

Disclosures

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I have no financial relationships to disclose within the past 12 months relevant to my presentation

AND

My presentation does not include discussion of off-label or investigational use

Effect of Proposed Revisions to the US Lung Allocation Score on Access to Lung Transplantation

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Background: Lung Allocation Score

- The Lung Allocation Score (LAS) system serves to rank candidates ≥ 12 years of age for allocation of deceased donor lungs in the US.
- LAS system was implemented in 2005 to improve access to transplant for candidates with the highest risk of waitlist mortality, without decreasing posttransplant survival rates.

Calculation of Lung Allocation Score

Waiting list urgency measure =

Expected # days lived w/o transplant during next year

Posttransplant survival measure =

Expected # days lived during 1st year after transplant

Raw allocation score = posttransplant survival measure
– 2x (waiting list urgency measure)

Normalized LAS = $100 \times (\text{raw score} + 2 \times 365) / 3 \times 365$

Background: Lung Allocation Score

- Group A comprises obstructive lung diseases
e.g. COPD
- Group B comprises pulmonary vascular diseases
e.g. PHTN
- Group C comprises cystic fibrosis
e.g. CF
- Group D comprises restrictive lung diseases
e.g. IPF

Revision of Lung Allocation Score

- LAS system is undergoing first major revision since its implementation in 2005 to better reflect risk of waitlist mortality and post-transplant survival in current cohort of patients.

Reasons for Revision of LAS System

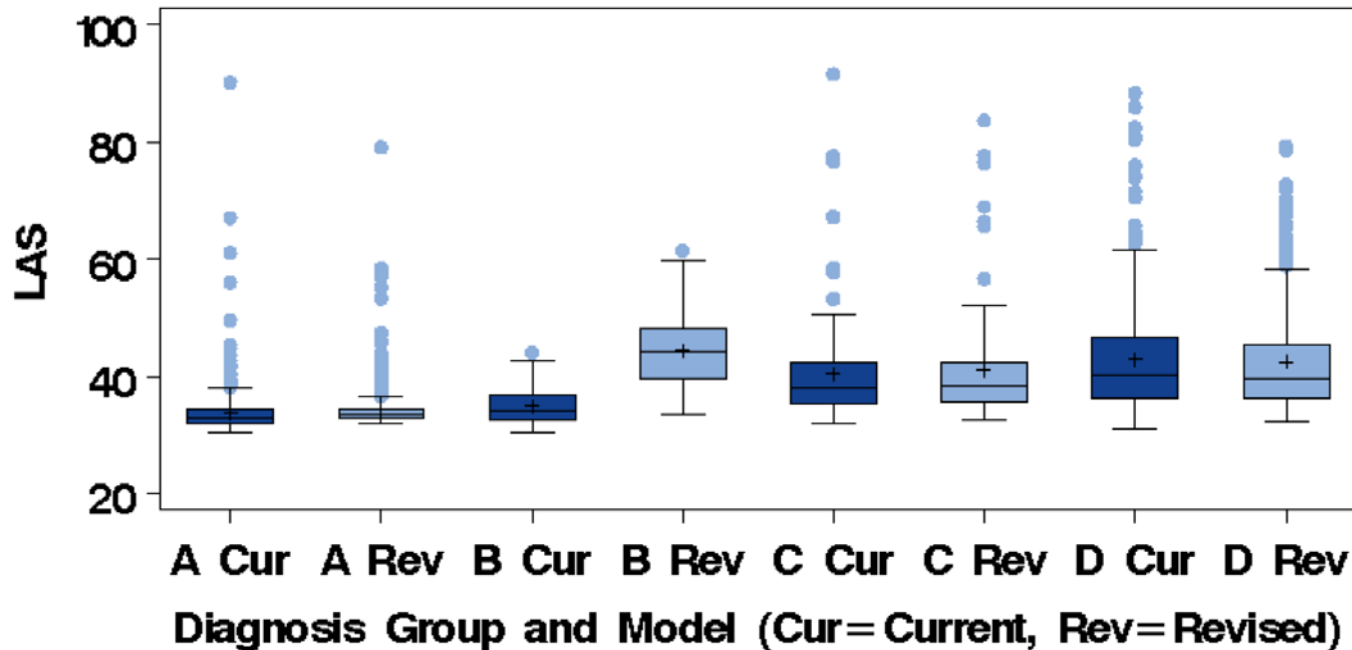
- The character of the waiting list has changed.
e.g. age, diagnoses
- Waitlist mortality has increased since the implementation of LAS due to sicker population, but it is increasing more for diagnosis group B and D candidates.

Methods

- We examined how the proposed revision may affect access to transplant for US lung transplant candidates in each diagnosis group.
- Candidate LAS's were calculated with the current and revised LAS models using 1,010 active lung transplant candidates aged ≥ 12 years on Jan 1, 2010.
- Candidates were ranked by priority for transplant from 1 to 1,010 by their current and revised model LAS.

Results

Figure 1. Boxplot of current and revised LAS for 2010 cohort of waitlist candidates, by diagnosis group

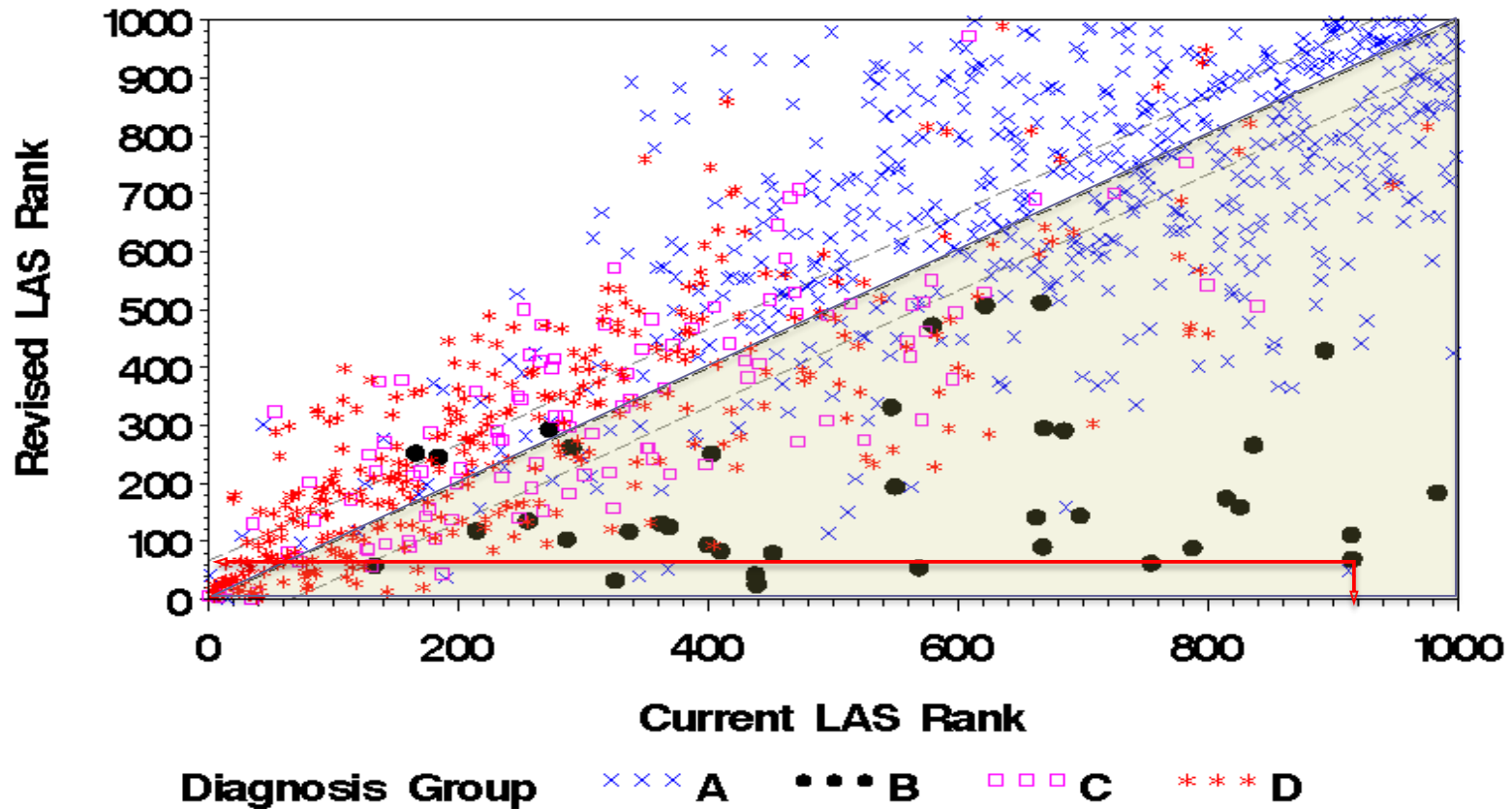


Diagnosis Group:
A = COPD
B = PHTN
C = CF
D = IPF

N	534	534	40	40	109	109	327	327
Mean	34	34	35	44	41	41	43	42
Std Dev	4	4	3	7	9	9	10	9

Results

Figure 2. Scatterplot of current and revised LAS rank for 2010 cohort of waitlist candidates, by diagnosis group



Diagnosis Group: A = COPD, B = PHTN, C = CF, D = IPF

Conclusion

- Revised LAS will affect the distribution of LAS and individual candidate scores particularly for candidates with pulmonary hypertension, who will have increased access to lung transplant.
- Revised LAS model should improve access to lungs for candidates who have a higher risk of death on the waitlist and a higher chance of survival posttransplant.