OPTN Kidney & Pancreas Transplantation Committee Continuous Distribution Workgroup
Meeting Summary
April 22, 2022
Conference Call

Rachel Forbes, MD, Chair
Oyedolamu Olaitan, MD, Vice Chair
Martha Pavlakis, MD, Chair
Jim Kim, MD, Vice Chair

Introduction

The Kidney & Pancreas Transplantation Committee Continuous Distribution Workgroup (the Workgroup) met via Citrix GoToMeeting teleconference on 4/22/2022 to discuss the following agenda items:

1. Review and Finalize Outstanding Rating Scale Decisions
2. Discussion: Attribute Weights for Modeling Request
3. Next Steps

The following is a summary of the Workgroup's discussions.

1. Review and Finalize Outstanding Rating Scale Decisions

Blood Type
The Workgroup reviewed current policy for kidney and pancreas allocation and how the Kidney and Pancreas Committees discussed the blood type rating scale at their April meetings. The Kidney Committee supported maintaining blood type screening for O and B blood types and exploring other options in modeling where certain blood types are given different weights. The Pancreas Committee also recommended kidney-pancreas (KP) should mirror what is recommended for kidney-alone. For pancreas-alone, the Pancreas Committee recommended to not screen but to prioritize identical over compatible with exceptions based on composite score.

Summary of Discussion
The Workgroup discussed the rating scales for Blood Type for kidney, pancreas, and KP. Members indicated there should be consideration for KP and pancreas-alone allocation and the importance of the pancreas being kept closer to the donor hospital for utilization. A Workgroup Chair asked if screening would keep organs closer to the donor hospital. Members further commented there should not be a screening option for pancreas and KP to prevent the pancreas from traveling too far. A member gave an example of organs from a blood type O pancreas or KP donor being recovered and if they cannot be utilized by the originally intended recipient, there would still be a chance of placing those organs closer to the donor hospital for non-O candidates. Members emphasized another difference between kidney and pancreas or KP is the size of the waitlist and with fewer candidates waiting for pancreata, screening is not as much of a concern. Same is not true for kidney because the waiting time is different. Pancreata is fewer numbers.

Staff asked the Workgroup how they thought allocating KP for blood type different than what is done currently would have an impact on access to transplant for kidney-alone candidates. Members

responded the number of KP transplants that are performed per year are a small number of the total kidney transplants so impact could be minimal. However, members indicated they would evaluate the potential impact via modeling. Another member commented any multi-organ combination involving kidney will likely decrease kidney-alone utilization. However, KP candidates would have been on the kidney-alone waitlist anyway when compared to other multi-organ candidates.

A member suggested for consideration using an option that doesn't use screening for kidney may increase utilization in cases where the match run list is exhausted. Another member further commented once the list is exhausted the change of the kidney being utilized would be very low. However, if the kidney is able to be used it would promote efficiency. A Workgroup Chair recommended replicating the current practice of screening for the initial iteration of Continuous Distribution as it is already familiar to the transplant community. Another member agreed and commented they cannot envision a new system without blood type screening in place for kidney. A member commented removing screening is something to continue to consider for a future iteration.

The Workgroup supported blood type screening for kidney-alone and prioritization for identical blood type over compatible blood type for KP and pancreas-alone.

Placement Efficiency
The Workgroup reviewed the piece-wise linear rating scale for placement efficiency previously discussed and a summary of the Workgroup and Kidney Committee leadership's recommendations for the scale's inflection points for kidney-alone. Previously the Workgroup recommended an inner plateau of 50 nautical miles (NM) with a driving slope to 85 percent at 250 NM. Kidney Committee leadership then recommended an uncertainty zone slope to 25 percent at 500 NM, after which the slope would gradually decline to zero percent at 5,181 NM. For Pancreas, KP, and islets, the Pancreas Committee recommended inflection points of a 50 NM inner plateau, driving slope to 25 percent at 250 NM, no uncertainty zone, and a flying slope to zero percent at 5,181 NM.

Summary of Discussion
The Workgroup agreed with recommendations for the placement efficiency rating scales for the purpose of KPSAM modeling.

Longevity Matching
The Workgroup reviewed the Kidney Committee's recommendation on the rating scale for estimated post-transplant survival (EPTS) and kidney donor profile index (KDPI) scores. The Committee recommended a continuous longevity matching rating scale where lower KDPI kidneys would be prioritized with lower EPTS patients.

Summary of Discussion
A member commented they agree with expanded longevity matching conceptually, but are concerned for elderly candidates and their potential outcomes as they would likely receive a higher KDPI kidney. Staff commented it could be possible to have different donor modifiers at different KDPI levels, so the weight for placement efficiency doesn't have to stay the same across the KDPI donor spectrum. A Workgroup Chair commented the Kidney Committee's general sentiment was the faster a high EPTS candidate can be transplanted, the better outcomes they'll have. The Committee placed more emphasis on getting those high EPTS candidates transplanted sooner. Staff further commented that in a

continuous distribution framework those hard boundaries of EPTS and KDPI matching wouldn't exist as they do in a classification based framework. A member suggested there should be equity access to lower KDPI kidneys across all age groups. A Workgroup Chair suggested asking the OPTN Ethics Committee to evaluate the issue of utility versus equity when it comes to longevity matching and age.

A Chair informed the Workgroup the Kidney Committee had previously been working on a project to expand pediatric access to sequence C kidneys, which was ultimately rolled into the larger continuous distribution of kidneys project. A member commented KDPI is not an accurate measurement of kidney quality from younger donors. Staff recommended addressing this issue is through the weight of the pediatric attribute and donor-dependent weights.

The Workgroup supported a continuous longevity matching rating scale for kidney-alone for the purposes of KPSAM modeling.

2. Attribute Weights for Modeling Request

The Workgroup began discussions on draft attribute weights for KPSAM modeling. Staff asked the Workgroup to think about the attributes in order of importance instead of frequency (for example, the importance of prior living donor priority versus how often prior living donors are added to the waiting list). The Workgroup reviewed the overall analytical hierarchy process (AHP) exercise results for kidney to begin a discussion on attribute weights for kidney modeling. The results showed a general consensus across demographic groups in the ranking of attributes. Those general community results were compared against Kidney Committee specific results to develop a starting point for attribute weights.

Based on combined AHP results, the recommended draft attribute weights were presented as follows:

- Most weight (15 percent each, 45 percent total)
  - medical urgency, pediatrics, and prior living donors
- Middle weight (10 percent each, 30 percent total)
  - blood type, CPRA, and waiting time
- Least weight (5 percent each, 20 percent total)
  - DR matching (HLA), longevity matching (KDPI/EPTS), kidney-after-liver safety net, and proximity efficiency

Summary of Discussion
A member questioned if candidates with highly weighted attributes would be offered kidneys that are blood type incompatible. Staff clarified per earlier discussion, the blood type screening would still be in place in the new framework.

A member commented they agree with giving KAL safety net a lower weight as those candidates tend to receive a transplant quickly after given safety net priority. The member further commented with the addition of other types of safety net priority, kidney-alone candidates could be further disadvantaged if the weight on safety net priority is too high. A Chair commented prioritizing safety net priority too low may results in increased simultaneous liver-kidney transplants.

A member commented they are particularly interested in seeing the modeling results for DR and longevity matching. The member further commented the Workgroup will need to balance increased patient access and long-term outcomes. Staff commented the Workgroup will have opportunities to refine the weights with multiple rounds of modeling and throughout the development of the project.

The Workgroup recommended reducing the blood type attribute to five percent because blood type screening will remain in place. Additionally, the Workgroup recommended increasing the proximity efficiency weight to 10 percent to align with the Kidney Committee's AHP results.

The Workgroup discussed other weight scenarios for KPSAM modeling. A member commented 100 percent CPRA should maintain high priority above pediatric candidates and recommended modeling a scenario with increased CPRA weight. A Chair asked if there's a way to distinguish between high CPRA levels. Staff commented the rating scale with a steep curve would reflect that non-linearity. A Chair recommended increasing CPRA to 15 percent and reserving the most of those points for the highest CPRA candidates. Some members supported modeling another option with different CPRA rating scales.

3. **Next Steps**

The Workgroup will continue discussion on pancreas and KP weights for modeling during the next meeting.

The meeting was adjourned.

Upcoming Meetings

- April 29, 2022 (Teleconference)

Attendance

- **Workgroup Members**
  - Martha Pavlakis
  - Rachel Forbes
  - Jim Kim
  - Oyedolamu Olaitan
  - Abigail Martin
  - Bea Concepcion
  - Caitlin Shearer
  - Cathi Murphy
  - Parul Patel
  - Rachel Engen
  - Todd Pesavento
- **HRSA Representatives**
  - Jim Bowman
  - Raelene Skerda
- **SRTR Representatives**
  - Bryn Thompson
  - Grace Lyden
  - Jonathan Miller
  - Nick Wood
  - Raja Kandaswamy
- **UNOS Staff**
  - Joann White
  - Rebecca Brookman
  - Kayla Temple
  - James Alcorn
  - Alison Wilhelm
  - Amanda Robinson
  - Benjamin Wolford
  - Darren Stewart
  - Joel Newman
  - Kaitlin Swanner
  - Kim Uccellini
  - Laura Schmidt
  - Lauren Motley
  - Lauren Mauk
  - Sarah Booker