

**OPTN Ad Hoc Multi-Organ Transplantation Committee
Lung Multi-Organ Workgroup
Meeting Summary
October 21, 2024
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 10/21/2024 to discuss the following agenda items:

1. Review options for lower CAS (Composite Allocation Score) threshold/Discuss lower CAS threshold
2. Review options for higher CAS threshold/Discuss higher CAS threshold
3. Recommend preliminary CAS thresholds

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

1. Review options for lower CAS (Composite Allocation Score) thresholds/Discuss lower CAS threshold

OPTN contractor staff presented potential options for lower CAS thresholds.

Summary of Presentation:

The goal is to identify a lower CAS threshold that will capture candidates who need to receive lung multi-organ offers. The data suggest a Composite Allocation Score (CAS) of 32-34 may be appropriate to capture the top 25% of lung-alone and lung-multi organ transplant candidates. Based on the SRTR widget, a CAS threshold of 32-34 is when mortality risk begins to increase. This may work for the lower threshold, but it still encompasses a large proportion of candidates on each match run. Having a separate threshold for O and non-O blood type donors may help with efficiency.

Summary of Discussion:

The OPTN Lung Multi-Organ Workgroup did not make any decisions.

The Chair noted that the number of multi-organ transplants involving liver-lung and kidney-lung combinations was very small last year and asked the staff about the travel distance for these organs. The staff indicated that the median travel distance for lung-kidney transplants was farther, at around seven hundred nautical miles, while the median distance for lung-liver transplants was three hundred sixty-six nautical miles.¹ The Chair pointed out that CAS subscore for the 75th percentile for all blood types was similar to the median CAS subscore (50th percentile) for O blood types, and recommended having a different threshold for the O blood type donors. Another member agreed that it would be challenging to justify giving access to the top half of one group while only accounting for the 90th percentile of another

¹ See page 73, "Lung Continuous Distribution One Year Monitoring Report," OPTN, May 9, 2024, https://optn.transplant.hrsa.gov/media/srino34s/data_report_lung_cd_1year_20240509.pdf.

group, thereby treating candidates differently based on their blood type. Another member added that the allocation process is donor-centric, meaning that the donor's blood type will influence the number of candidates considered in a match run. Therefore, it is more about the candidates' points in relation to the specific donor being offered. Staff affirmed that the CAS thresholds would be based on donor blood type since the number of candidates appearing on the match depends on which candidate blood types are compatible with the donor's blood type. The member expressed concern about the donor factors reducing the match run too much, such that candidates who need a second organ may appear on a short match run (e.g. for a hepatitis C positive donor) but not have a high enough CAS to receive the second organ per policy. Staff noted the workgroup can look at metrics to assess who would be captured by any preliminary thresholds identified by the workgroup. A member suggested that providing extra points for blood type O due to a lack of donor access and raising thresholds for access feels like it undermines patient access overall. The focus should be on the percentage of patients with a higher CAS and the urgency of their conditions. A staff member noted that the different point allocations for blood types, particularly for O type, grant better priority to those candidates compared to others, so the intent of a higher CAS threshold for O donors for multi-organ offers would be to provide more equal access to multi-organ offers across candidate blood types.

2. Review options for higher CAS thresholds/Discuss higher CAS thresholds

OPTN contractor staff presented the opportunities for higher CAS thresholds.

Presentation summary:

The goal is to identify a higher CAS threshold that will capture a smaller subset of highly medically urgent/highly prioritized candidates.

Considerations:

- What lung CAS represents similar priority/urgency to Status 1A & 1B liver candidates and Status 1 & 2 heart candidates?
 - Status 1A liver: Adult candidate with life expectancy less than 7 days, or medically urgent pediatric
 - Status 1B liver: Pediatric candidate with severe liver disease
 - Status 1 heart: Adult candidate on ECMO, hospitalized with support device, or MCSD with life threatening ventricular arrhythmia
 - Status 1A heart: Pediatric candidate, medically urgent (ventilated, balloon pump, on inotropes, MCSD, etc.)
 - Status 2 heart: Adult candidate, typically hospitalized with temporary support device
 - Status 1B heart: Pediatric candidate, on inotropes but doesn't qualify for 1A
- Which lung-liver and lung-kidney candidates should receive offers before the liver is offered to MELD 37+ candidates, and the kidney is offered to 100% CPRA and prior living donor candidates?

The workgroup reviewed median match run appearances for the classifications currently included in scope for the multi-organ allocation project.

Summary of discussion:

The OPTN Lung Multi-Organ Workgroup did not make any decisions.

The workgroup discussed that the median match appearances represents both liver-alone and liver multi-organ candidates. A member noted there are almost no multi-organ candidates who fall into liver classification 1. The Chair emphasized that data is crucial for understanding the limited number of patients in each category. Establishing a medical urgency cut-off or a higher CAS for that initial group of patients is vital. A member discussed examining the scores of multi-organ transplant candidates and whether there were any exceptions. A staff member said that many of the heart-lung recipients had exceptions but the lung-liver and lung-kidney recipients did not. The Chair noted that they have applied for exceptions in the past but have not always been successful, which raises concerns about the messages being communicated to the community. Members speculated whether exceptions would be needed for heart and lung transplants and emphasized that if a patient does not meet the CAS cut-off but is deemed sufficiently ill, an application for an exception will be necessary.

3. Recommend preliminary CAS thresholds

The OPTN Lung Multi-Organ Workgroup made the following preliminary recommendations:

- Lower CAS threshold (less medically urgent/less priority):
 - All donors: 31
 - Non-O donor (A/AB/B): 31
 - O donor: 35
- Higher CAS threshold (higher medically urgency/priority):
 - Non-O donor (A/AB/B): 34
 - O donor: 39

The Workgroup requested additional data to further evaluate these potential thresholds, including how many candidates would fall above and below these thresholds, and the medical urgency scores for those candidates.

Summary of discussion:

Members agreed that enforcing a single cut-off could be unfair to certain blood types while disproportionately benefiting others. They suggested that implementing two cut-offs might be beneficial. The Chair agreed that this could be a good approach. One member proposed establishing a cut-off for blood type O and another for type A, given they are the largest groups, while blood types B and AB could be included under A. The Chair suggested eliminating the five extra points assigned to blood type O and indicated that a higher threshold would likely fall around 34. Another member highlighted that the current listing of mortality and post-transplant survival rates shows that a higher CAS does not necessarily correlate with greater medical urgency. For example, a younger patient may have a very high post-transplant survival rate but not a high CAS score, indicating that medical urgency should not be the sole criterion. A member asked if there was data available on the mean rank on the lung match for a given CAS threshold and donor blood type. The member looked at an O donor match run and observed that the initial 35 patients on the list have a CAS above 35, but noted that the further that OPOs offer down the list suggests that the donor lungs are more medically complex. They raised concerns about the declining chances of lungs being successfully transplanted if the list extends beyond the first 50 patients. Would it even matter to establish a lower threshold if these organs likely wouldn't be accepted in the first place? Another member questioned whether the dynamics have changed now that it's a national allocation system. They wondered if, after considering distance limitations and the

number of programs within 500 nautical miles, the main reasons for declining offers stem from donor factors rather than distance. A staff member clarified that the algorithm is currently being applied only to specific donors more likely to donate to multi-organ candidates, rather than a blanket application across all donors. This focus on certain donors could potentially mitigate concerns about medically complex donors, though it won't address all circumstances.

Next steps:

OPTN contractor staff will submit the data request. The sponsoring committee will receive an update on the workgroup's progress on 10/30. The workgroup will reconvene to review the additional data when available and continue to discuss the lung CAS thresholds.

Upcoming Meeting

- To be determined.

Attendance

- **Workgroup Members**
 - Marie Budev
 - Chris Curran
 - Chris Sonnenday
 - Erika Lease
 - Lisa Stocks
 - PJ Geraghty
 - JD Menteer
 - Jackie Russe
 - Shelley Hall
- **HRSA Representatives**
 - Jim Bowman
 - Marilyn Levi
- **SRTR Staff**
 - Katie Audette
- **UNOS Staff**
 - Viktoria Filatova
 - Katrina Gauntt
 - Chelsea Hawkins
 - Kaitlin Swanner
 - Sara Langham
 - Laura Schmitt
 - Ross Walton
- **Others**
 - Gundeep Dhillon