OPTN Lung Transplantation Committee
Meeting Summary
July 10, 2025
Conference Call

Matthew Hartwig, MD, Chair
Dennis Lyu, MD, Vice Chair

Introduction

The Lung Transplantation Committee (Committee) met via Webex teleconference on 7/10/2025 to discuss the following agenda items:

1. OASIM Research Questions
2. Candidate Biology: Donor Size Matching
3. Open Forum

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

1. OASIM Research Questions

The meeting began with an overview on the development of the thoracic organ allocation simulation model by Scientific Registry for Transplant Recipients (SRTR). There was an emphasis on the importance of simulation modeling in evaluating policy changes, especially when real-world data is limited. The Committee was encouraged to provide a comprehensive list of research questions and metrics to guide this process.

Summary of discussion

No decisions were made.

Draft metrics and stratification variables were presented, including transplant rate, waiting list mortality, post-transplant survival, waiting time, and travel distance. Subgroups under consideration included age, diagnosis, blood type, and prior living donor status. The draft metrics were informed by existing monitoring reports and committee members were encouraged to suggest any missing elements either during or after the meeting.

Committee members offered feedback on the draft list. A member suggested including offer-to-decision times, bypass processes, and organ non-use, particularly when organs are routed through third-party perfusion groups. The member stressed the importance of understanding inefficiencies in the lung allocation system. The Chair supported these ideas, noting the value of granular data in improving system transparency and efficiency. There was also interest in including a research question related to lungs that are allocated to non-U.S.

A committee member proposed tracking patient status at the time of transplant, such as ICU admission or Extracorporeal Membrane Oxygenation (ECMO) support, to better understand acuity and resource use. It was mentioned that data on supplemental oxygen use is already collected, which could be leveraged for further analysis.

Next steps

The Committee will finalize the list of research questions to inform the development of SRTR's simulation model for lung allocation.

2. Candidate Biology: Donor Size Matching

The Committee reviewed the June 12, 2025, meeting, during which they discussed options for addressing height in Lung Continuous Distribution (CD) and expressed interest in exploring donor-height matching. The Committee was introduced to various rating scale concepts that could be incorporated size matching into allocation, including linear decay, asymmetric slopes, flat-top curves, and bell curves.

Summary of discussion

No decisions were made.

Committee members generally favored the flat-top curve with asymmetric decay, noting that different disease groups may require different matching strategies. The flat-top curve with asymmetrical decay reflects a range of acceptable donor sizes with decreasing priority for matches beyond that range. Committee members emphasized the importance of tailoring size matching to specific diseases, such as Chronic Obstructive Pulmonary Disease (COPD) or Idiopathic Pulmonary Fibrosis (IPF), and considering demographic factors like sex and race.

A committee member with pediatric lung expertise noted challenges in anatomical matching for some pediatric recipients and the need to evaluate donor-recipient height ratios. The members reported a need for airway and vessel modifications due to size mismatches.

Next steps

The Committee will continue to discuss the Candidate Biology project at their next meeting.

3. Open Forum

A community member shared concerns about the current lung allocation system, particularly with how waitlist urgency points are weighted and assigned in the lung composite allocation score (CAS), compared to the weight of proximity and efficiency points. They highlighted issues with the non-disease-specific nature of the waitlist mortality equation and the potential for gaming the system through strategic hospital admissions. They argued that efficiency points are overweighted relative to waitlist survival, potentially disadvantaging candidates in smaller population centers. They urged reevaluating the waitlist survival equation to develop disease-specific models and redistribute points to better reflect mortality risk.

Summary of discussion

No decisions were made.

Committee members acknowledged the importance of the community member's input and discussed the historical development and weighting of CAS elements. A member noted that CAS aimed to reduce proximity weighting compared to the previous allocation system, and that initial outcomes showed decreased waitlist deaths and increased transplant rates, particularly among the sickest candidates. The member recognized, however, the challenges faced by intermediate-acuity patients who deteriorate before receiving offers. Another member highlighted the steep scoring curve for waitlist survival and its influence compared to post-transplant survival, potentially leading to delays for moderately ill patients. Another member commented that while predictive models have limitations, the waitlist mortality model is statistically robust, and further study with additional variables could improve accuracy. There was a

suggestion to analyze CAS performance by geographic location and population density to identify potential inequities.

The community member further cautioned that CAS-related increases in long-distance organ procurement have raised costs and could threaten the financial viability of small programs, potentially leaving entire regions without lung transplant services. Committee leadership concluded that these points warrant future examination, particularly regarding exceptions, geographic disparities, and the balance between survival and efficiency in the scoring system.

Next steps

The Committee may consider exploring the topics presented during future meetings.

Upcoming Meetings

- August 14, 2025, teleconference, 5PM ET

Attendance

- **Committee Members**
  - Matthew Hartwig
  - Dennis Lyu
  - Brian Keller
  - Ed Cantu
  - Thomas Kaleekal
  - Heather Strah
  - Wayne Tsuang
  - Siddhartha Kapnadak
  - Lara Schaheen
  - Josepha Tusa
  - Gary Schwartz
  - Jackie Russe
  - Tina Melicoff
  - Jody Kieler
- **HRSA Representatives**
  - None
- **SRTR Staff**
  - Maria Masotti
  - Tim Weaver
- **UNOS Staff**
  - Kelley Poff
  - Kaitlin Swanner
  - Sara Rose Wells
  - Susan Tlusty
  - Chelsea Hawkins
  - Samantha Weiss
  - Leah Nunez
  - Houlder Hudgins
  - Keighly Bradbrook
- **Guest attendees**
  - Mark Rolfe