OPTN Ad Hoc Multi-Organ Transplantation Committee
Lung Multi-Organ Workgroup
Meeting Summary
May 13, 2025
Conference Call

Marie Budev, DO, MPH, Chair
Lisa Stocks, RN, MSN, FNP, Chair

Introduction

The OPTN Lung Multi-Organ Workgroup (the Workgroup) met via WebEx teleconference on 05/13/2025 to discuss the following agenda items:

1. Welcome and agenda
2. Data request: Heart-Lung Waiting List Mortality and CAS Thresholds
3. Finalize workgroup recommendations

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

1. Welcome and agenda

The Workgroup reviewed the agenda, the potential lung composite allocation score (CAS) thresholds, and the group's workplan for March-May 2025.

Summary of presentation:

The preliminary lung CAS thresholds are:

Blood type O donors:

- High CAS threshold: 35
- Low CAS threshold: 34

Blood type A, B, AB donors:

- High CAS threshold: 31
- Low CAS threshold: 30

At this meeting, the Workgroup will review results of the data request "Heart-Lung Waiting List Mortality and CAS Thresholds" and finalize recommendations on CAS thresholds for inclusion in the upcoming policy proposal. The OPTN Ad Hoc Multi-Organ Transplantation Committee plans to vote in May to send the policy proposal out for public comment in summer 2025.

Summary of discussion:

The Workgroup did not make any decisions.

There was no discussion.

2. Data request: Heart-lung waiting list mortality and CAS thresholds

The Workgroup reviewed the results of the data request on heart-lung waiting list mortality and CAS thresholds.

Summary of presentation:

The purpose of the data request was to evaluate the waiting list mortality rate for heart-lung candidates and help the Workgroup determine whether a third, higher lung CAS threshold should be incorporated into the MOT allocation tables to better prioritize medically urgent heart-lung candidates.

The data request analyzed time-varying waiting list mortality rates by heart status and lung/heart-lung medical urgency points, including all heart, lung, and heart-lung candidates waiting between March 9, 2023 and March 8, 2025. The analysis of CAS subscore at removal for heart-lung candidates includes all heart-lung candidates removed from the waiting list between September 27, 2023 and March 8, 2025. The analysis of CAS thresholds includes all lung match run appearances for the 7 multi-organ donor types submitted between September 28, 2023 and August 31, 2024.

Waiting list mortality rates were analyzed by grouping candidates based on the following lung CAS:

- 3 points = ~210 days of expected survival on the waiting list without transplant (typically ~ 95th percentile for all lung registrations)
- 10 points = ~100 days of expected survival on the waiting list without transplant

Mortality rates were displayed for heart-lung, heart, and lung candidates with 10 or more medical urgency points, 3 to <10 medical urgency points, and <3 medical urgency points. For all groups, the data shows that as medical urgency points increase, the waiting list mortality increases. Heart and lung candidates with 10 or more medical urgency points have by far the highest waitlist mortality. Heart status 2 candidates have a lower waitlist mortality rate than heart-lung candidates with high lung medical urgency scores. The Workgroup may wish to consider a third, high CAS threshold that would allow very medically urgent heart-lung candidates (those with 10 or more medical urgency points in their lung CAS) to receive offers before heart status 2 candidates.

To help identify an appropriate third, high CAS threshold, the data request analyzed the following, stratified by O blood type donors and non-O blood type donors:

- Median number of candidates above each threshold on each match run
- Median number of heart-lung candidates above each threshold on each match run
- Distribution of medical urgency points for all adult heart-lung candidates above each threshold on each match run

Of all heart-lung transplants between September 28, 2023 and August 31, 2024, most transplants were from donation after brain death (DBD) donors age 18-69 with Kidney Donor Profile Index (KDPI) 0-34% and DBD donors age 18-39 with KDPI 35-85%. The Workgroup reviewed CAS thresholds of 40-44 for blood type O DBD donors age 18-69 with KDPI 0-34%. For all thresholds the median number of candidates on each match run above the CAS threshold was 5-8, capturing a median of 1.3% - 2.1% of candidates on each match run. The median number of heart-lung candidates on each match run above the CAS threshold was 1 for CAS 40 and 0 for CAS 41-44.

For each CAS threshold from 40-44, the data request considered the distribution of medical urgency points for all adult heart-lung candidates appearing above the threshold on all match runs. Most heart-lung candidates with CAS of 41 or greater had very high lung medical urgency scores, and nearly all heart-lung candidates with CAS of 42 or greater had very high lung medical urgency scores.

To assess the potential impact of adding a third, high CAS threshold, the data request considered the distribution of allocation scores for heart-lung candidates removed from the waiting list. This inquiry focused on CAS subscore, because efficiency points are not available for candidates removed for reasons other than transplant. Candidates within 600 NM of the donor receive eight or more efficiency points, so

for a CAS threshold of 41, a subscore of 33 was used. For CAS threshold of 42, a subscore of 34 was used. The data shows that adoption of a third, higher CAS threshold would increase access to transplant and reduce waitlist mortality for candidates with very high CAS subscores.

The Workgroup reviewed CAS thresholds of 35-39 for blood type A, B, and AB DBD donors age 18-69 with KDPI 0-34%. The median number of candidates on each match run above the CAS threshold was 1-2, capturing a median of 1.3% - 2.6% of candidates on each match run. The median number of heart-lung candidates on each match run above the CAS threshold was 0.

For each CAS threshold, the data request considered the distribution of medical urgency points for all adult heart-lung candidates appearing above the threshold on all match runs. For CAS threshold of 37, most appearances had 10 or more medical urgency points. For CAS threshold of 38, all appearances had 10 or more medical urgency points. To assess the potential impact of adding a third, high CAS threshold, the data request considered the distribution of allocation scores for heart-lung candidates removed from the waiting list, focusing on CAS subscore eight points lower than the potential CAS threshold. This data showed that the patients most likely to benefit are those with high medical urgency who were removed due to death or being too sick to transplant.

The Workgroup considered whether to recommend adding a third, higher lung CAS threshold to the multi-organ allocation tables or an alternative path, such as a new project to develop guidance for exception requests for heart-lung candidates with a high lung CAS.

3. Finalize lung CAS thresholds

The Workgroup decided to recommend a third, higher CAS threshold of 41 for blood type O donors and 37 for blood type A, B, and AB donors across all donor groups.

The Chair supported a third, higher CAS threshold, and suggested that a CAS threshold of 41 may be appropriate for blood type O donors. A member voiced support, based on the high medical urgency of these patients. The member asked if data were available for post-transplant survival among highly medically urgent patients, questioning whether they may be too sick for transplant. The Chair noted that these candidates are small in number and survival may vary based on the reason for transplant and other factors.

The Workgroup agreed to recommend adding a third, higher CAS threshold of 41 for blood type O donors and 37 for blood type A, B, and AB donors across all donor groups.

The Chair noted that the multi-organ allocation policy will take time to implement and questioned whether the OPTN Lung and Heart Transplantation Committees should develop an exception pathway for heart-lung candidates via the heart regional review boards. A member noted that the data did not show where the heart-lung candidates removed for death or too sick fell on the heart waiting list. The member suggested that there may be good arguments for a heart exception if the candidates have very high medical urgency on the lung list and are at lower heart statuses. Members discussed a potential guidance document for heart exceptions based on very high lung medical urgency.

Next steps:

- The Workgroup will recommend to the MOT Committee a third, higher CAS threshold of 41 for blood type O donors and 37 for blood type A, B, and AB donors across all donor groups.
- OPTN contractor staff will provide follow up data on the heart status of heart-lung candidates removed from the waiting list for death or too sick, for inclusion in the policy proposal.

Attendance

- Workgroup Members
    - Marie Budev, Chair
    - PJ Geraghty
    - Matthew Hartwig
    - Erika Lease
    - JD Menteer
    - Zoe Stewart Lewis
- UNOS Staff
    - Chelsea Hawkins
    - Houlder Hudgins
    - Sarah Roache
    - Kaitlin Swanner
    - Ross Walton