SCIENTIFIC REGISTRY OF TRANSPLANT RECIPIENTS

# SRTR Hot Topics


## Jon Snyder, PhD

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Minneapolis, MN

# Disclosures

I have no financial relationships to disclose within the past 12 months relevant to my presentation. The ACCME defines ‘relevant’ financial relationships as financial relationships in any amount occurring within the past 12 months that create a conflict of interest.

My presentation does/does not include discussion of off-label or investigational use, and I do/do not intend to reference unlabeled/unapproved uses of drugs or products in my presentation.

# Hot Topics

- SRTR Websites
- SRTR Program-specific Reports
- New Metrics
- Decision Aids
- Continuous Distribution

SCIENTIFIC REGISTRY OF TRANSPLANT RECIPIENTS

SECURE SITE

Welcome to the new SRTR Secure Website launched on February 20, 2019. If this is your first time logging in to the new site, and you had an active account on the old site, you MUST reactivate your account.

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**Government Regulations**

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| | DISTANCE | DECEASED DONOR TRANSPLANTS IN A YEAR | LIVING DONOR TRANSPLANTS IN A YEAR | SURVIVAL ON THE WAITLIST | GETTING A DECEASED DONOR TRANSPLANT FASTER | 1-YEAR LIVER SURVIVAL |
|---|---|---|---|---|---|---|

For liver transplant candidates, this measure has the **largest impact on survival after listing** among these three measures. 1 year liver survival includes only candidates who received a transplant.

## Mayo Clinic Hospital

**Phoenix, AZ**

View Summary Data
View Complete Report (PDF)

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|---|---|---|---|---|---|
| N/A | 128 ADULTS | 1 ADULTS |  |  |  |

## Northwestern Memorial Hospital

**Chicago, IL**

View Summary Data
View Complete Report (PDF)

| DISTANCE | DECEASED DONOR TRANSPLANTS IN A YEAR | LIVING DONOR TRANSPLANTS IN A YEAR | SURVIVAL ON THE WAITLIST | GETTING A DECEASED DONOR TRANSPLANT FASTER | 1-YEAR LIVER SURVIVAL |
|---|---|---|---|---|---|
| N/A | 98 ADULTS | 8 ADULTS |  |  |  |

| | DISTANCE | DECEASED DONOR TRANSPLANTS IN A YEAR | LIVING DONOR TRANSPLANTS IN A YEAR | GETTING A DECEASED DONOR TRANSPLANT FASTER | 1-YEAR KIDNEY SURVIVAL |
|---|---|---|---|---|---|

For kidney transplant candidates, this measure has the **largest impact on survival after listing.** 1 year kidney survival includes only candidates who received a transplant among these three measures.

---

## Cleveland Clinic Florida Weston

**Weston, FL**

View Summary Data
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| DISTANCE | DECEASED DONOR TRANSPLANTS IN A YEAR | LIVING DONOR TRANSPLANTS IN A YEAR | GETTING A DECEASED DONOR TRANSPLANT FASTER | 1-YEAR KIDNEY SURVIVAL |
|---|---|---|---|---|
| N/A | 176 ADULTS | 38 ADULTS | | |

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## University of Washington Medical Center

**Seattle, WA**

View Summary Data
View Complete Report (PDF)

| DISTANCE | DECEASED DONOR TRANSPLANTS IN A YEAR | LIVING DONOR TRANSPLANTS IN A YEAR | GETTING A DECEASED DONOR TRANSPLANT FASTER | 1-YEAR KIDNEY SURVIVAL |
|---|---|---|---|---|
| N/A | 167 ADULTS | 31 ADULTS | | |

# Program-Specific Reports

SCIENTIFIC REGISTRY OF TRANSPLANT RECIPIENTS

**Cleveland Clinic Florida Weston**
Center Code: FLCC
Transplant Program (Organ): Kidney
Release Date: July 8, 2019
Based on Data Available: April 30, 2019

SRTR Program-Specific Report
Feedback?: SRTR@SRTR.org
1.877.970.SRTR (7787)
http://www.srtr.org

## A. Program Summary

**Figure A1. Waiting list and transplant activity**

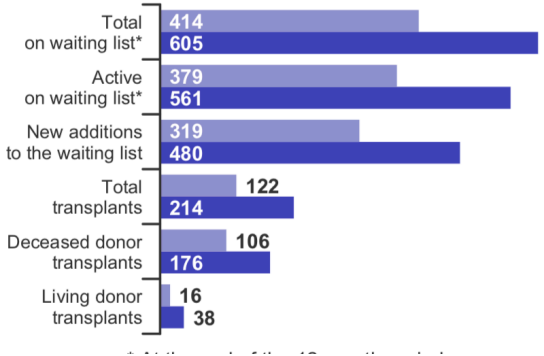



**Table A1. Census of transplant recipients**

| Recipients | 01/01/2017-12/31/2017 | 01/01/2018-12/31/2018 |
|---|---|---|
| Transplanted at this center | 122 | 214 |
| Followed by this center* | 256 | 363 |
| ...transplanted at this program | 227 | 332 |
| ...transplanted elsewhere | 29 | 31 |

* Recipients followed are transplant recipients for whom the center has submitted a post-transplant follow-up form for a transplant that took place before the 12-month interval for each column.

# PSRs: In the Pipeline

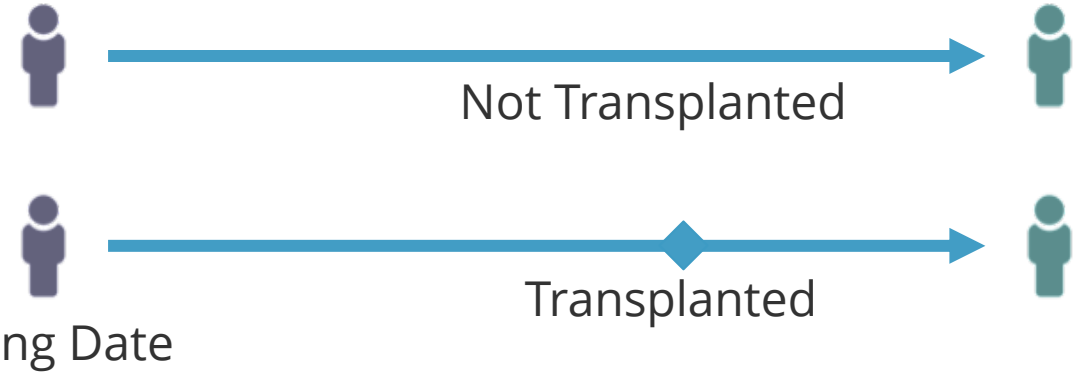
SURVIVAL FROM LISTING METRIC

ADJUSTMENT FOR KIDNEY AND LIVER BIOPSY RESULTS

NEW INTESTINE TRANSPLANT OUTCOME EVALUATIONS

# Survival From Listing Metric


What is the overall survival experience of patients at program X from the time of listing?



# Why survival from listing?

Most similar to an intent-to-treat analysis for the candidate experience after listing

Integrates the pretransplant and posttransplant patient experience

OPTN Final Rule [§121.11(b)(iv)] and the SRTR contract state that the PSRs shall include survival from listing

**Table 1. Rates of patient mortality after listing: 07/01/2016 – 06/30/2018**

| Waiting List Registrations | This Center | OPO/DSA | Region | U.S. |
|---|---|---|---|---|
| **All Patients** | | | | |
| Count at risk during the evaluation period | 743 | 7,426 | 23,965 | 288,901 |
| Person Years* | 1,108.6 | 11,217.1 | 36,254.1 | 432,923.4 |
| Number of Deaths | 31 | 438 | 1,540 | 19,041 |
| **Adult (18+) Patients** | | | | |
| Count at risk during the evaluation period | 743 | 7,149 | 23,229 | 280,328 |
| Person Years* | 1,108.6 | 10,748.1 | 35,100.7 | 419,601.2 |
| Number of Deaths | 31 | 437 | 1,537 | 18,975 |
| **Pediatric (<18) Patients** | | | | |
| Count at risk during the evaluation period | 0 | 277 | 736 | 8,573 |
| Person Years* | 0.0 | 469.0 | 1,153.4 | 13,322.1 |
| Number of Deaths | 0 | 1 | 3 | 66 |

* Person years are calculated as days (converted to fractional years). The number of days from July 1 or from the date of first wait listing until death, reaching 7 years after listing or June 30.

** Patient mortality after listing captures the relative survival experience of patients after listing. It depends on dimensions inside and outside of the control of the transplant program including, for example, local availability of organs.

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2-year Evaluation Window

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31*100/1108.6 = 2.8

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31*100/1108.6 = 2.8

2.8 deaths per 100 person-years following listing

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**Figure 1. Observed and expected rates of patient mortality after listing: 07/01/2016 – 06/30/2018**

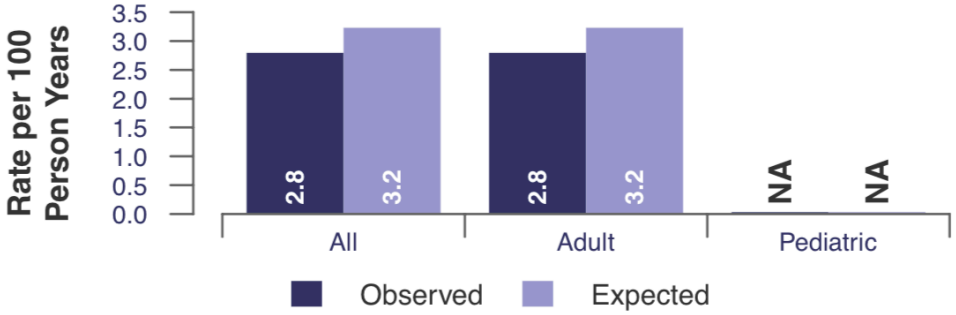



**Figure B3. Observed adult (18+) and pediatric (<18) rates of patient mortality after listing: 07/01/2016 – 06/30/2018**

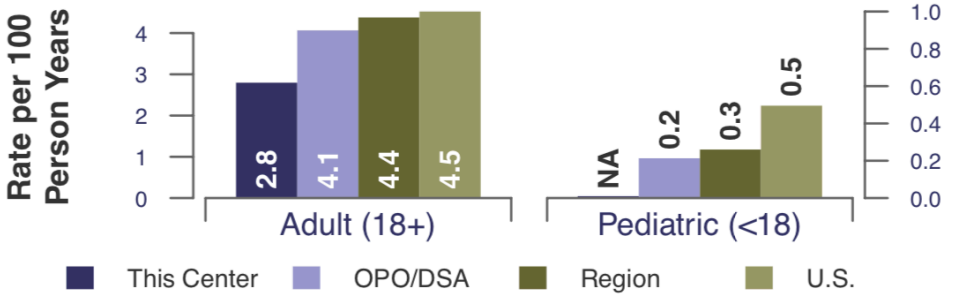
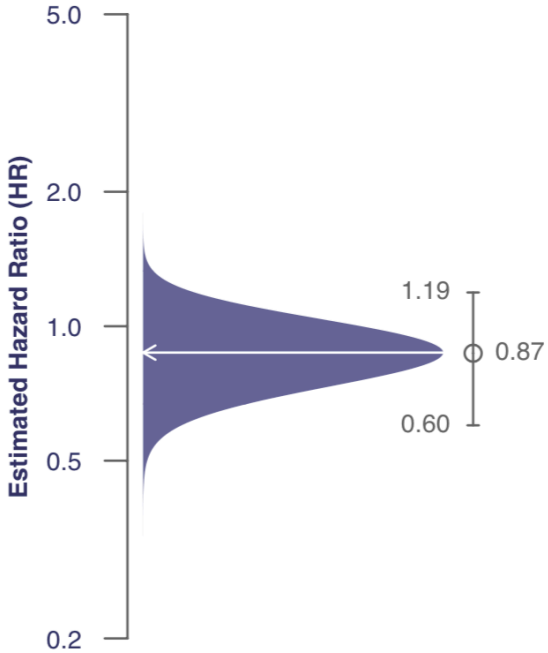



**Figure 2. Patient mortality after listing HR estimate****



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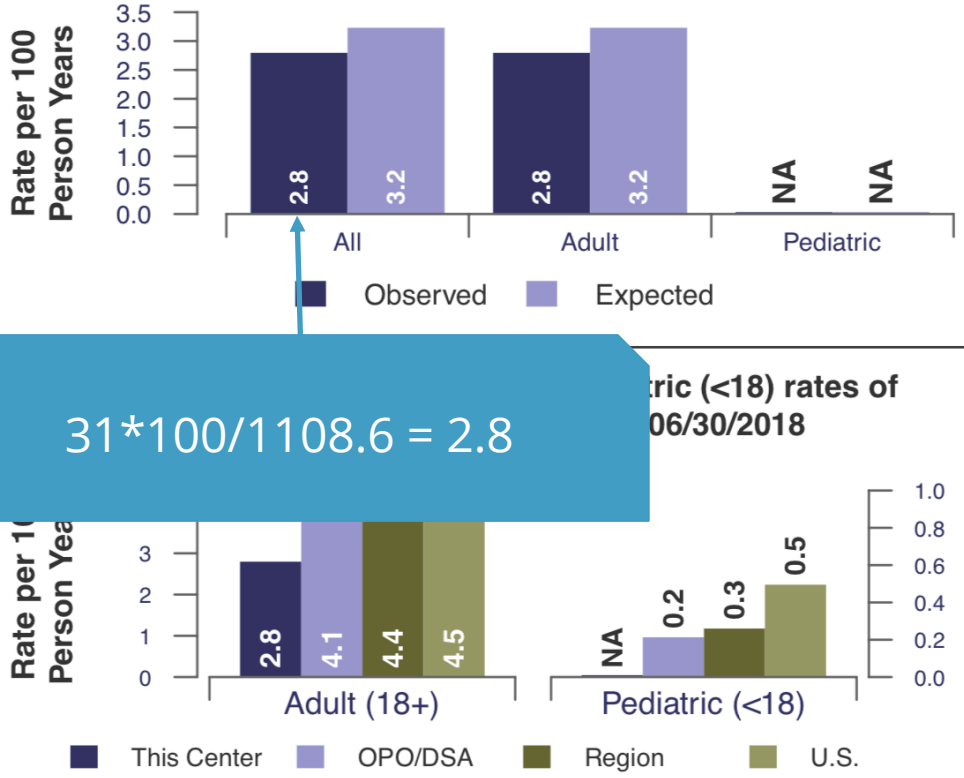


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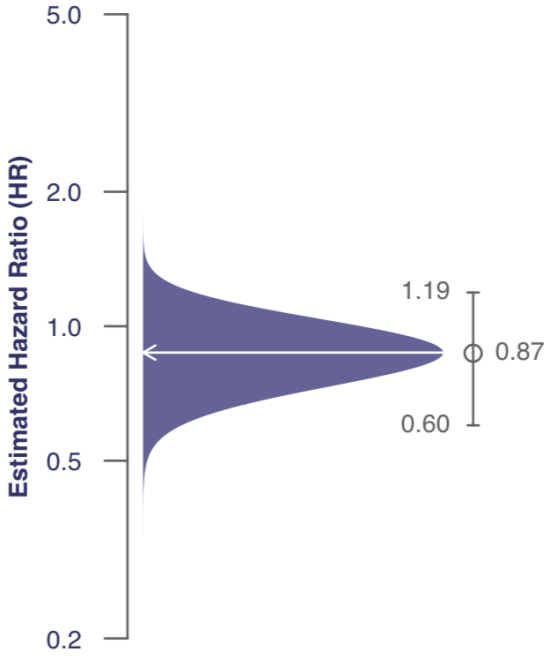

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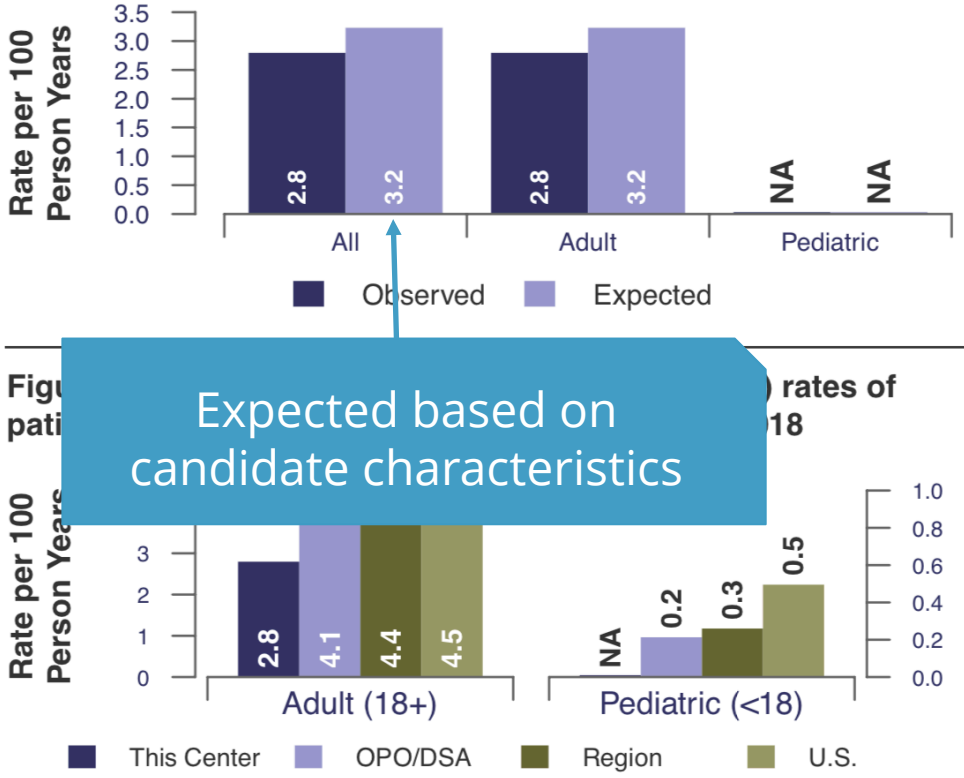
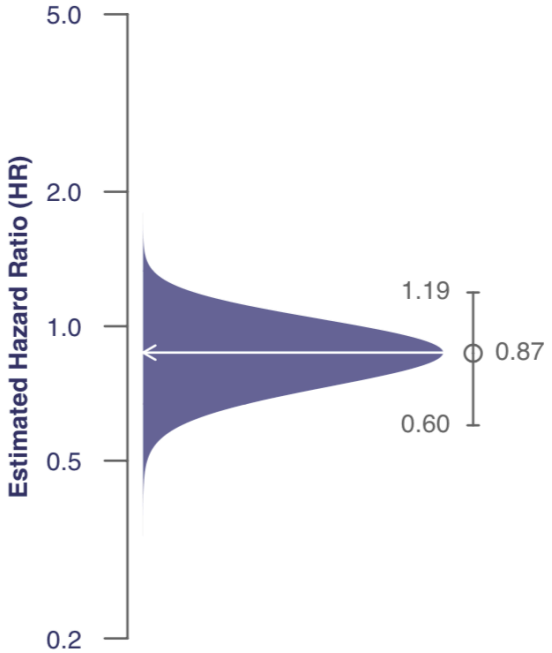



Expected based on candidate characteristics

**Figure 2. Patient mortality after listing HR estimate****



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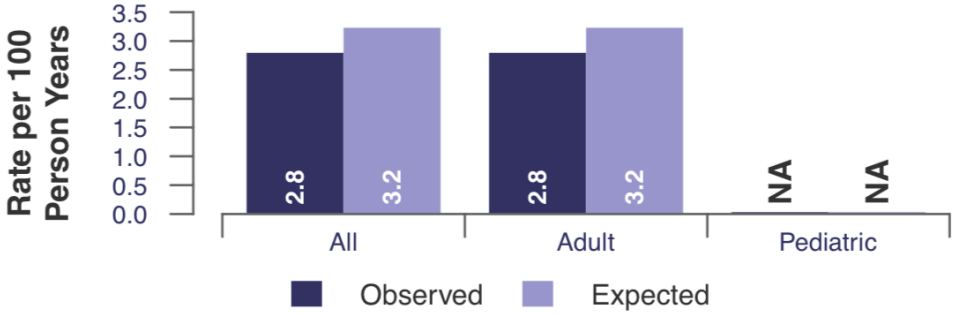


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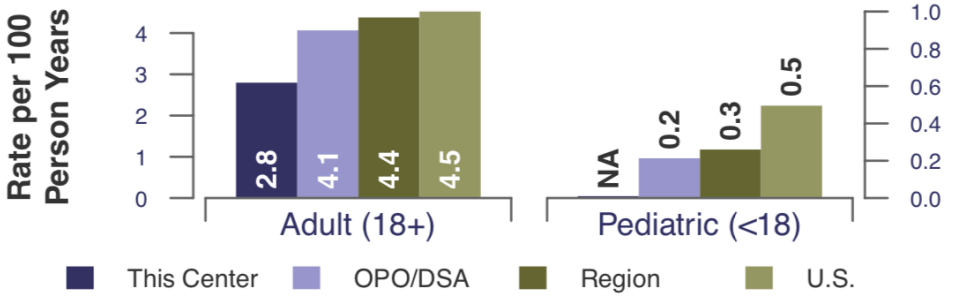


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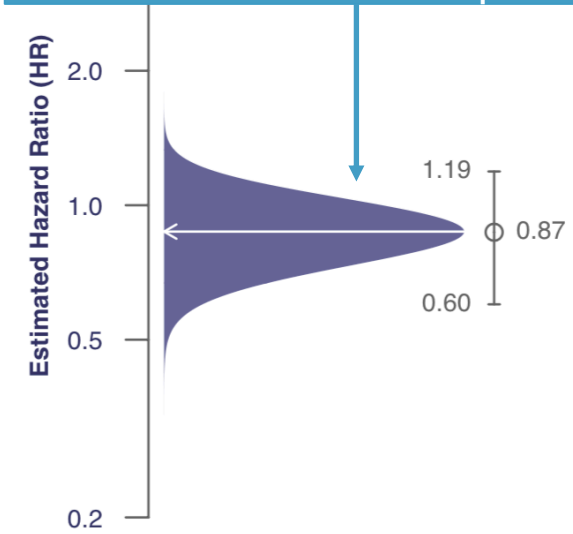
Estimated Hazard Ratio: 0.87

13% better than expected.



# Previewing the Survival From Listing Evaluations

Will be previewed during the January 2020 PSR cycle on the SRTR Secure Site.

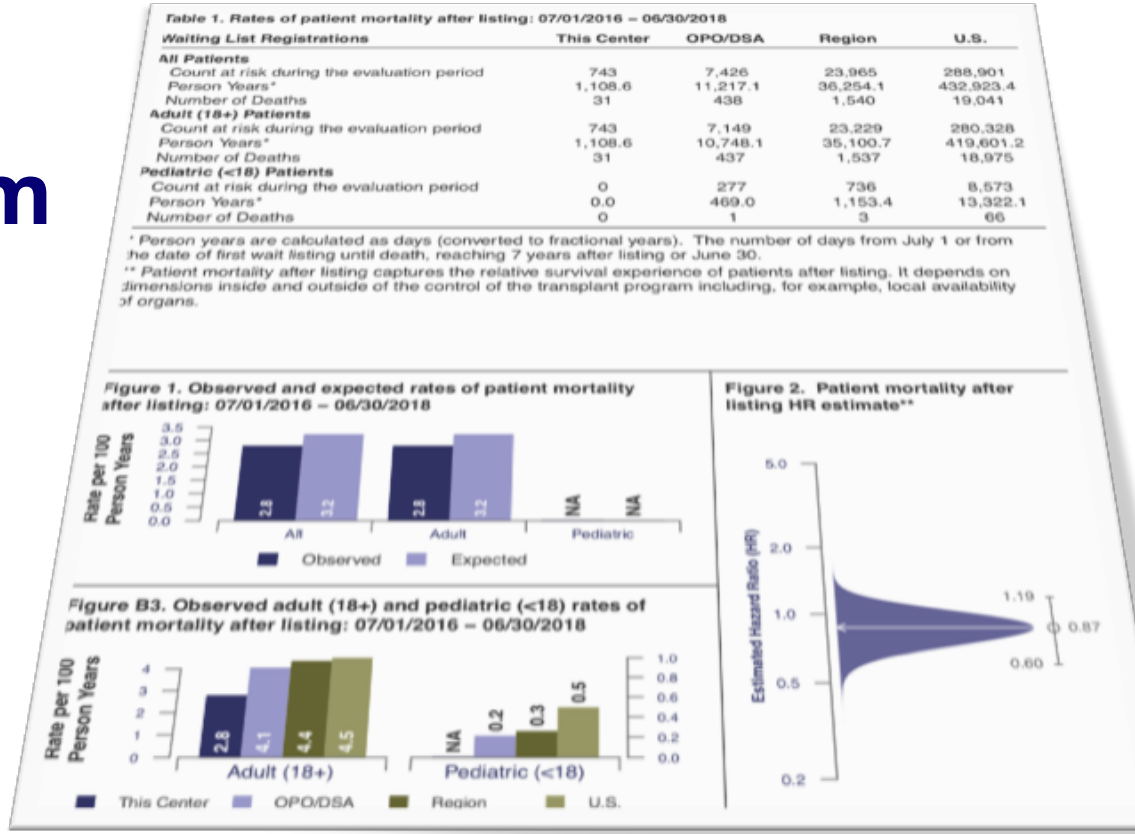


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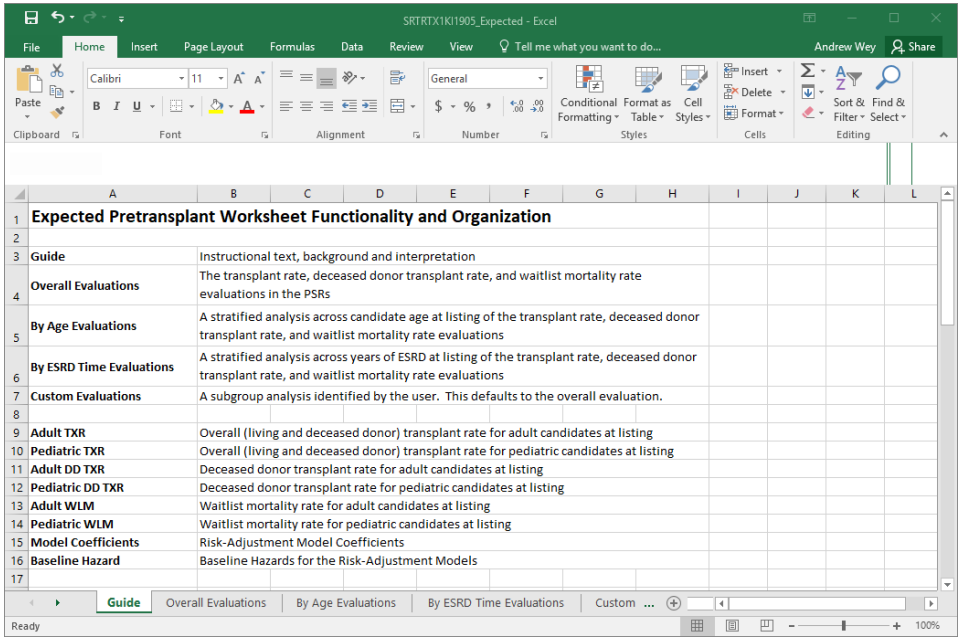
*Figure B3. Observed adult (18+) and pediatric (<18) rates of patient mortality after listing: 07/01/2016 – 06/30/2018*



*Figure 2. Patient mortality after listing HR estimate***

# Survival from Listing: Expected Workbooks




| | A | B |
|---|---|---|
| 1 | **Expected Pretransplant Worksheet Functionality and Organization** | |
| 2 | | |
| 3 | **Guide** | Instructional text, background and interpretation |
| 4 | **Overall Evaluations** | The transplant rate, deceased donor transplant rate, and waitlist mortality rate evaluations in the PSRs |
| 5 | **By Age Evaluations** | A stratified analysis across candidate age at listing of the transplant rate, deceased donor transplant rate, and waitlist mortality rate evaluations |
| 6 | **By ESRD Time Evaluations** | A stratified analysis across years of ESRD at listing of the transplant rate, deceased donor transplant rate, and waitlist mortality rate evaluations |
| 7 | **Custom Evaluations** | A subgroup analysis identified by the user. This defaults to the overall evaluation. |
| 8 | | |
| 9 | **Adult TXR** | Overall (living and deceased donor) transplant rate for adult candidates at listing |
| 10 | **Pediatric TXR** | Overall (living and deceased donor) transplant rate for pediatric candidates at listing |
| 11 | **Adult DD TXR** | Deceased donor transplant rate for adult candidates at listing |
| 12 | **Pediatric DD TXR** | Deceased donor transplant rate for pediatric candidates at listing |
| 13 | **Adult WLM** | Waitlist mortality rate for adult candidates at listing |
| 14 | **Pediatric WLM** | Waitlist mortality rate for pediatric candidates at listing |
| 15 | **Model Coefficients** | Risk-Adjustment Model Coefficients |
| 16 | **Baseline Hazard** | Baseline Hazards for the Risk-Adjustment Models |
| 17 | | |



Due to the complexity of the survival from listing models, expected workbooks will help programs understand both the contribution of individual patients to the expected and the calculation of the expected for a given patient.

SCIENTIFIC REGISTRY OF TRANSPLANT RECIPIENTS

FIND & COMPARE TRANSPLANT PROGRAMS

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- Risk Adjustment Models: Waiting List
- Risk Adjustment Models: Offer Acceptance
- Risk Adjustment Models: OPOs
- PSR Reporting Timeline
- OSR Reporting Timeline
- Kidney Transplant Decision Tool
- Liver Waiting List Calculator

Home | Kidney Transplant Decision Tool

# Kidney Transplant D

Introduction | Dialysis vs. Transplant | Living vs. Deceased Donor | Increased Infectious Risk Kidneys | Questions for Your Doctor | Calculate Your Risks

## Dialysis vs. Transplant

### What are your treatment options for kidney failure?

# Kidney Transplant Decision Aid



## Dialysis vs. Transplant

### What are your treatment options for kidney failure?

### Dialysis

**PROS**

- If you are not a candidate for transplant, it will keep you alive

### Transplant

**PROS**

- Better survival rate compared to dialysis if you are a candidate

## What are your likely outcomes on the kidney transplant waiting list?

**Choose the Transplant Program:**

Cleveland Clinic Florida Weston (FL)

☑ Adjust for Program-Specific Transplant Rate

**Choose your age:**

55

**Choose your gender:**

- ◉ Male
- ○ Female

**Choose your race:**

- ○ Asian
- ○ Black
- ○ Native American
- ○ Pacific Islander
- ◉ White
- ○ Multiracial

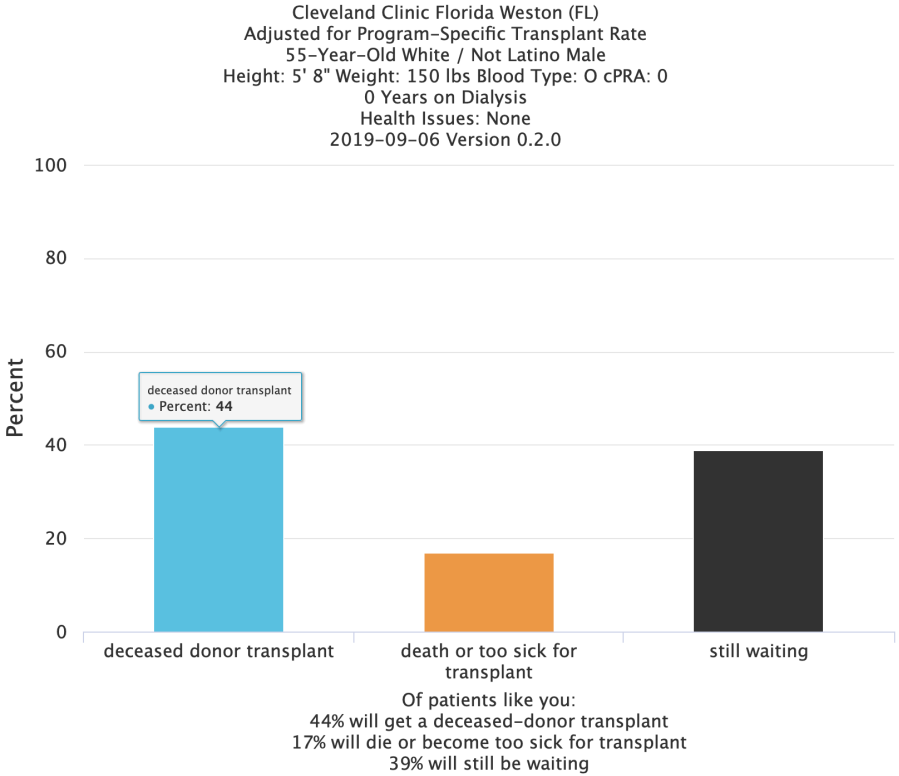
**Choose your ethnicity:**

- ○ Latino
- ◉ Not Latino

**Enter your height:**

**Feet:** 5 **Inches:** 8

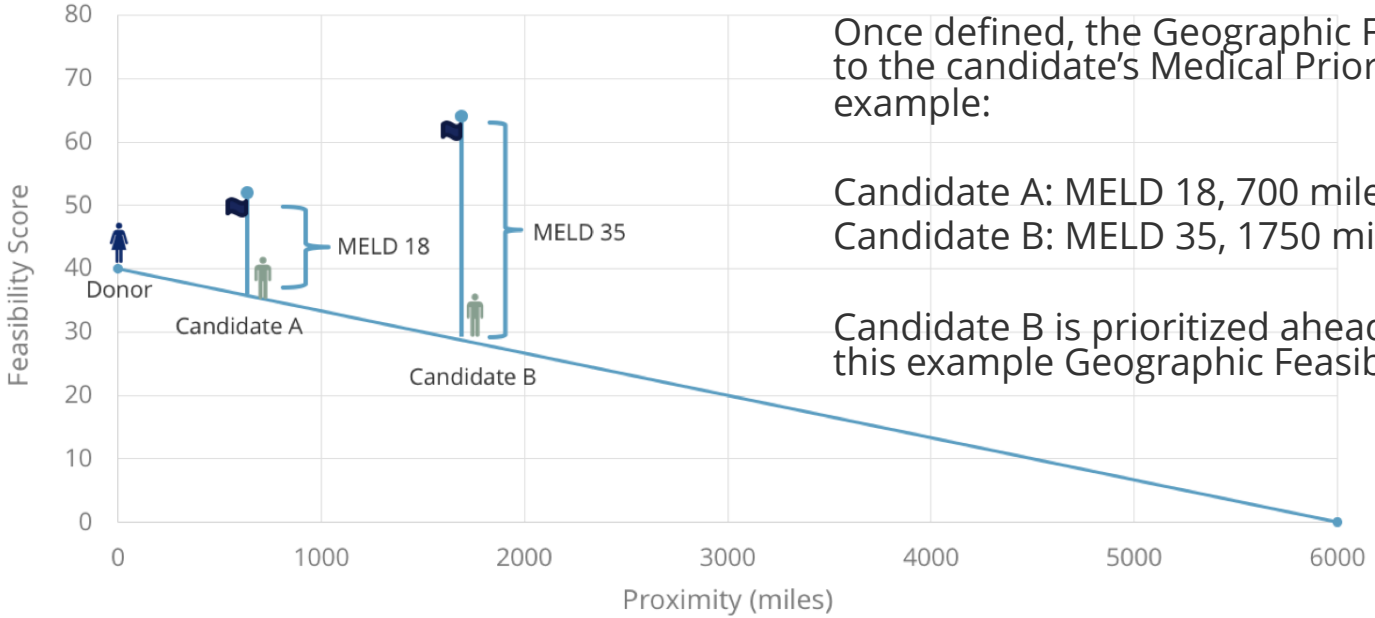
### Outcomes in 5 Years



# A continuous distribution framework:


Snyder et al. Organ distribution without geographic boundaries: A possible framework for organ allocation. Am J Transplant 2018;18:2635-2640.

# How does the geographic feasibility score work?




**The Geographic Feasibility Score:**

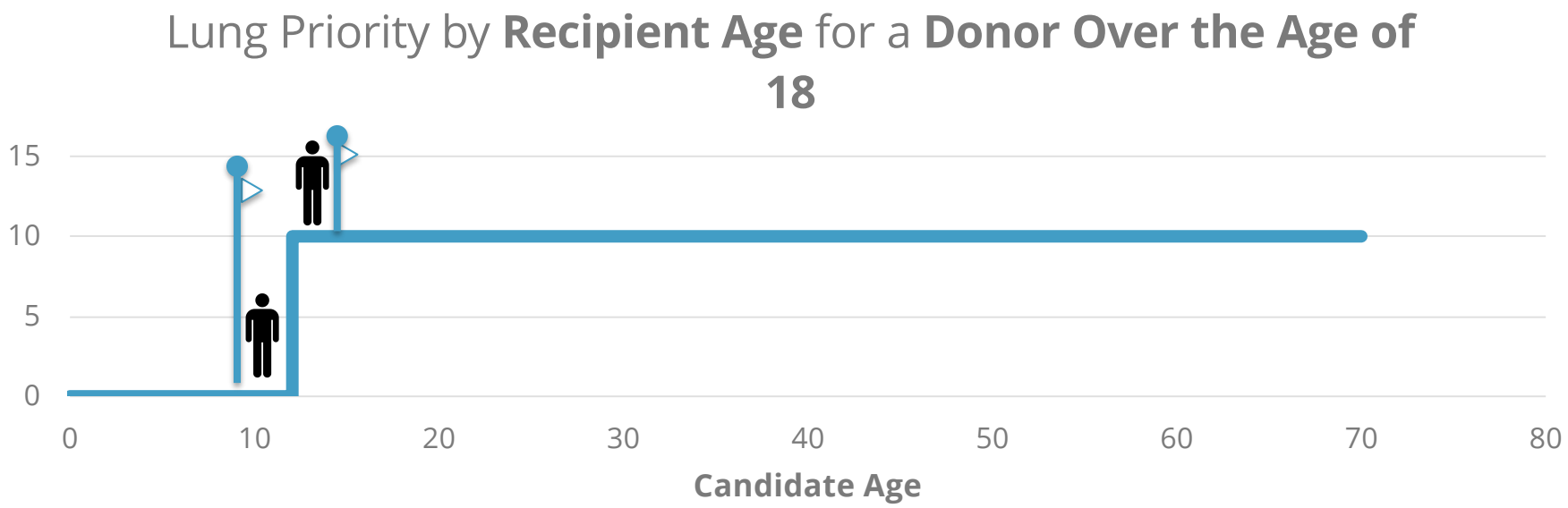
Once defined, the Geographic Feasibility Score is added to the candidate's Medical Priority Score. Consider a liver example:

Candidate A: MELD 18, 700 miles
Candidate B: MELD 35, 1750 miles

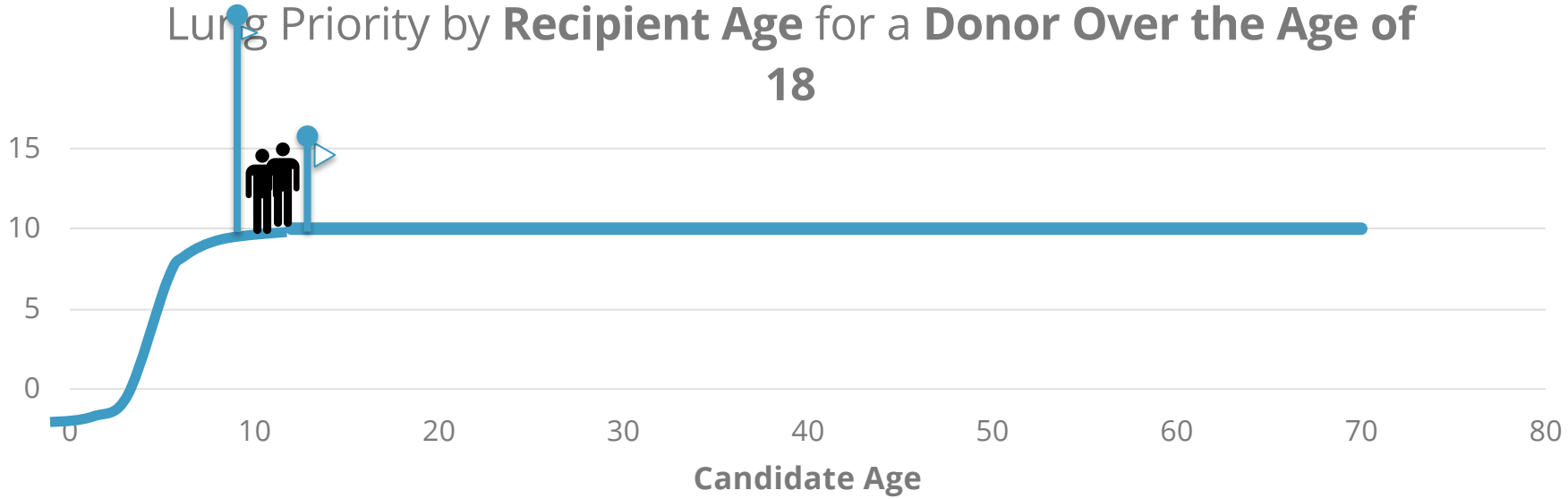
Candidate B is prioritized ahead of Candidate A using this example Geographic Feasibility Score.

Snyder et al. Organ distribution without geographic boundaries: A possible framework for organ allocation. Am J Transplant 2018;18:2635-2640.

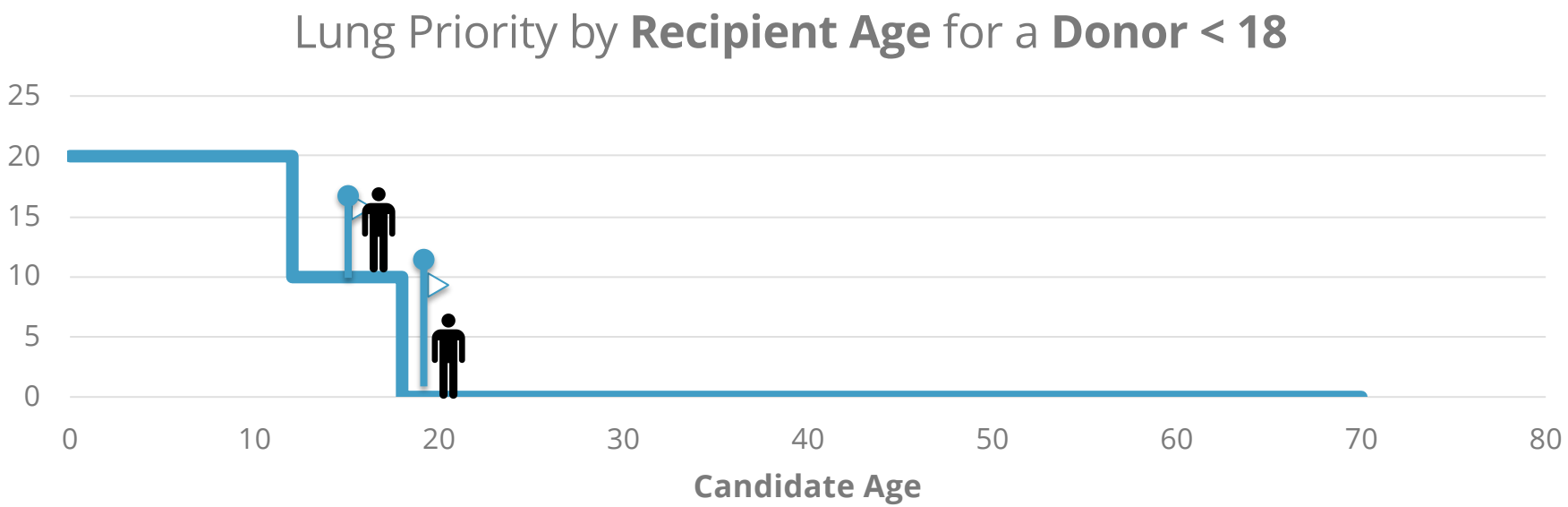
# What about factors other than geography?



# Creating Continuous Age Priority



# Same idea for pediatric lung donors



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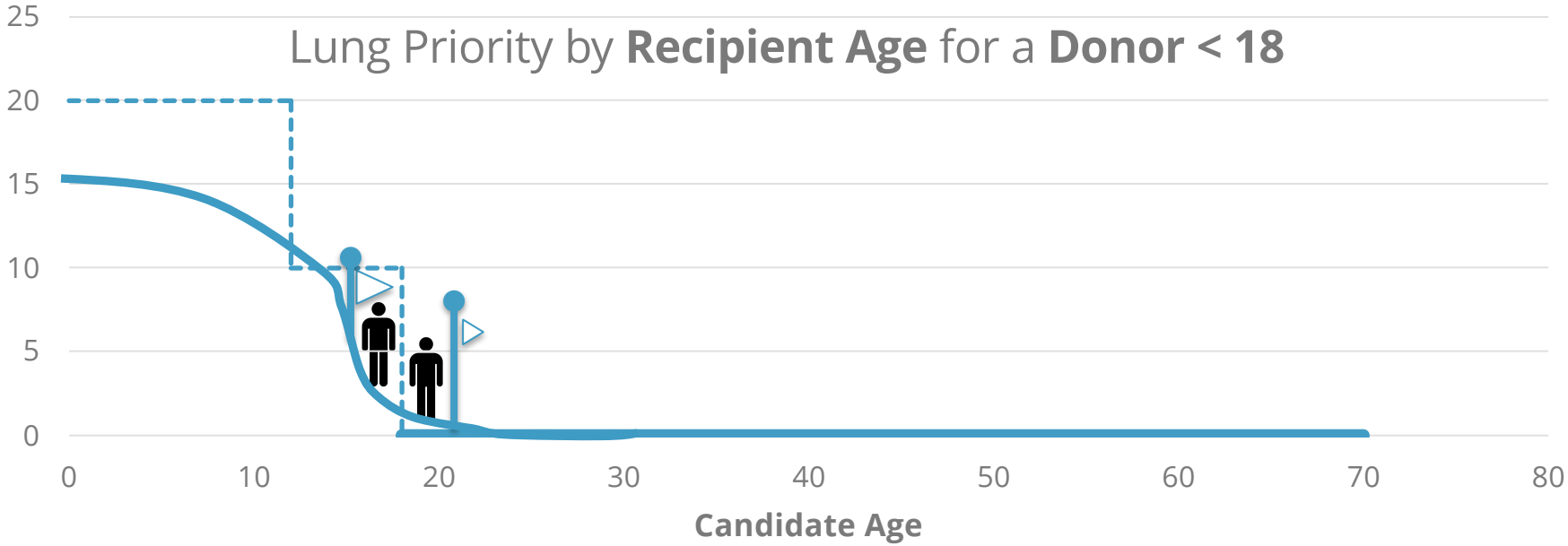

Received: 2 July 2018 | Revised: 14 August 2018 | Accepted: 5 September 2018

DOI: 10.1111/ajt.15115

PERSONAL VIEWPOINT

AJT

# Organ distribution without geographic boundaries: A possible framework for organ allocation

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The Final Rule mandates that organ allocation not be based on the transplant candidate's place of residence or listing, except as required by sound medical judgment and best use of donated organs, to avoid wasting organs and futile transplants, and to promote access and efficiency. Current Organ Procurement and Transplantation Network (OPTN) policies use donation service areas and OPTN regions to distribute and allocate organs for transplant. These policies have recently been called into question as not meeting the requirements of the Final Rule. Therefore, we propose using borderless allocation scores that combine medical priority scores with geo-

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