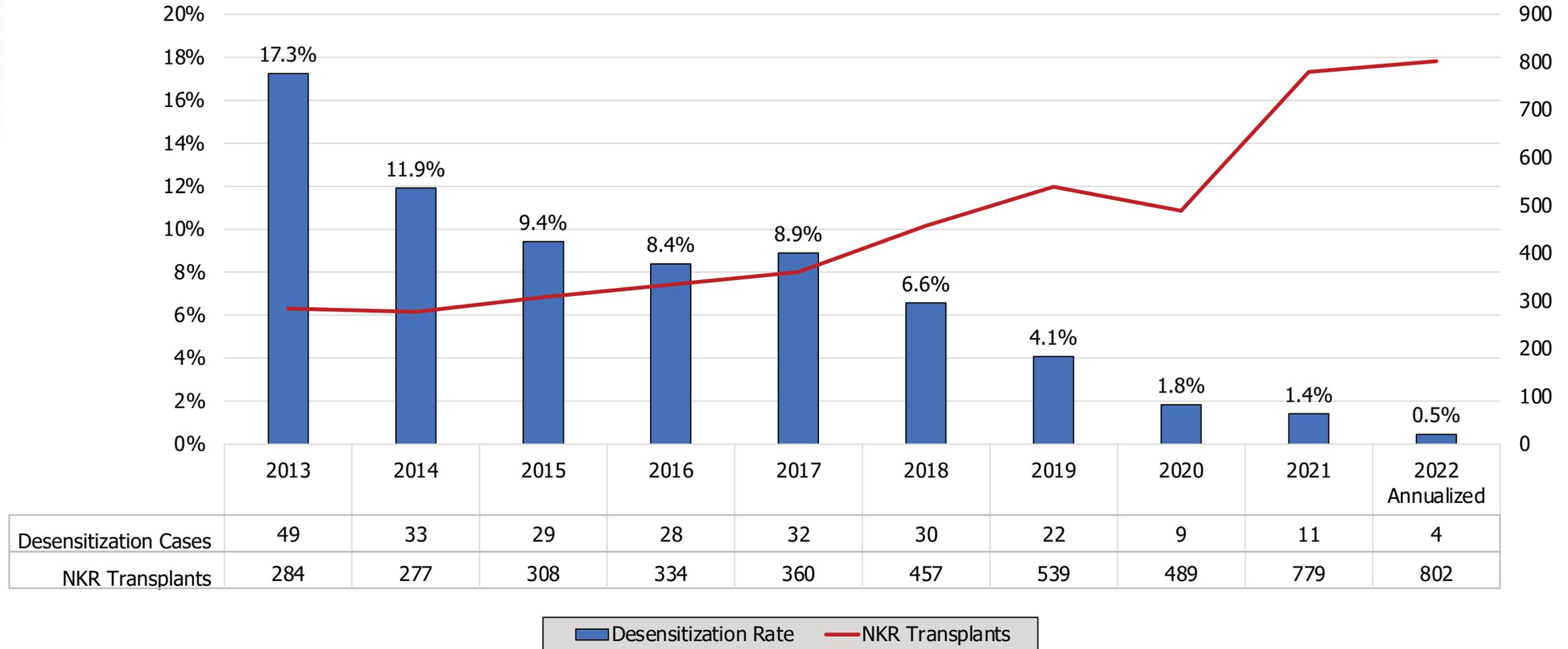


Death Censored Half-Life Curve for NKR Facilitated Transplants



*NKR Facilitated Transplants from 2/2008 through 12/2020. NKR chain end waitlist patients excluded.
Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
SRTR data as of June 2022 (<https://www.srtr.org/>)*

NKR Desensitization Cases Decline as Volume Grows



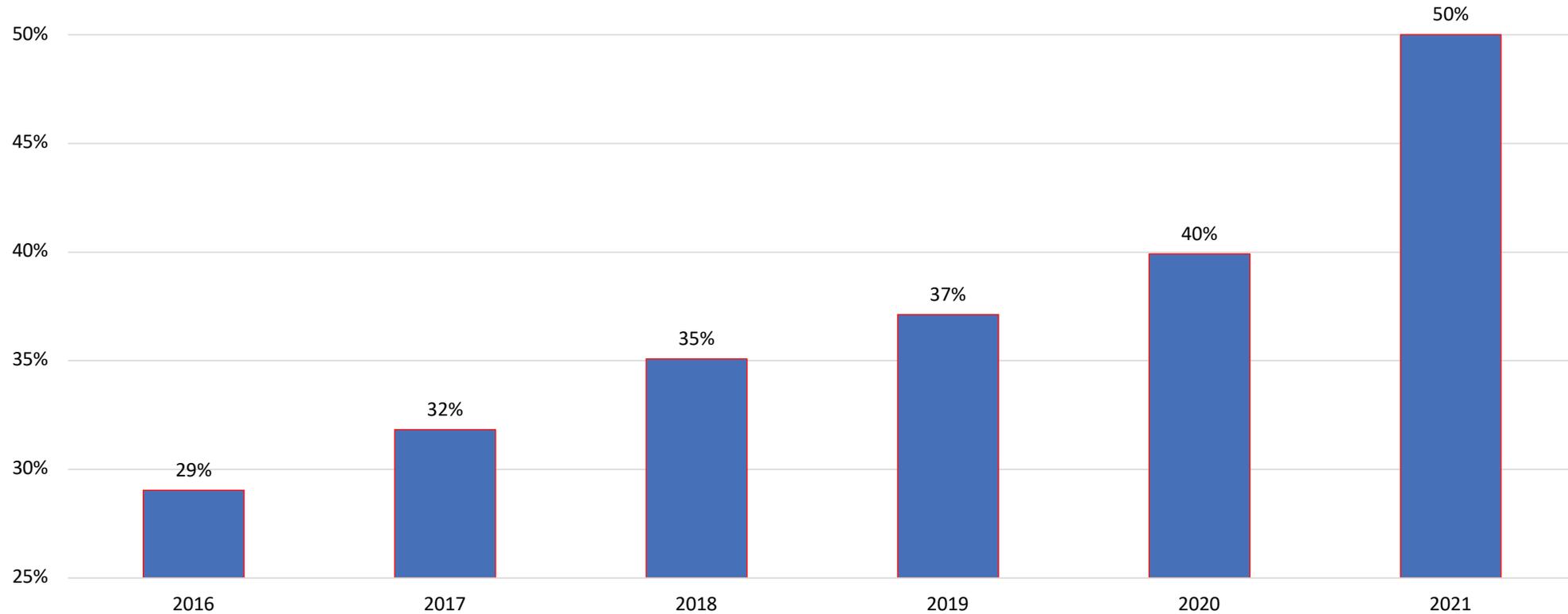
www.kidneyregistry.org administrative database; transplants through 07/18/22

*excludes waitlist patients



NKR's Share of Highly Sensitized U.S. Living Donor Transplants

Patients with cPRA >80%



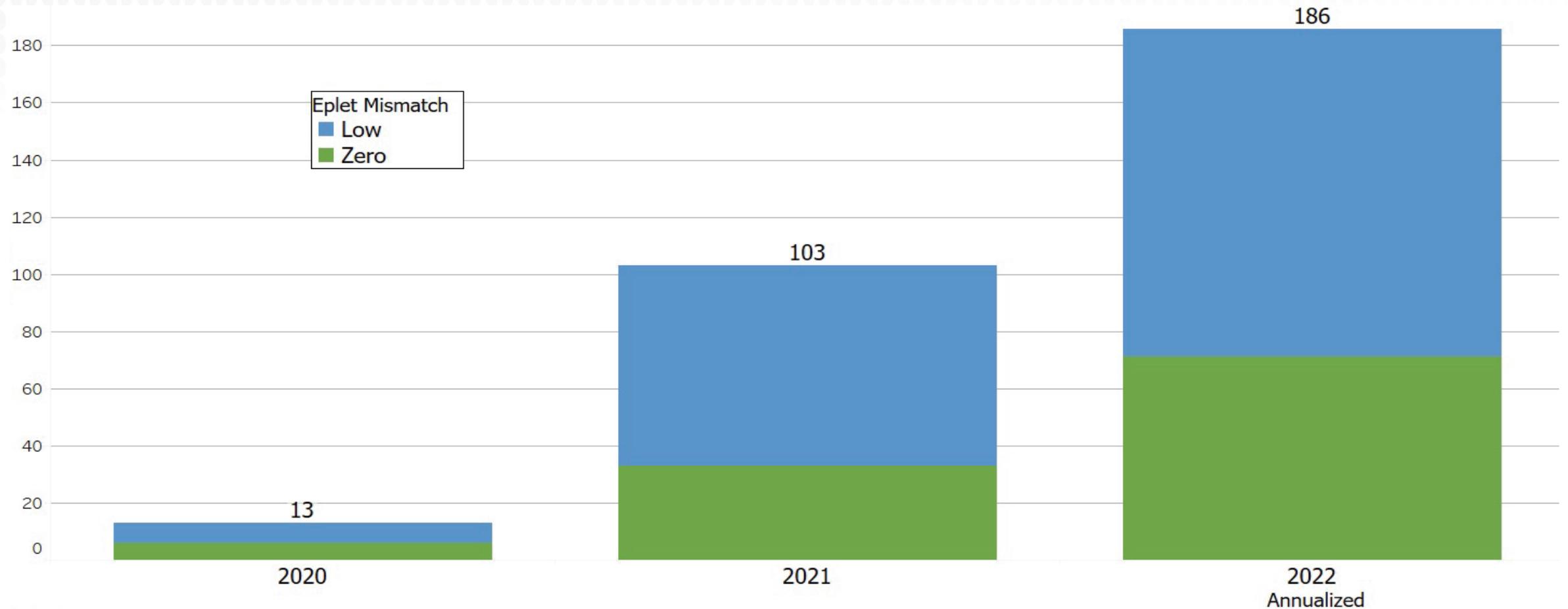
	2016	2017	2018	2019	2020	2021
Non-NKR Living Donor	241	245	268	272	238	232
NKR Living Donor	70	78	94	101	95	116

Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
 Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
 SRTR data as of June 2022 (<https://www.srtr.org/>)



NKR Facilitated Low Eplet Mismatch Transplants

Compatible and Incompatible Pairs



As of 7/11/2022

Includes KFL Direct Transplants

To learn more about the Kidney for Life Initiative please visit the website at www.kidneyforlife.org.



KFL Antibody Screening Results

	0 EMM + Low EMM	Med EMM + High EMM	Totals
1 Year Kits Mailed	77	78	155
1 Year Kits Outstanding	39	42	81
1 Year Screenings Completed	38	36	74
1 Year De Novo DSA**	0	8	8
% 1 Year De Novo DSA**	0%	22%	

**confirmed by lab director, 1,000 MFI Cutoff

To learn more about the Kidney for Life Initiative please visit the website at www.kidneyforlife.org.



Appendix

NKR Facilitated Transplant Outcomes

Death Censored Graft Failure	(n)	1 Year*	3 Year*	5 Year*
NKR KPD(NKR)	3,479	1.4%	3.2%	6.0%
Non-NKR KPD (KPD)	6,525	1.4%	4.0%	7.2%
US Living Donor (LD)	75,728	1.5%	3.7%	6.6%
US Unrelated Living Donor (ULD)	37,659	1.5%	3.7%	6.7%

Patient Mortality	(n)	1 Year*	3 Year*	5 Year*
NKR KPD (NKR)	3,479	0.9%	3.1%	7.1%
Non-NKR KPD (KPD)	6,525	1.5%	4.4%	8.2%
US Living Donor (LD)	75,728	1.3%	3.8%	7.3%
US Unrelated Living Donor (ULD)	37,659	1.3%	3.9%	7.4%

*Statistically Significant

Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
SRTR data as of June 2022 (<https://www.srtr.org/>)



Appendix

Case Mix: Better Outcomes Despite Harder Cases

Characteristics	NKR KPD	Non NKR KPD	US Living Donor	US Unrelated Living Donor
Median (IQR) Cold Ischemia Time	9.6	1.4	1.0	1.1
% cPRA 80+	20.8	9.5	3.6	3.6
% cPRA 98+	6.9	2.7	1.1	0.9
% Previous Transplant	23.9	16.2	11.0	11.5
Median (IQR) Years on Dialysis	0.9	0.9	0.5	0.6
% Pre-emptive Transplant	29.7	30.2	36.1	36.2
% African-American	14.1	13.5	12.6	11.6
% Public Insurance	44.4	45.7	42.5	40.3

Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
SRTR data as of June 2022 (<https://www.srtr.org/>)



Appendix

Sensitized (>80% cPRA) Patient Outcome Data

Type	1 Year	3 Year	5 Year	7 Year	7 Year Differential	NKR 7 Year Advantage
NKR KPD	1.40%	3.70%	7.10%	11.60%		
US Living Donor	2.50%	6.10%	10.00%	14.20%	2.60%	18%
US Unrelated Living Donor	2.80%	6.30%	11.30%	15.90%	4.30%	27%
Non-NKR KPD	2.40%	6.60%	11.20%	14.80%	3.20%	22%

NKR's Share of Highly Sensitized Living Donor Transplants

Type	2017	2018	2019	2020	2021
US Living Donor	245	268	272	238	232
NKR KPD	78	94	101	95	116
As %	32%	35%	37%	40%	50%

Provided courtesy of CSTAR part of the Department of Surgery, NYU Grossman School of Medicine
Kaplan-Meier GS Rates for Transplants Study Period: 02/2008-12/2021 with follow-up through 3/31/2022
SRTR data as of June 2022 (<https://www.srtr.org/>)

