OPTN Kidney Transplantation Committee
Meeting Summary
November 14, 2022
Conference Call

Martha Pavlakis, MD, Chair
Jim Kim, MD, Vice Chair

Introduction

The Kidney Transplantation Committee (the Committee) met via teleconference on 11/14/2022 to discuss the following agenda items:

1. Welcome and Announcements
2. OASIM Report Follow-Up
3. Refresher on Continuous Distribution Project Goals
4. Focused Discussion: Proximity Efficiency

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

1. Welcome and Announcements

Staff and Committee Leadership welcomed the Committee members.

Summary of discussion:

There were no questions or comments.

2. OASIM Report Follow-Up

The Committee held a brief follow-up discussion on the OASIM report presentation from the previous meeting.

Summary of discussion:

The Chair commented there were some interesting results. Specifically the results showed when there is a higher emphasis on longevity matching, the transplant rates reduce for the 18-50 age ranges. Additionally, when pediatric candidates are highly prioritized to the point they are prioritized for national offers, the travel distance appears to increase. The Chair asked the Committee if there should be a staggered approach for certain age ranges.

A patient representative commented in their experience, candidates are willing to accept any kidney in order to get off of dialysis. The Chair commented this matches feedback they've received from other patients. A Committee member commented there are a lot of risk variables impacting KDPI and EPTS calculations that creating an algorithm sophisticated enough is difficult.

Another member commented some of the scenarios in the report seem to decrease the emphasis on qualifying time and that should be considered as selecting a policy that could lengthen a candidate's time on dialysis would likely not be favorable by the community. The member commented it would be beneficial to see how waitlist mortality is impacted if qualifying time priority is changed. The Chair agreed and commented the policy should aim to get candidates on dialysis transplanted faster.

Another member commented on the decrease in the transplant rate for higher CPRA patients in some of the modeled scenarios and stated the results are not granular enough to determine which highly sensitized candidates are receiving the most priority. The member suggested future modeling should be more detailed for the highest CPRA candidates to determine if they are receiving appropriate priority.

3. Refresher on Continuous Distribution Project Goals

The Committee reviewed goals and progress to date for the Continuous Distribution of Kidneys project as well as the approach for developing the second modeling request.

Presentation summary:

Over the course of the project, the Committees have identified attributes to be included in the framework, determined rating scales for each attribute, and modeled different weights. The Committee is now reviewing the modeling results to determine what rating scales and weights need to be adjusted in preparation for the second modeling request.

To achieve this goal, the Committees will discuss the goals of each attribute and what the desired effect should be while considering public comment feedback, previous Committee and Kidney-Pancreas Continuous Distribution (the Workgroup) discussions, modeling results, mathematical optimization, and other data.

Summary of discussion:

There were no questions or comments.

4. Focused Discussion: Proximity Efficiency

The Committee focused discussion on the proximity efficiency attribute.

Presentation summary:

The Committee reviewed previous meeting discussions, relevant modeling results, and community feedback related to proximity efficiency.

For kidney, the Committee previously supported a rating scale that reflected:

- Inner plateau of 50 nautical miles (NM)
- Driving slope to 85 percent at 250 NM
- Uncertainty zone slope to 25 percent at 500 NM, gradually declining to zero percent

The Committee and the Workgroup previously acknowledged donor factors such as KDPI should be considered for proximity efficiency as well.

The results of the analytical hierarchy process (AHP) values exercise placed very low importance on distance relative to other attributes. However, public comment feedback showed efficiency is of significant community interest.

In the organ allocation simulator (OASIM) results, the median travel distance was higher for all scenarios compared to current policy with the exception of the scenario that placed high weight on the proximity efficiency attribute.

The Committee was asked to consider the following questions for the purpose of modeling and mathematical optimization:

- What is the goal for the proximity efficiency attribute?
    - Similar distance distribution to current policy?

    - Minimize distance as much as possible?
    - Minimize distance – but with constraints (equity by geography, candidate biology, etc.)?
- Which of the OASIM scenarios is closer to the desired goal?
- Should the Committee establish a constraint for maximum tolerable distance?
    - Would this constraint differ depending on organ quality, donor type, or candidate type?

Summary of discussion:

A member commented using proximity as a surrogate for matching efficiency is difficult and suggested not prioritizing distance highly or setting a maximum tolerable distance. The Chair agreed and commented a concern for a maximum tolerable distance as it could disproportionately impact different geographic populations. Additionally the Chair commented picking a maximum tolerable distance would be difficult to determine in a justifiable way.

Staff clarified the Committee could select a median maximum distance. For example, the Committee could determine that 75 percent of all kidneys should not travel beyond a certain distance. Massachusetts Institute of Technology (MIT) can model many different scenarios and this discussion is meant to determine what would be the maximum tolerable distance the Committee would consider for the purpose of establishing a constraint in the optimization. By eliminating options that would not be acceptable by the community, the optimization can narrow in on optimal policy solutions.

The Chair suggested a travel distance more than 50 percent greater than the current average distance would likely not be acceptable. A member commented from an OPO perspective, some organs need to travel long distances in order to be placed. Staff commented the current median travel distance is 110 NM, with some organs traveling much farther than that in some situations. The member further commented they are concerned with limiting with a maximum distance.

A member commented a maximum distance could be high if other efficiencies are also addressed. Another member commented they agree with not establishing an upper boundary and supports other tools to help with matching efficiency such as Offer Filters and donor modifiers. Another member commented they would recommend a larger boundary or no boundary and exploring other parameters such as population density, transplant center density, and number of multi-organ transplant centers within a boundary.

The Chair clarified the question is if there should be a maximum median distance constraint for the purpose of mathematical optimization and modeling to help narrow options. The Chair further commented likely no more than 50 percent of kidneys in any allocation scenario should be travelling more than 500 nautical miles. Members agreed.

Staff also commented the Utilization Considerations of Kidney Pancreas Continuous Distribution Workgroup and Offer Filters Workgroups are focusing on some other efficiency considerations as well.

Upcoming Meetings

- November 21, 2022 - Teleconference
- November 28, 2022 - Teleconference

Attendance

- **Committee Members**
  - Martha Pavlakis
  - Chandrasekar Santhanakrishnan
  - Elliot Grodstein
  - Tania Houle
  - Jesse Cox
  - Marian Charlton
  - Patrick Gee
  - Peter Lalli
  - Precious McCowan
- **HRSA Representatives**
  - Jim Bowman
- **SRTR Staff**
  - Bryn Thompson
  - Grace Lyden
  - Jon Miller
- **UNOS Staff**
  - Lindsay Larkin
  - Kayla Temple
  - Keighly Bradbrook
  - Ben Wolford
  - James Alcorn
  - Joann White
  - Lauren Motley
  - Ross Walton
  - Ruthanne Leishman
  - Sara Moriarty
  - Sarah Booker
  - Tomas Dolan