

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)
 - Lymphangiomyomatosis (28 candidates)
 - Eisenmenger's (2 candidates)
 - Bilirubin increase >50%, group B (1 candidate)
- Post-transplant mortality model:
 - Lymphangiomyomatosis (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 UNetSM

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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