

**OPTN Lung Transplantation Committee
Meeting Summary
December 12, 2024
Conference Call**

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

Introduction

The Lung Transplantation Committee (Committee) met via Webex teleconference on 12/12/2024 to discuss the following agenda items:

1. Lung Continuous Distribution 18-month Monitoring Report & ABO Identical vs. Compatible Data Request
2. Open Forum

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

1. Lung Continuous Distribution 18-month Monitoring Report & ABO Identical vs. Compatible Data Request

[Continuous Distribution \(CD\) of Lungs](#) was implemented on March 9, 2023. The most recent monitoring report, requested by the Committee in May 2024, includes analysis of the first 18 months of data post-implementation. In addition to formal data reports, the [OPTN Lung Monitoring dashboard](#) aids with post-implementation monitoring.

The Committee requested additional blood type data during their September 27, 2024 meeting.

Data Summary:

Lung CD 18-month monitoring report

Results related to blood type from the Lung CD 18-month monitoring report¹ were reviewed.

ABO Compatible vs. Identical Lungs Transplants Data Request²

Key questions for this request

- How similar or different are ABO identical vs. Compatible lung transplants under CD, in terms of recipient, donor and match characteristics?
- Is there room to more strongly prioritize identical candidates in lung allocation?

¹ OPTN Descriptive Data Request. “ABO Compatible vs Identical Lung Transplants

Under Continuous Distribution.” Prepared for Lung Transplantation Committee Conference Call, December 10, 2024.

Data & Cohort

- 1-year post ABO modification
 - September 27th, 2023 – September 26th, 2024
- Lung-alone transplants stratified by blood type match, Identical vs Compatible

Results - Overall

- 91% of lung-alone transplants went to ABO identical recipients
 - Of 3,203 lung transplants, 2,915 were an identical blood type match, 288 were a compatible blood type match
- The highest percent of compatible transplants involved blood type O donors
 - Of 288 ABO compatible lung transplants, 225 (12.7%) blood type O lungs went to non-O recipients

Results - Recipient Characteristics

- ABO compatible recipients were more medically urgent than ABO identical recipients
- The height distribution was similar for ABO compatible and ABO identical recipients
- A slightly larger percent of lungs that were transplanted to ABO compatible recipients were pediatric
 - 2.8% (8/288) of ABO compatible were pediatric, compared to 0.7% (19/2,915) of ABO identical transplants
- A larger percent of lungs that were transplanted to ABO compatible recipients were “prioritized”
 - Prioritized recipients met any of the following criteria:
 - Medical urgency points > 1 (WLAUC < 289 days)
 - Height < 150cm
 - *CPRA > 0
 - Age at listing < 18 years
 - 75.0% of ABO compatible recipients were prioritized, while 57.4% of ABO identical lung transplants were prioritized

*It was noted that less than 25% of candidates had acceptable antigens entered in Waitlist.

Results – Donor Characteristics

There were no noticeable differences between donors who donated lungs to ABO identical vs compatible recipients in terms of donation after circulatory death (DCD) status, smoking history, age, or PaO₂/FiO₂ ratio.

Results - Match Characteristics

- ABO compatible recipients had a lower sequence number at acceptance than ABO identical recipients
- A slightly larger percent of lungs that were transplanted to ABO compatible recipients were allocated out of sequence (AOOS)
 - Lungs were determined to be AOOS if the recipient did not appear on the donor's match run or if at least one candidate above the recipient on the match had a recorded OPO refusal code of 861, 862, 863, 799, or 898.
 - 22.6% of ABO compatible were AOOS compared to 11.6% of ABO identical that were AOOS

Conclusions

- Allocation is generally working as intended
- Candidates can receive compatible lungs when they are prioritized in allocation
- Diverting too many of these compatible lungs to ABO identical candidates rather than prioritized ABO compatible candidates may lead to an increase in waiting list mortality
- 25% of compatible lungs went to candidates that were “not prioritized”
- There may be an opportunity to allocate these lungs instead to ABO identical or otherwise prioritized candidates
- It’s unclear how big of an impact a policy change to re-distribute organs will have, as some of these lungs were AOOS

Summary of discussion:

No decisions were made.

The Committee noted that transplant rates for blood type O candidates have improved but remain lower compared to other blood types. Members discussed that while blood type O candidates are receiving transplants at rates similar to pre-CD, they have not experienced the same gains in access as other blood types.

Several members emphasized that blood type O candidates tend to be sicker at time of transplant and experience longer waiting times to transplant. There were previously some concerns that O candidates being sicker would negatively impact post-transplant outcomes. However, post-transplant outcomes appear similar across blood types³, with no significant differences in 6-month outcomes observed.

There was some discussion of potential solutions to increase access for O candidates. Members discussed the need to better understand factors contributing to differential access for O candidates, including:

- The relationship between medical urgency and blood type
- Potential impacts of passenger lymphocyte syndrome in compatible versus identical transplants
- Logistical and operational factors affecting organ acceptance, thus, impacting AOOS
- The proportion of O donors in the overall donor pool

The Chair posed a question to the Committee about whether this needs to be further investigated. There was a suggestion to allow more data to accrue on long-term outcomes for ABO identical vs compatible lung transplants. A member also suggested comparing outcomes for prioritized compatible vs prioritized identical. A difference in these outcomes may provide evidence to support a policy change.

2. Open Forum

There were no open forum speakers.

Upcoming Meetings

- January 23, 2024, teleconference, 5PM ET

³ OPTN Descriptive Data Request. “ABO Compatible vs Identical Lung Transplants

Under Continuous Distribution.” Prepared for Lung Transplantation Committee Conference Call, December 10, 2024.

Attendance

- **Committee Members**
 - Matthew Hartwig
 - Dennis Lyu
 - Brian Keller
 - David Erasmus
 - Ed Cantu
 - Thomas Kaleekal
 - Heather Strah
 - Stephen Huddleston
 - Katja Fort Rhoden
 - Sid Kapnadak
 - Wayne Tsuang
 - Jody Kieler
 - Brian Armstrong
 - Joseph Tusa
 - Lara Schaheen
- **HRSA Representatives**
 - None
- **SRTR Staff**
 - Katie Audette
 - Maria Masotti
- **UNOS Staff**
 - Kelley Poff
 - Kaitlin Swanner
 - Sara Rose Wells
 - Chelsea Hawkins
 - Samantha Weiss