

Variability in Center-Level Acceptance of Complex Patients

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CUTTING EDGE of **TRANSPLANTATION**

TRANSPLANT SUMMIT 2019

***NO SIZE FITS ALL:** Uncovering the
Potential of Personalized Transplantation*

Disclosure

I have no disclosures related to this presentation

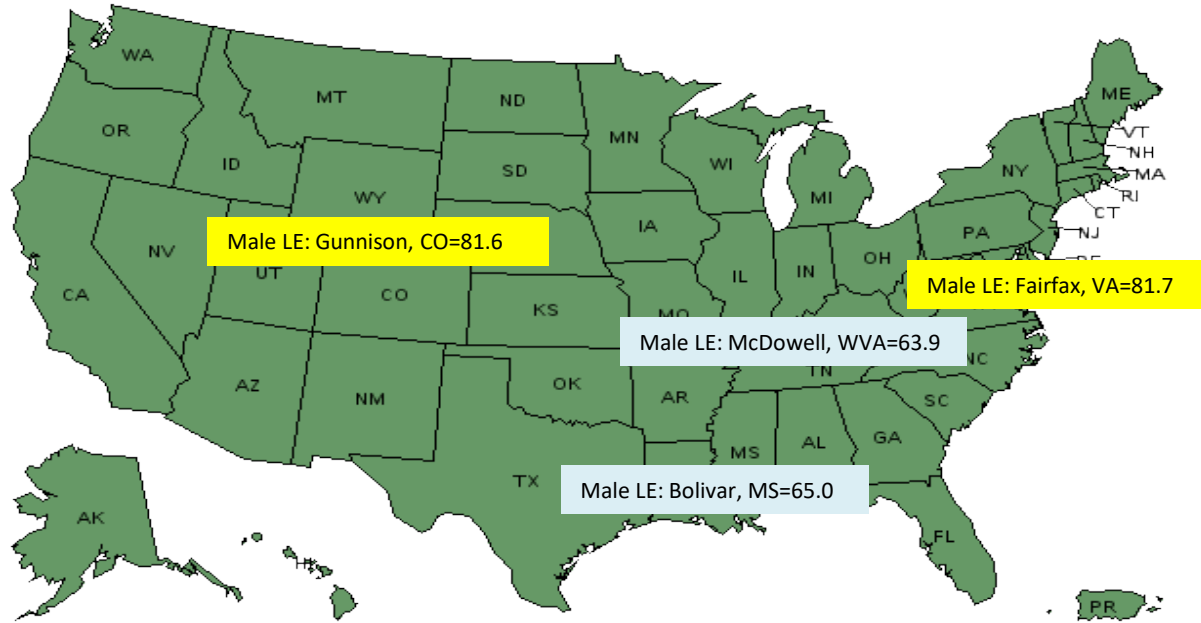
Introduction

- Variation in practice is common among healthcare providers and may be appropriate to provide optimal care for specific patient populations
- However, variation may also imply differences in quality and processes of care that may be leveraged to identify best practices and provide learning opportunities
- Furthermore, clinically relevant levels of variation in practice or outcomes may also be important to disseminate to decision-makers including patients as it may impact prognosis and satisfaction

Types of Center-Level Variation

- Random variation is expected and reflects natural differences in outcomes and processes of care (a.k.a. noise)
- Systematic variation – reflects differences in processes of care and outcomes that are purposeful or due to differences in practice, patient populations or quality of care

Life Expectancy by US County

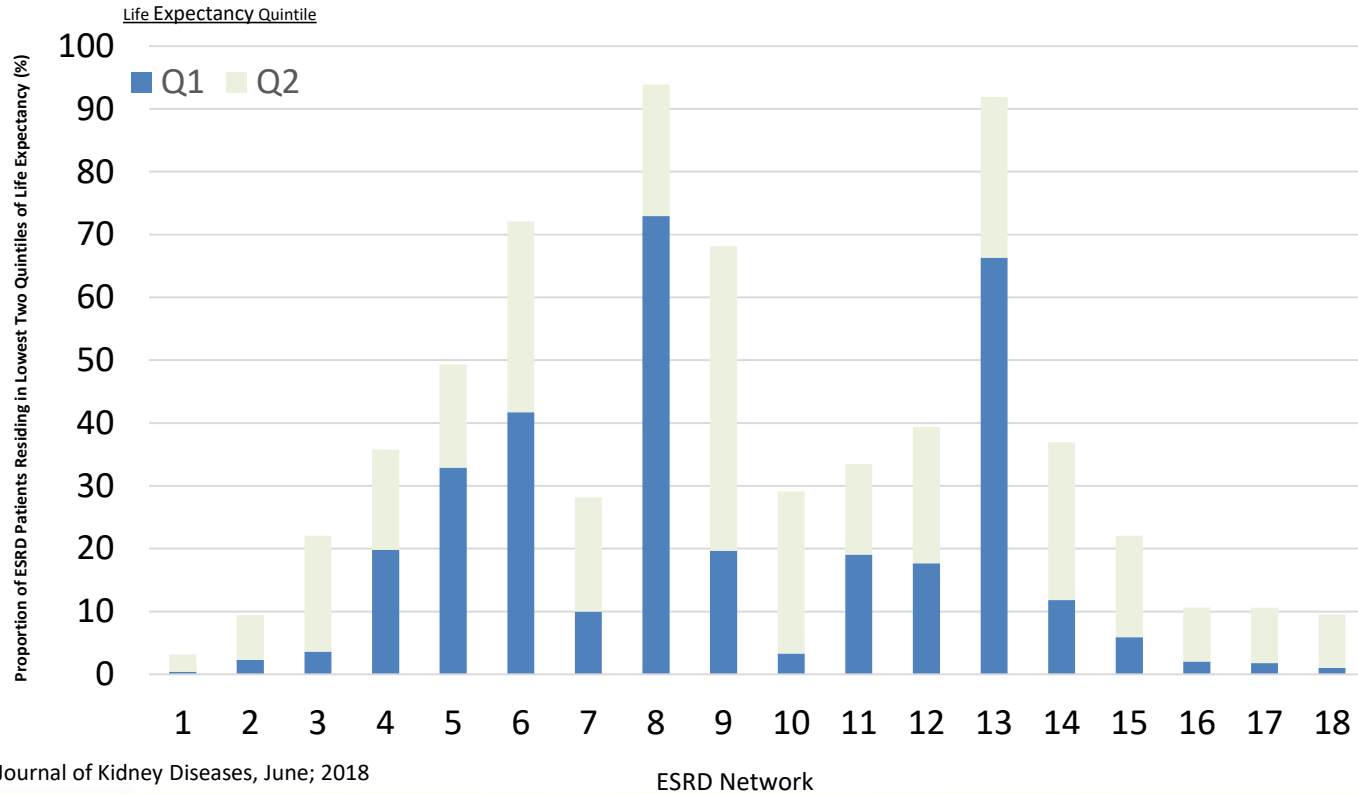


US Male Life Expectancy = 76.1

US Female Life Expectancy = 80.8

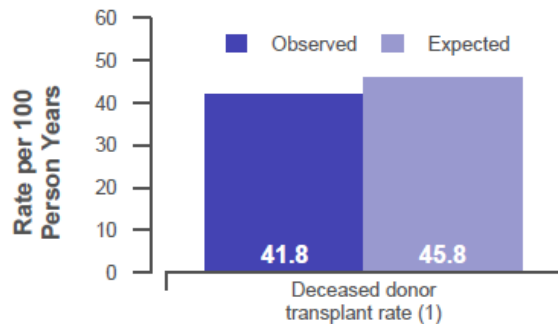
Source: Institute for Health Metrics and Evaluation, accessed 2016

Variation in Low Life Expectancy Communities by ESRD Network



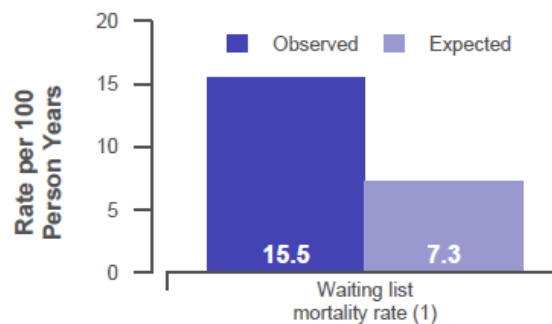
Schold et al, American Journal of Kidney Diseases, June; 2018

Figure A2. Transplant rates
01/01/2015 - 12/31/2015



(1) Not significantly different ($p=0.593$)

Figure A3. Waiting list mortality rates
01/01/2015 - 12/31/2015



(1) Statistically higher ($p<0.01$)

Figure A4. First-year adult graft and patient survival: 01/01/2013 - 06/30/2015

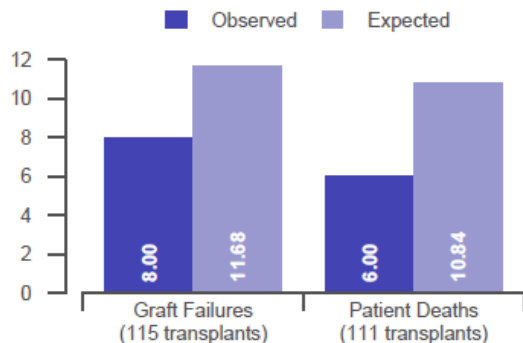
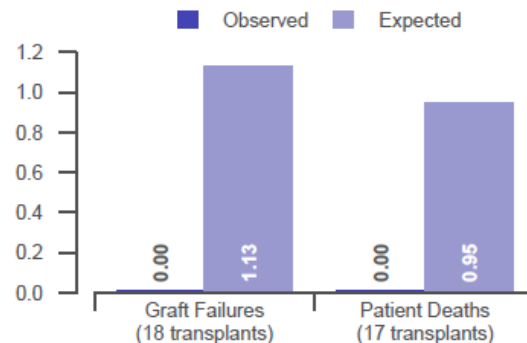
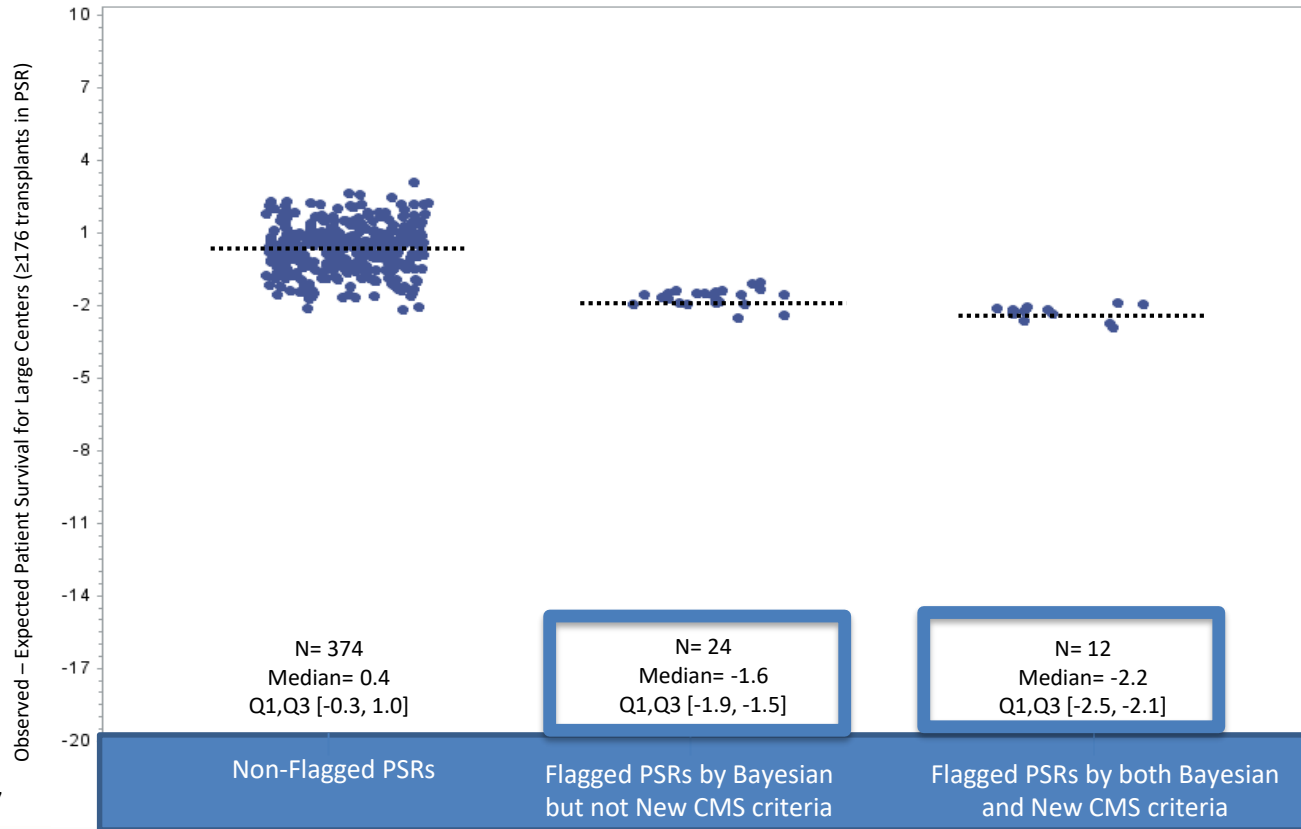


Figure A5. First-year pediatric graft and patient survival: 01/01/2013 - 06/30/2015

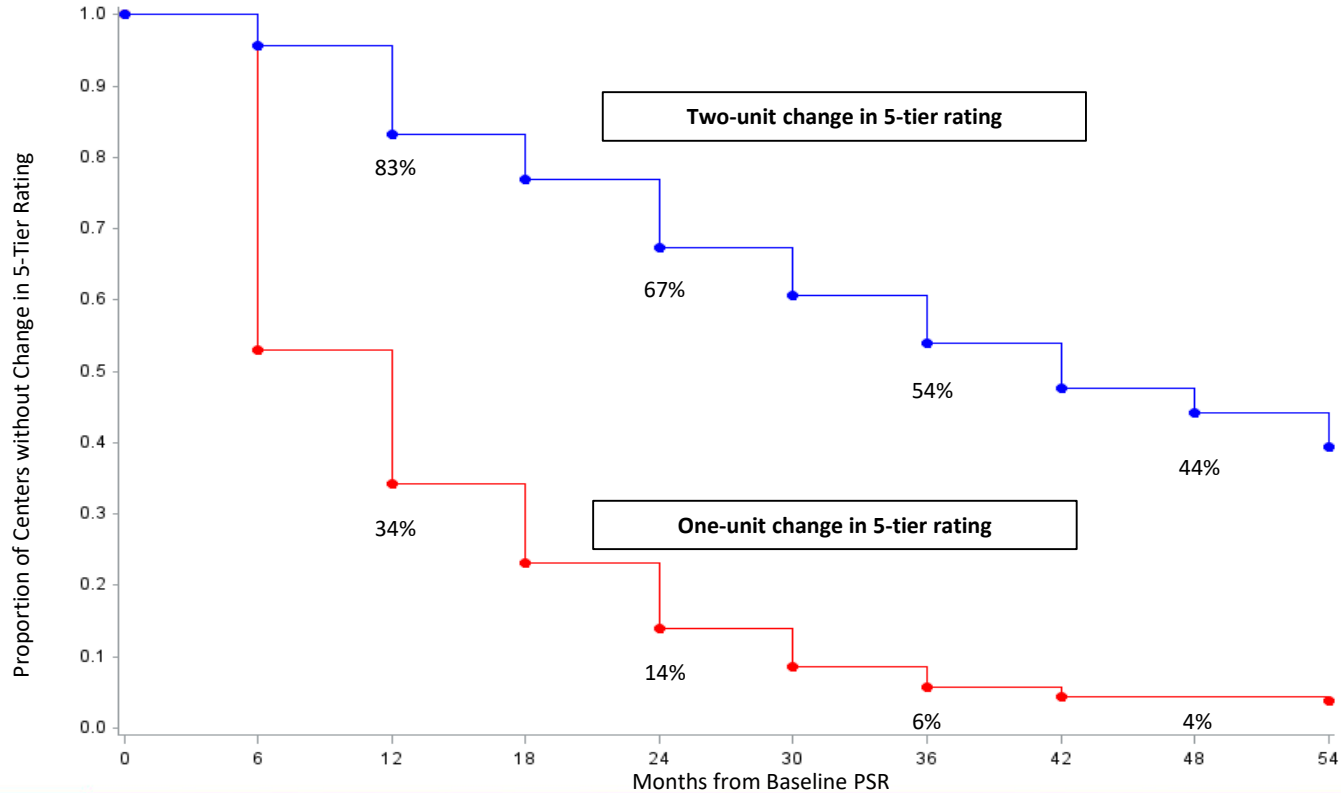


O-E % Patient Survival: Large Centers



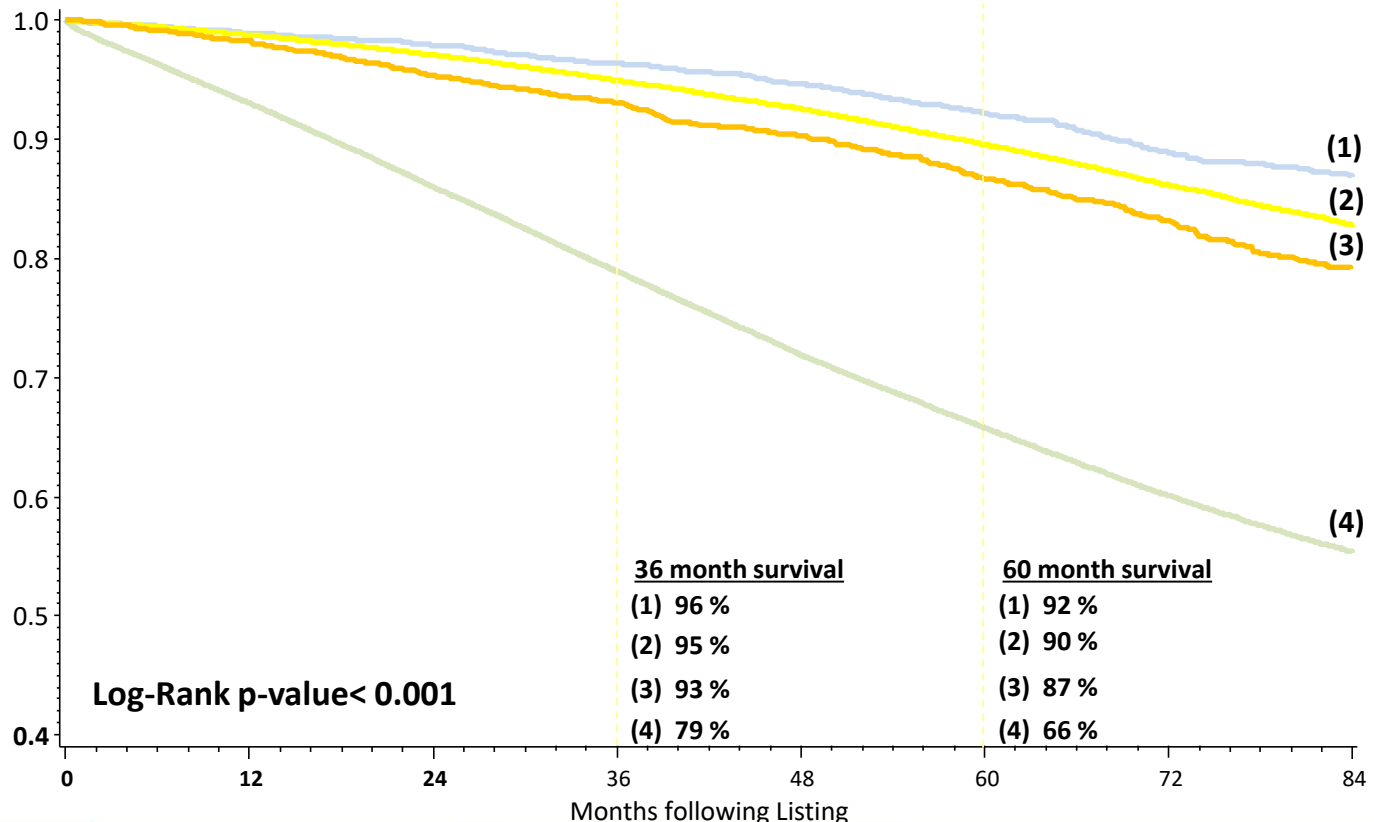
Schold JD et al,
Transplantation; June, 2017

5-Tier Program Assessments: Informed Choice?



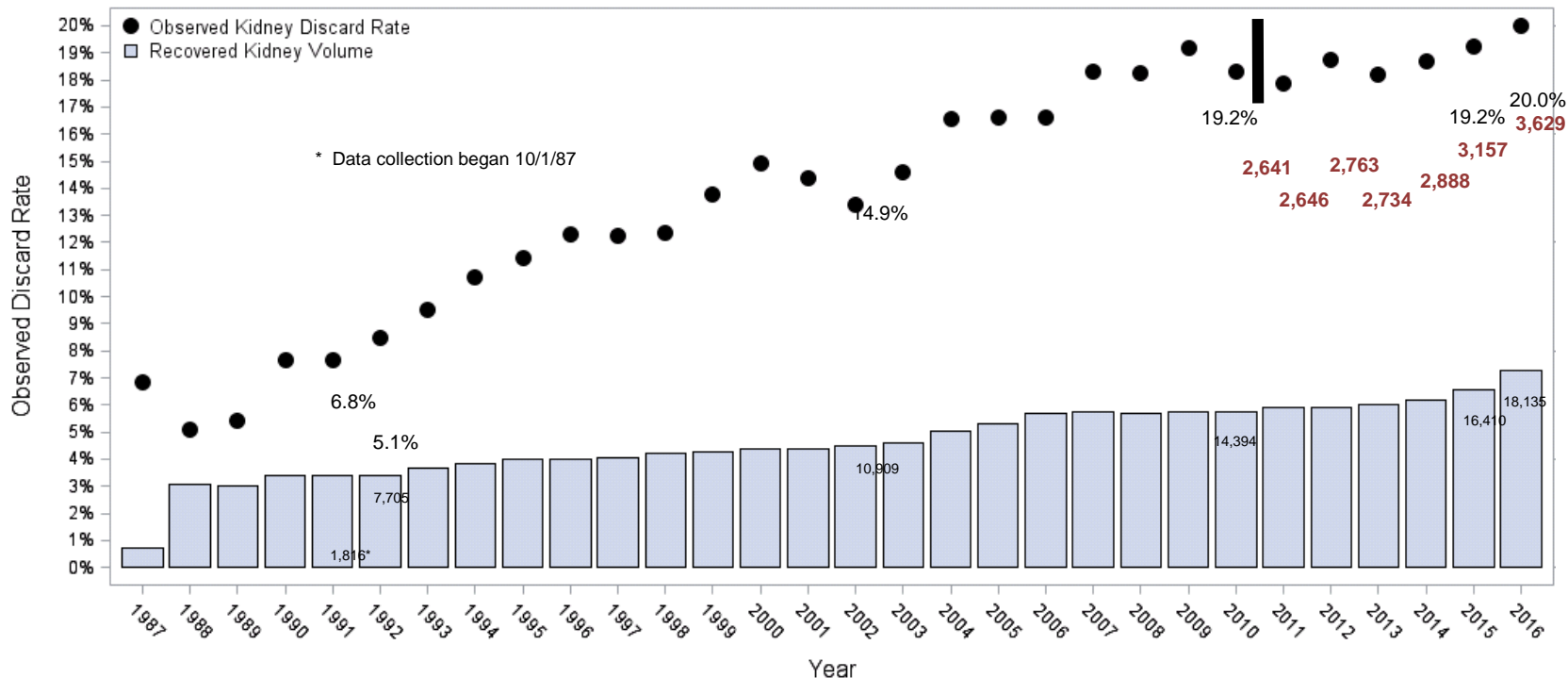
Schold et al, American Journal of Transplantation, 2018

Patient Survival by Transplant Status and Center Performance



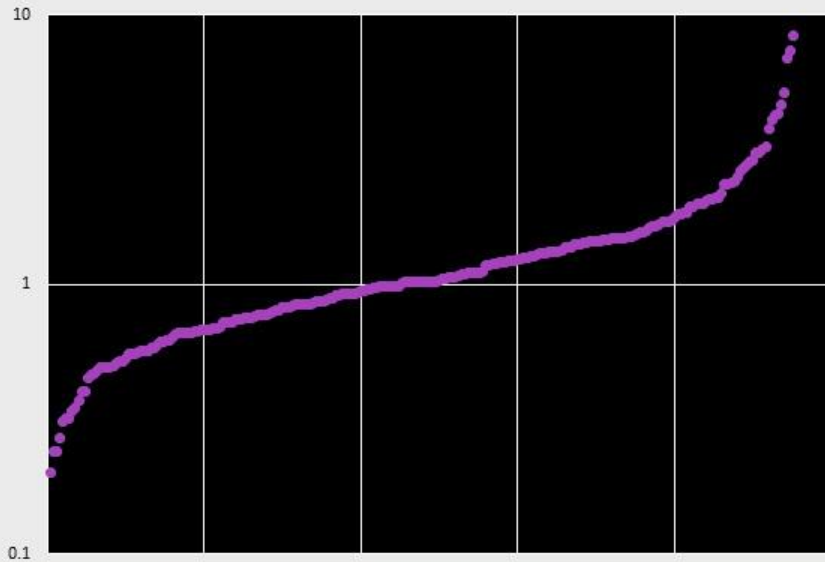
Schold et al,
CJASN, 2014 Oct
7;9(10):1773-80

Discard rate trends - kidney

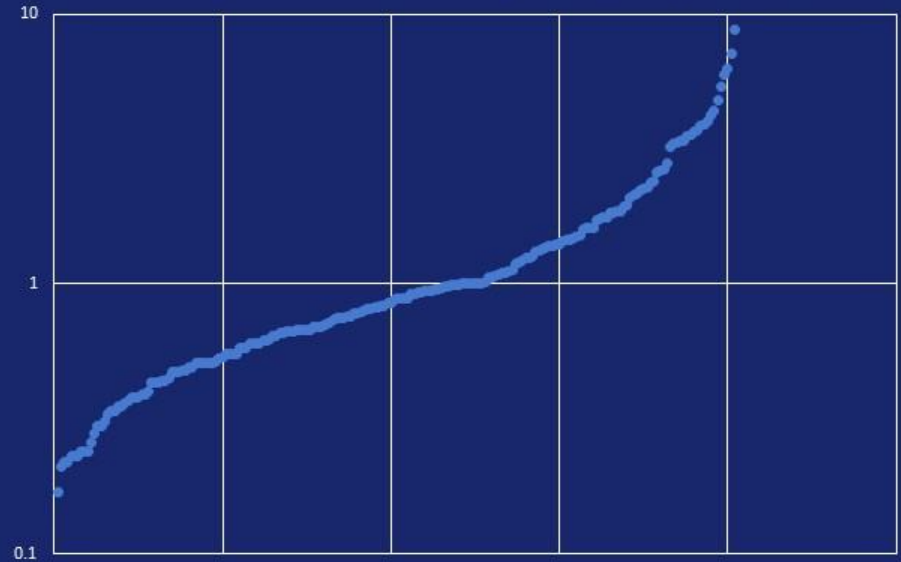


OFFER ACCEPTANCE RATIO BY US KIDNEY TRANSPLANT CENTER

Offer Acceptance Ratio by US Kidney Transplant Center



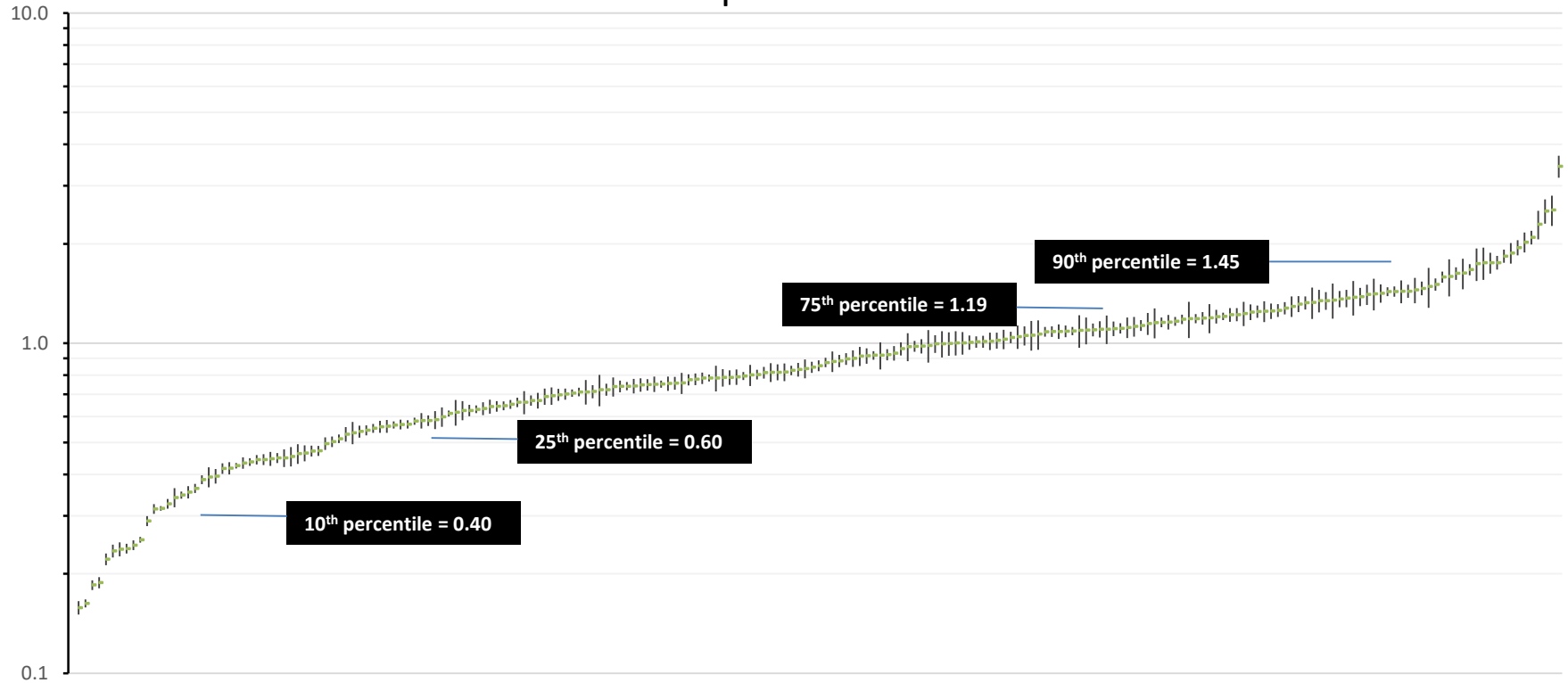
Offer Acceptance Ratio for KDRI>1.75 by US Kidney Transplant Center

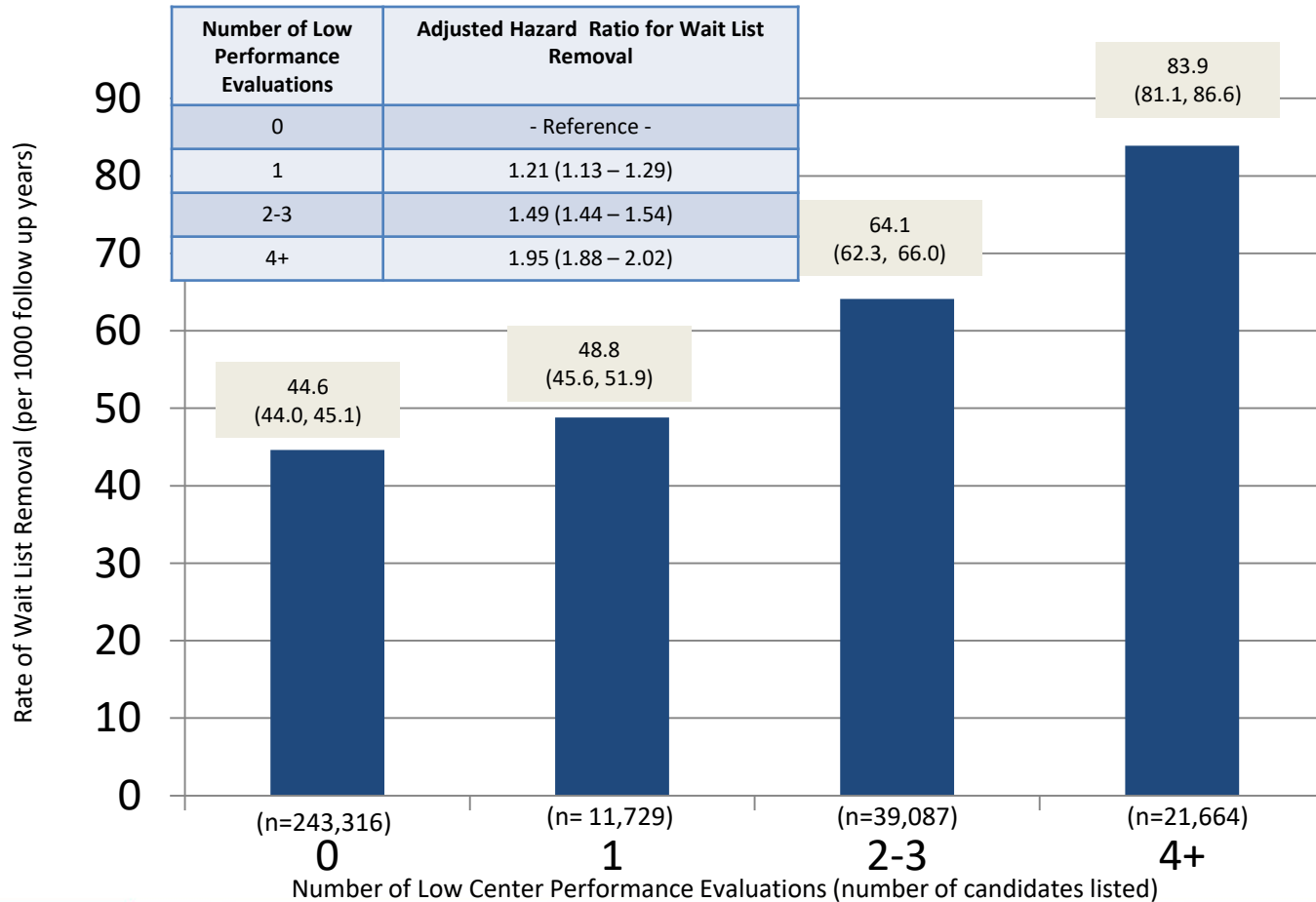


Effect of low acceptance practices on eventual placement/discard

Category	Odds Ratio for Kidney Placement for a 1 SD increase in offer acceptance ratio of programs in the local DSA	95% Confidence Interval
Overall	1.07	(1.02, 1.13)
High donor quality	1.04	(0.99, 1.10)
Medium donor quality	1.08	(1.02, 1.14)
Low donor quality	1.05	(1.00, 1.11)
Offers 1-10	1.07	(1.02, 1.12)
Offers 11-100	1.06	(1.00, 1.12)
Offers > 100	1.05	(1.00, 1.11)

Standardized Incidence Rate of Pre-emptive Re-listing following Graft Failure by US Kidney Transplant Center





Source: Schold et al, American Journal of Transplantation; April 2016

Benchmarking: Is my transplant practice different than regional and national based on measured characteristics?



Transplant Program (Organ): Kidney
 Release Date: March 20, 2014 (January 2014 Report)
 Based on Data Available: January 31, 2014

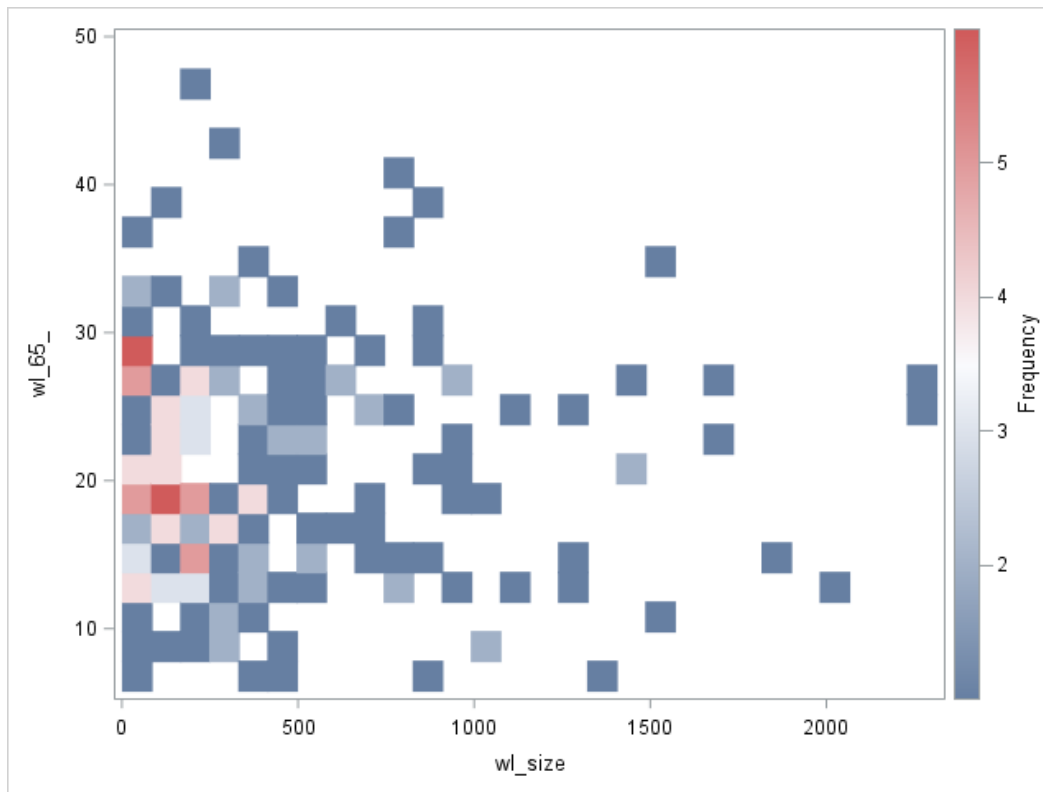
Feedback: SKTR@SKTR.org
 1.877.970.SRTR (7787)
<http://www.srtr.org>

B. Waiting List Information

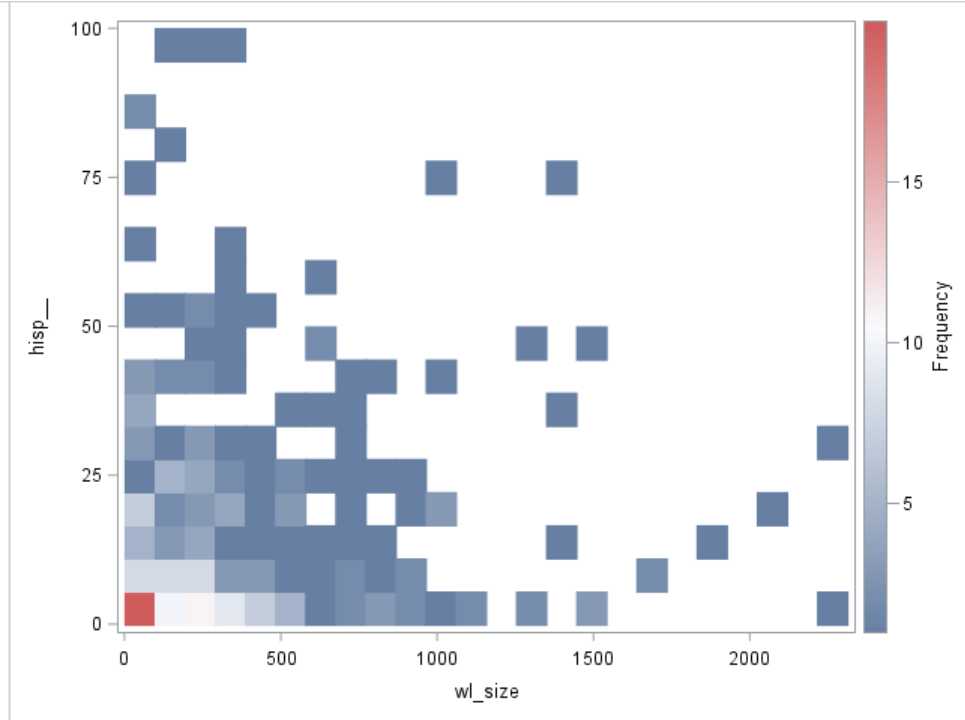
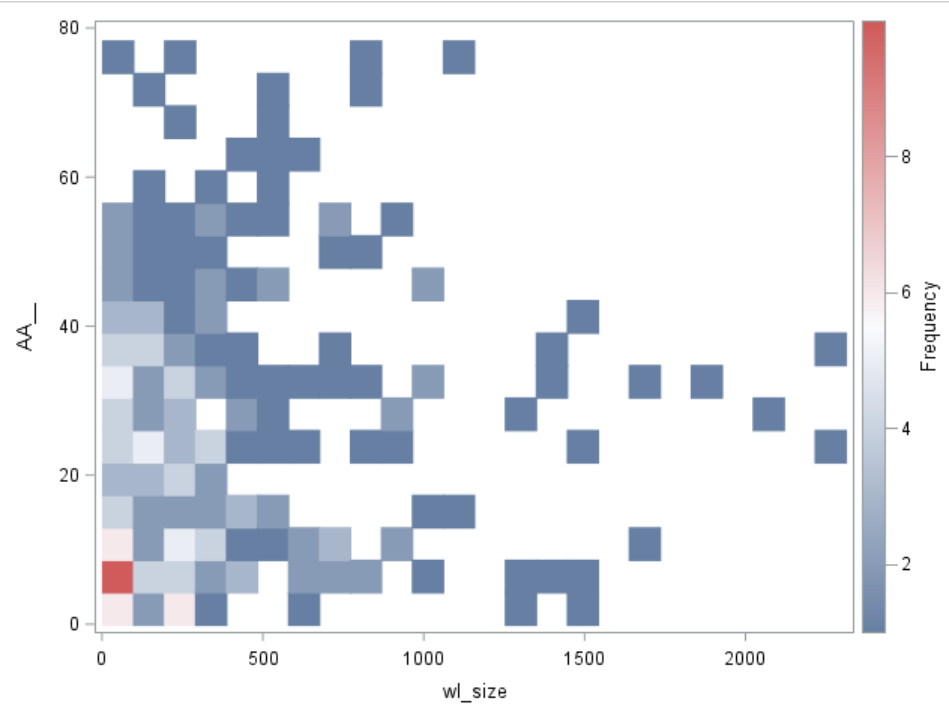
Table B3. Medical characteristics of waiting list candidates
 Candidates registered on the waiting list between 07/01/2012 and 06/30/2013

Medical Characteristic	New Waiting List Registrations 07/01/2012 to 06/30/2013 (%)			All Waiting List Registrations on 06/30/2013 (%)		
	This Center (N=273)	OPTN Region (N=2,698)	U.S. (N=35,951)	This Center (N=636)	OPTN Region (N=6,549)	U.S. (N=101,324)
All (%)	100.0	100.0	100.0	100.0	100.0	100.0
Blood Type (%)						
O	48.4	46.4	48.4	46.5	49.2	52.1
A	33.0	36.1	32.9	33.5	31.8	28.8
B	17.2	14.2	15.0	18.1	16.1	16.3
AB	1.5	3.3	3.7	1.9	2.9	2.8
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Previous Transplant (%)						
Yes	19.4	16.2	14.1	21.7	20.4	16.4
No	80.6	83.8	85.9	78.3	79.6	83.6
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
Initial CPRA (%)						
0-9%	86.1	80.3	83.5	71.7	73.4	80.3
10-79%	4.4	11.9	10.1	13.7	14.4	11.4
80+%	9.2	7.8	6.4	14.6	12.2	8.4
Unknown	0.4	0.0	0.0	0.0	0.0	0.0
Primary Disease (%)						
Glomerular Diseases	31.1	22.2	19.8	29.9	22.4	19.5
Tubular and Interstitial Diseases	7.7	5.3	3.9	8.2	5.2	3.5
Polycystic Kidneys	11.7	8.7	7.2	9.6	8.1	6.6
Congenital, Familial, Metabolic	1.8	3.1	1.9	1.7	2.0	1.5
Diabetes	21.2	27.7	32.0	24.5	27.7	32.2
Renovascular & Vascular Diseases	0.4	0.1	0.2	0.2	0.2	0.2
Neoplasms	0.4	0.5	0.3	0.2	0.4	0.3
Hypertensive Nephrosclerosis	15.0	22.5	22.6	15.1	23.4	25.2
Other	9.5	9.3	11.6	9.9	9.8	10.5
Missing*	1.1	0.6	0.5	0.8	0.8	0.6

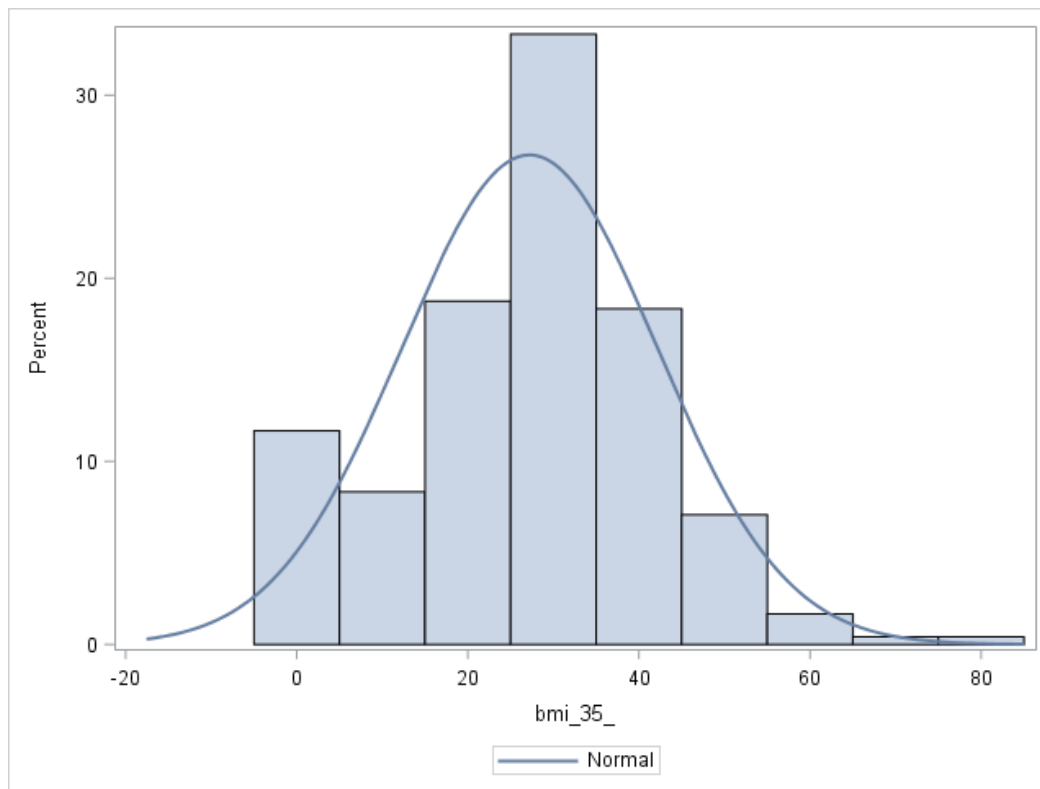
Kidney Transplant Center Wait List Size by % of Candidates over age 65



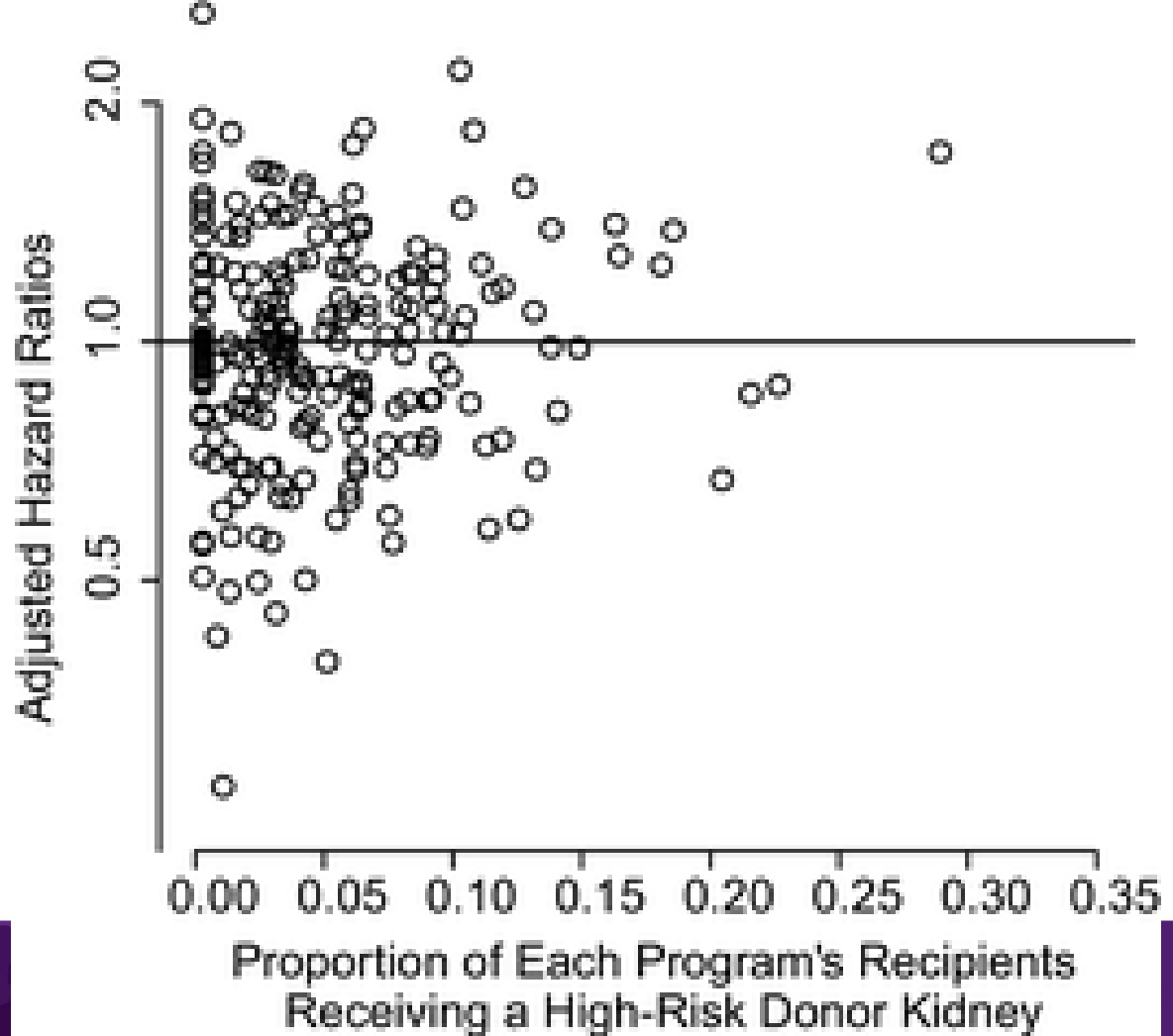
Kidney Transplant Center Wait List Size by % of African American and Hispanic Candidates



Kidney Transplant Center % of Candidates with BMI > 30 kg/m²



Variation in Use of High KDPI donor Kidneys



American Journal of Transplantation, Volume: 16, Issue: 9, Pages: 2646-2653, First published: 08 March 2016, DOI: (10.1111/ajt.13783)

Summary and Conclusions

- There is wide variation in certain processes of care and outcomes between transplant centers
- This variability is important to evaluate and potentially to identify best practices
- There may be models of transplantation which optimize patient outcomes by directing them to centers that have success with certain patient populations
- Effective dissemination of variability in practice to patients that may affect important decision-making is important and includes (a) what information to disseminate prominently and (b) how to disseminate the information in a palatable format