# Updated Cohort for Calculation of the Lung Allocation Score (LAS)

*OPTN Lung Transplantation Committee*

# Purpose and Proposal

- Purpose
  - Improve accuracy of lung allocation score (LAS) in ranking candidates
- Proposal
  - Update the cohort of candidates and recipients used to determine LAS
  - Modify the coefficients and probabilities used in the LAS calculation
  - Remove unnecessary variables from the LAS calculation

# Rationale

- LAS calculation last updated in 2012
- 2012 update based on cohorts:
  - Candidates from 2006-2008
  - Recipients from 2005-2008
- Updated LAS to be used in the continuous distribution project

# Changes made during the 2012 LAS Update

- Removed percent predicted forced vital capacity (FVC) for certain candidates
- Added the following variables to the LAS calculation:
  - **Cardiac index**
  - **Central venous pressure (CVP)**
  - Creatinine
  - Six-minute-walk-distance
  - **Creatinine increase > 150%**
  - Oxygen needed at rest

# Overview of Proposed 2020 LAS Updates

- Update cohort: candidates and recipients from 2015 – 2018
- Remove unnecessary variables from LAS calculation
- LAS will change slightly to better predict candidate survival
- How candidates are ranked on the match run will change slightly
- Data will still be collected for variables removed from the LAS calculation

# Remove variables that were not predictive

- Variables not predictive due to small numbers of candidates
- Waitlist mortality model:
  - Obliterative Bronchiolitis (72 candidates)
  - Lymphangioleiomyomatosis (28 candidates)
  - Eisenmenger's (2 candidates)
  - Bilirubin increase >50%, group B (1 candidate)
- Post-transplant mortality model:
  - Lymphangioleiomyomatosis (27 recipients)
  - Creatinine increase > 150% (3 recipients)
  - Eisenmenger's syndrome (1 recipient)

# Remove variables that were not predictive

- Variables not predictive and changed sign
- Waitlist mortality model
  - Diabetes
  - FVC < 80% spline, group D
  - Cardiac index < 2 L/min/m2
  - CVP > 7mm HG spline, group B
- Post-transplant mortality model
  - Pulmonary fibrosis, other
  - Functional status, no assistance

# Member Actions

- No action required by members
- Not anticipated to affect data collection for lung candidates/recipients
  - Data will still be collected for variables removed from the models
- Updates will be programmed in UNet$^{SM}$

# Feedback Requested

- Are the appropriate variables being removed from the calculation?
- Is a transition needed to protect any specific populations?
- Should implementation take place before, or at the same time, as implementation of continuous distribution?

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