OPTN Lung Transplantation Committee
Meeting Summary
November 23, 2022
Conference Call

Marie Budev, DO, Chair
Matthew Hartwig, MD, Vice Chair

Introduction

The Lung Transplantation Committee (the Committee) met via Citrix GoTo teleconference on 11/23/2022 to discuss the following agenda items:

1. Welcome and agenda
2. Composite Allocation Score vs. Lung Allocation Score
3. Next steps and closing comments

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

1. Welcome and agenda

The Chair welcomed Committee members.

Summary of discussion:

There was no further discussion by the Committee.

2. Composite Allocation Score vs. Lung Allocation Score

UNOS staff presented analysis to respond to members' concerns that some candidates are dropping in relative priority further than expected in the composite allocation score (CAS). The objective was to determine correlation between the lung allocation score (LAS) medical urgency and CAS rank. This was done by examining data from candidates listed as of 11/10/22. UNOS staff ranked candidates' order under LAS and CAS, creating scatter plots showing candidates' LAS rank and CAS rank. UNOS staff noted that all these CAS rankings are based on the CAS subscore, but proximity to the donor hospital will further adjust where a candidate would fall on a specific match run.

Data Summary:

When examining CAS and LAS rank comparison, it is notable that there is a cluster of patients that have priority under LAS and CAS, but their priority shifted down slightly under CAS, possibly due to increased access for height, calculated panel reactive antibody (cPRA), etc. Similarly, there is a cluster of candidates that have low priority under LAS and CAS.

Generally, candidates with a post-transplant survival score in the top 25% shifted considerably upward under CAS. There is a small group of candidates who shifted upward without being in the top 25% of post-transplant survival scores.

Candidates in the top 25% based on medical urgency under LAS who had a rank change of at least 50 places are not present in Diagnosis Group A. Some candidates will receive higher priority under continuous distribution. The candidates who shifted significantly under Diagnosis Group A are almost entirely candidates who are in the top 25% of post-transplant survival scores. A few candidates in the

top 25% of post-transplant survival scores had rankings shift downwards but are relatively close to having equal priority in both systems. There are still candidates in Diagnosis Group A who are not in the top 25% for estimated post-transplant survival, but still receive significant priority. About 10.2% of candidates in Diagnosis Group A fell into the top 25% priority under CAS.

Under Diagnosis Group B, the top 25% most medically urgent candidates under LAS whose rank changed by at least 50 places tended to receive lower priority under CAS with one exception. The candidates who received higher priority under Diagnosis Group B generally had post-transplant survival scores within the top 25%. Similarly, there are Diagnosis Group B candidates who received higher priority under CAS and some Diagnosis Group B candidates who are in the top 25% for estimated post-transplant survival but received lower priority under CAS. Despite the shifts of Diagnosis Group B candidates in rankings, 48.1% are in the top 25% quartile under CAS.

Some medically urgent Diagnosis Group C candidates under LAS had rank changes by at least 50 places under CAS. There are three candidates in total that fall into this category and two experienced lower priority while one experienced higher priority. This group has small sample sizes. The candidates with high estimated post-transplant survival tended to experience higher priority under CAS for Diagnosis Group C, but two candidates received lower priority despite falling into the top 25% for post-transplant survival. In Diagnosis Group C, 40% of candidates are in the top 25% quartile for CAS, and 25.7% of candidates are in the bottom 25% quartile for CAS.

There are several Diagnosis Group D candidates that were in the top 25% medically urgent under LAS that had their rank changed by at least 50 places under CAS. The vast majority experienced a decrease in their priority under CAS. There are several clusters of candidates that did not receive a significant change in priority with their priority remaining high. Most Diagnosis Group D candidates had high post-transplant survival scores, but there are some candidates in the top 25% of post-transplant survival scores that still receive lower priority under CAS. There is an even distribution between quartiles of where candidates fall under CAS priority for Diagnosis Group D candidates. Over half of Diagnosis Group D candidates are in the top 50% (top two quartiles) of priority under CAS.

Shifts in priority based on their specific diagnosis grouping shows a wide range of shifting. Diagnosis Group D tended to shift to have lower priority under CAS and Diagnosis Group A, B, C tended to shift to have higher priority under CAS but there is still significant spread.

CPRA and height also impacts priority, as sensitized candidates and the shortest candidates have an increase in priority under CAS.

The top 25% most medically urgent candidates generally moved to have lower priority under CAS.

Summary of discussion:

The Chair asked if the candidates who lost priority in Diagnosis Group A because of their age. UNOS staff responded that age has not yet been examined as a factor in the analysis. The Chair asked why some candidates are in the bottom 25% of priority under CAS and what the reasons are for that change. She notes it may be age. UNOS staff agreed to investigate this. A member asked for the current percentages for quartiles under the current system. UNOS staff responded that points for LAS are evenly distributed throughout the first few quartiles. \A member commented the Diagnosis Group D analysis highlights the Committee's concern with the change in the impact of the waitlist urgency score. He asked if it is possible to generate the same set of data when examining a linear curve for waitlist urgency and post-transplant survival to make sure the Committee's intention is reflected and the impact is not too skewed. UNOS staff will follow up on that.

A member noted a fourth of the candidates in the top 25% under LAS are moving to the other three bottom quartiles. A member stated examining the demographics of candidates per quartile for those who increased and decreased will give a sense of reason for the change. Age and disease categories will be indicative of this. Members requested to examine what is driving these changes. A member asked if measures that determine post-transplant survival could be examined by candidate.

A member commented that chronic obstructive pulmonary disease (COPD) candidates benefit under CAS, but pulmonary fibrosis (PF) and idiopathic pulmonary fibrosis (IPF) seem to have lower priority. He noted the distance metrics may even out this spread. The Chair responded she wants to see what is driving the candidates moving into the lower 25% percentile. A member voiced concern over disease progression not being reflected in priority. He explained that sudden changes that cause candidates to get sicker may hurt outcomes. Members agreed that this may lead to candidates being transplanted who are too sick.

Members agreed there is a significant impact for candidates with high cPRAs at an individual center level. A member voiced concern over short candidates not receiving a 5% benefit for height. He noted it may only apply to extremely tall and pediatric candidates. UNOS staff responded there are updates being made to the height calculation that will be reflected under CAS scores on 11/23/22. Additionally, there is an updated cPRA calculation pending implementation that will lead to changes in CAS reports.

The Chair stated the goal is for members to explain why candidates shifted in priority. A member noted when looking at a linear versus non-linear curve for waitlist urgency, it may be helpful to examine a shallow curve as well. Members asked for notes on why the Committee originally went with a non-linear curve for waitlist urgency.

Next steps:

UNOS staff will follow up with the committee with their recommendations for further analysis based on member feedback.

3. Next steps and closing comments

UNOS staff explained that lung continuous distribution town halls have been successful. The last town hall is scheduled for 11/29/22. The Committee will also provide a transplant coordinator and patient focused webinar. The Update Data Collection for Lung Mortality Models proposal, the Revise Lung Review Board Guidelines, Guidance, and Policy for Continuous Distribution proposal, and the Update Multi-Organ Allocation for Continuous Distribution of Lungs proposal will go to the Board of Directors meeting on December 5, 2022. The OPTN Executive Committee will meet on December 4, 2022, and the Past Chair will request to move the lung continuous distribution implementation date from January 31, 2022, to March 2, 2022.

In the system members will enter the percent of points when submitting an exception request. Members are used to inputting a percentile so town hall slides were updated to clarify this, and data will be published on the distribution of the CAS score for waitlist survival and post-transplant outcome goals. The percent needed to request to place a candidate at a designated percentile will be shown as well. UNOS staff gave a demo of what this will look like in the system. A training for the lung community on the demo can be found in the OPTN learning management system: SYS186 UNet^{SM} for Lung Continuous Distribution. UNOS staff noted the percentage allows for easy changes to attribute weights and less disruption to the exception request system.

Summary of discussion:

A member stated he is used to thinking in terms of points so a calculator that shows percentile points and percentage is needed to make an adequate request. The Chair asked for a demo of the system to address this.

Upcoming Meeting

- December 15, 5PM EST, teleconference

Attendance

- **Committee Members**
  - Marie Budev
  - Erika Lease
  - Brian Armstrong
  - Dennis Lyu
  - Edward Cantu
  - Errol Bush
  - John Reynolds
  - Marc Schecter
  - Matthew Hartwig
  - Michael Mulligan
  - Nirmal Sharma
  - Pablo Sanchez
  - Stephen Huddleston
- **HRSA Representatives**
  - Jim Bowman
- **SRTR Staff**
  - Katherine Audette
  - Nicholas Wood
- **UNOS Staff**
  - Kaitlin Swanner
  - Taylor Livelli
  - Holly Sobczack
  - Joel Newman
  - Krissy Laurie
  - Tatenda Mupfudze
  - Samantha Weiss
  - Susan Tlusty